07-31-2020 LETTING ITEM 071

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	1
	ILLINOIS	CONTRACT NO. 61G62		

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

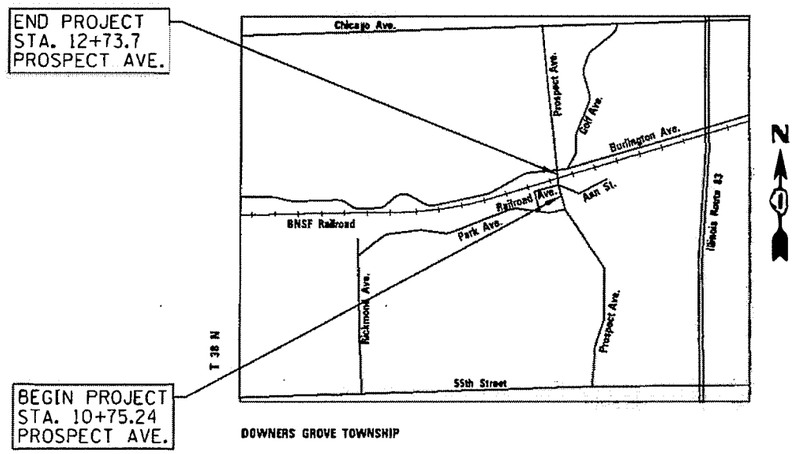
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

MUN 1003 (PROSPECT AVENUE)
BURLINGTON AVENUE TO ANN STREET
RECONSTRUCTION, SIDEWALKS, PAVEMENT MARKING, LANDSCAPING
SECTION 16-00045-01-MS
PROJECT NO. 6LRR(035)
VILLAGE OF CLARENDON HILLS
DUPAGE COUNTY
C-91-040-20

FOR INDEX OF SHEETS AND STATE STANDARDS, SEE SHEET NO. 2

LOCATION OF SECTION INDICATED THUS:- ▬

R 11 E 3rd PM



DOWNERS GROVE TOWNSHIP

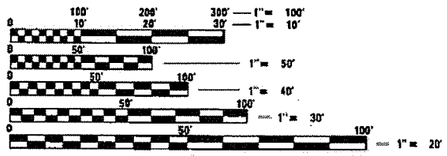
GROSS AND NET LENGTH= 198.5 FEET (0.04 MILES)

LOCATION MAP
N.T.S.

DESIGN SPEED
20 MPH

CLASSIFICATION
MAJOR COLLECTOR

TRAFFIC
3500 ADT (2040)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

DAVID D. LANDEWEER
062-042363
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

6-20-2020

DAVID D. LANDEWEER
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 062-042353 EXPIRES 11-30-21

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Approved 4/16/ 20 20
VILLAGE OF CLARENDON HILLS

Passed 6-2 20 20
DISTRICT ENGINEER OF LOCAL ROADS AND STREETS

Releasing for Bid Based on Limited Review June 4 20 20
REGIONAL ENGINEER

PLANS PREPARED BY:
TERRA ENGINEERING LTD.

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID PROGRAM ENGINEER: CARMEN E. RAMOS, PE SCHAUMBURG, IL

CONTRACT NO. 61G62

ENGINEER'S SEAL
AFFIX SEAL

INDEX OF SHEETS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-11	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
442201-03	CLASS C AND D PATCHES
601001-05	PIPE UNDERDRAINS
602011-02	CATCH BASIN, TYPE C
604001-05	FRAME AND LIDS, TYPE 1
604036-03	GRATE TYPE 8
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5M) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5M) TO 24" (600MM) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

GENERAL NOTES

1. SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF IDOT STANDARD SPECIFICATIONS AND ALL REVISIONS THERETO AND IN ACCORDANCE WITH THE DETAILS ON THE PLANS.

2. THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER, DON CHIARUGI, AT DON.CHIARUGI@ILLINOIS.GOV A MINIMUM OF TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

3. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) 48 HOURS PRIOR TO ANY WORK IN THE RIGHT OF WAY OR EASEMENTS TO LOCATE UTILITIES, AND CONTACT THE OWNER'S REPRESENTATIVE SHOULD PUBLIC UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

5. THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

6. ALL ELEVATIONS IN THE PLANS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

7. ALL REFERENCES IN THE HIGHWAY STANDARDS AND STANDARD SPECIFICATIONS FOR REINFORCEMENT, DOWEL BARS, AND TIE BARS IN PAVEMENT, SHOULDERS, CURB, GUTTER, COMBINATION CURB & GUTTER AND MEDIAN, AND CHAIR SUPPORTS FOR CRC PAVEMENT SHALL BE EPOXY COATED UNLESS NOTED ON THE PLANS.

8. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1½" INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS WITH WRITTEN APPROVAL FROM THE ENGINEER. A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 V:H.

9. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

10. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

11. THE DEPARTMENT HAS NOT OBTAINED ANY PERMITS FOR OFFSITE BORROW OR WASTE/USE (BWU) AREAS. PRIOR TO WORKING IN BWU AREAS, IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING PERMITS IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPER PERMITS. IN ADDITION TO THE BORROW REVIEW (BDE 2289) and USE/WASTE REVIEW (BDE 2290) SUBMITTALS, THE CONTRACTOR WILL NEED TO SUBMIT AN EROSION AND SEDIMENT CONTROL (ESC) PLAN FOR EVERY BWU SITE TO THE DEPARTMENT FOR ACCEPTANCE. GUIDELINES FOR ACCEPTABLE BWU PRACTICES CAN BE FOUND IN SECTION II.G.1 AND 2 of the SWPPP.

12. AGGREGATE SUBGRADE IMPROVEMENT (CU YD) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSTABLE AND/OR UNSUITABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH AGGREGATE SUBGRADE IMPROVEMENT (CU YD) WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC CONE AND/OR DYNAMIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.04 (04/01/2016) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE CURRENT IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND /OR UNSUITABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED.

13. THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND ALL TREES WITHIN THE CONSTRUCTION AREA TO ESTABLISH A "TREE PROTECTION ZONE" BEFORE ANY WORK BEGINS OR ANY MATERIAL IS DELIVERED TO THE JOBSITE. NO WORK IS TO BE PERFORMED (OTHER THAN ROOT PRUNING), MATERIALS STORED OR VEHICLES DRIVEN OR PARKED WITHIN THE "TREE PROTECTION ZONE". REMOVE PROTECTIVE TEMPORARY FENCE ONLY AFTER ALL CONSTRUCTION WORK HAS BEEN COMPLETED.

14. ALL TREE PROTECTION, TREE REMOVAL, PRUNING, AND ROOT PRUNING SHALL BE COMPLETED BEFORE CONSTRUCTION OPERATIONS COMMENCE IN ANY AREA. AT NO TIME SHALL THE CONTRACTOR PRUNE OR REMOVE ANY TREES UNLESS SPECIFICALLY DIRECTED BY THE ENGINEER.

15. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN. WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

16. ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR SHOWN IN THE PLANS SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS/HER OPERATIONS.

17. THE FINISHED EARTHWORK SHALL HAVE A VEGETATION-SUSTAINING SOIL COVERING THE TOP SIX INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION-SUSTAINING SOIL REQUIRED WILL BE PAID FOR SEPARATELY AS TOPSOIL FURNISH AND PLACE, 6".

18. ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED.

19. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND VILLAGE OF CLARENDON HILLS.

20. THE SUBGRADE STABILITY SHALL BE VERIFIED BY PROOF ROLLING WITH A FULLY LOADED TANDEM-AXEL TRUCK.

21. ANY AGGREGATE SUBGRADE IMPROVEMENT CONTAMINATED AND/OR DAMAGED BY THE CONTRACTOR'S VEHICLES AND/OR EQUIPMENTS IS TO BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.

22. PIPE UNDERDRAINS SHALL BE INSTALLED ACCORDING TO SECTION 601 OF THE SSRBC AND STANDARD 601001-05. TOP OF PIPE UNDERDRAINS SHALL BE PLACED MINIMUM 6" BELOW THE AGGREGATE SUBGRADE IMPROVEMENT LAYER. THE COST OF MAKING PIPE UNDERDRAINS CONNECTIONS TO DRAINAGE STRUCTURES SHALL BE INCLUDED.

23. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE WITH THE BNSF RAILROAD WHENEVER CONSTRUCTION ACTIVITY IS WITHIN 25 FEET OF THE RAILROAD ROW. THE CONTRACTOR SHALL RETAIN FLAGMEN EMPLOYED AND DESIGNATED BY THE BNSF RAILROAD TO MONITOR ON-COMING TRAIN TRAFFIC, AND ADVISE CONTRACTOR PERSONNEL WHEN ACTIVITY ON OR NEAR THE RAILROAD RIGHT-OF-WAY MAY PROCEED. THIS ITEM WILL BE PAID FOR ACCORDING TO ARTICLE 107.12 AND WILL BE REIMBURSED ACCORDING TO ARTICLE 109.05.

COMMITMENTS: NONE

TERRA ENGINEERING LTD.

USER NAME = DavidL	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = NTS	CHECKED -	REVISED -
PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 1 OF 1 SHEETS | STA. | TO STA.

GENERAL NOTES
STATE STANDARDS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	2
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

* SPECIALTY ITEM

SI	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0031 80% FEDERAL 20% STATE ITEP	ROADWAY 0004 100% STATE GCPF	ROADWAY 0004 80% FEDERAL 20% STATE CMAQ
	20101000	TEMPORARY FENCE	FOOT	300	300		
	20200100	EARTH EXCAVATION	CU YD	29	29		
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	29	29		
	20400800	FURNISHED EXCAVATION	CU YD	31	31		
	20800150	TRENCH BACKFILL	CU YD	3	3		
	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	89	89		
	21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	135	135		
	21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	287	287		
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	5	5		
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	5	5		
*	25100630	EROSION CONTROL BLANKET	SQ YD	142	142		
*	25200110	SODDING, SALT TOLERANT	SQ YD	255	255		
•	25200200	SUPPLEMENTAL WATERING	UNIT	4	4		
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	23	23		

SDD 1
K:_2016\16-258 Clarendon Hills Downtown Revitalization\Design\Transportation\CHDR Contract 2\CADD\CAGD Sheets\CH-SDD_FINAL.dgn

TERRA ENGINEERING LTD.

USER NAME = DavidL	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = NTS	CHECKED -	REVISED -
PLOT DATE = 5/24/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE
SCALE: NTS | SHEET 1 OF 7 SHEETS | STA. | TO STA.

SUMMARY OF QUANTITIES

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	3
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		

* SPECIALTY ITEM

SI	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0031 80% FEDERAL 20% STATE ITEP	ROADWAY 0004 100% STATE GCPF	ROADWAY 0004 80% FEDERAL 20% STATE CMAQ
	28000400	PERIMETER EROSION BARRIER	FOOT	274	274		
	28000510	INLET FILTERS	EACH	6	6		
	28100500	BROKEN CONCRETE RIPRAP	SQ YD	25	25		
	30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	7	7		
	30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	89	89		
	31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	564	564		
	35300300	PORTLAND CEMENT CONCRETE BASE COURSE 8"	SQ YD	2	2		
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	544	443	102	
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	78	78		
	40603200	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-4.75, N50	TON	101	101		
	40604060	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	130	110	20	
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	2223	2223		
	42400800	DETECTABLE WARNINGS	SQ FT	72	72		
	44000100	PAVEMENT REMOVAL	SQ YD	92	92		

• SPECIALTY ITEM

SI	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0031 80% FEDERAL 20% STATE ITEP	ROADWAY 0004 100% STATE GCPF	ROADWAY 0004 80% FEDERAL 20% STATE CMAQ
	44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	226		226	
	44000160	HOT-MIX ASPHALT SURFACE REMOVAL, 2 3/4"	SQ YD	906	906		
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	261	261		
	44000600	SIDEWALK REMOVAL	SQ FT	5135	5135		
	44201713	CLASS D PATCHES, TYPE I, 6 INCH	SQ YD	22	22		
	44201717	CLASS D PATCHES, TYPE II, 6 INCH	SQ YD	22	22		
	44201721	CLASS D PATCHES, TYPE III, 6 INCH	SQ YD	22	22		
	44201723	CLASS D PATCHES, TYPE IV, 6 INCH	SQ YD	22	22		
	48301000	PROTECTIVE COAT	SQ YD	624	624		
	60108200	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	60	60		
	60206905	CATCH BASINS, TYPE C, TYPE 1 FRAME, OPEN LID	EACH	1	1		
	60207005	CATCH BASINS, TYPE C, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
	60207605	CATCH BASINS, TYPE C, TYPE 8 GRATE	EACH	1	1		
	60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		

* SPECIALTY ITEM

SI	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0031 80% FEDERAL 20% STATE ITEP	ROADWAY 0004 100% STATE GCPF	ROADWAY 0004 80% FEDERAL 20% STATE CMAQ
	60255500	MANHOLES TO BE ADJUSTED	EACH	3	3		
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	257	257		
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	20	20		
•	66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1		
•	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1	1		
•	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1	1		
•	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	20	20		
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
	67100100	MOBILIZATION	LSUM	1	1		
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	40	40		
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	32	32		
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	11	11		
	70300900	PAVEMENT MARKING TAPE, TYPE IV - LETTERS AND SYMBOLS	SQ FT	216	216		
	70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	310	310		

• SPECIALTY ITEM

SI	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0031 80% FEDERAL 20% STATE ITEP	ROADWAY 0004 100% STATE GCPF	ROADWAY 0004 80% FEDERAL 20% STATE CMAQ
	70300924	PAVEMENT MARKING TAPE, TYPE IV 24"	FOOT	48	48		
•	72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	9	9		
•	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	197	197		
•	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	353	353		
•	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	391	391		
•	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	91	91		
•	K0013000	PERENNIAL PLANTS, PRAIRIE TYPE, 2" DIAMETER BY 4" DEEP PLUG	UNIT	6	6		
•	K0013020	PERENNIAL PLANTS, PRAIRIE TYPE, GALLON POT	UNIT	2	2		
•	K0013030	PERENNIAL PLANTS, WETLAND TYPE, 2" DIAMETER BY 4" DEEP PLUG	UNIT	7	7		
•	K0013050	PERENNIAL PLANTS, WETLAND TYPE, GALLON POT	UNIT	3	3		
•	K0026850	PERENNIAL PLANT CARE	SQ YD	201	201		
•	K0029634	WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE	POUND	64	64		
•	X0320018	FINISHES	L SUM	1	1		
	X0320067	BENCH REMOVAL	EACH	3	3		

▪ SPECIALTY ITEM

SI	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0031 80% FEDERAL 20% STATE ITEP	ROADWAY 0004 100% STATE GCPF	ROADWAY 0004 80% FEDERAL 20% STATE CMAQ
	X0322024	TRENCH DRAIN	EACH	2	2		
	X0323706	TRASH RECEPTACLE RELOCATION	EACH	5	5		
▪	X0324582	PLUMBING EQUIPMENT, ACCESSORIES AND RELATED SYSTEMS	LSUM	1	1		
	X0326859	PAVEMENT IMPRINTING	SQ YD	81	81		
*	X0327007	PEDESTRIAN LIGHT POLE, INSTALL ONLY	EACH	4	4		
▪	X0327739	MISCELLANEOUS ELECTRICAL WORK	LSUM	1	1		
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	29	29		
	X4240430	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL	SQ FT	2855	2855		
	X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	8	8		
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1	1		
	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	199	199		
*	X8360120	LIGHT POLE FOUNDATION, SPECIAL	EACH	4	4		
	XX007609	GRASS PAVERS	SQ YD	50	50		
	Z0003850	BENCHES	EACH	2	2		

SDD 6
M:_2018\18-256 Clarendon Hills Downtown Revitalization\Design\Transportation\CHDR Contract 2\CADD\CHDD Sheets\CH-SDD_FINAL.dgn

TERRA ENGINEERING LTD.

USER NAME = DavidL	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = NTS	CHECKED -	REVISED -
PLOT DATE = 5/24/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 6 OF 7 SHEETS

SUMMARY OF QUANTITIES

STA. TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	8
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

* SPECIALTY ITEM

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	Z0003855	BICYCLE RACKS	EACH	9	9		
*	Z0007601	BUILDING REMOVAL NO. 1	LSUM	1	1		
	Z0013798	CONSTRUCTION LAYOUT	LSUM	1	1		
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	LSUM	1		1	
	XX009400	BIORETENTION SYSTEM A	SQ FT	994	994		
	XX009401	RELOCATE BIKE FIX-IT STATION	EACH	1	1		
	XX009402	BIKE RACK REMOVAL	EACH	4	4		
	XX009403	BUILDING CONCRETE	CU YD	45			45
	XX009404	BUILDING METALS	L SUM	1	1		
	XX009405	BUILDING FINISH CARPENTRY	L SUM	1	1		
	XX009406	BUILDING EXTERIOR ENVELOPE	L SUM	1	1		
	XX009407	BUILDING OPENINGS	L SUM	1			1
	XX009408	BUILDING SIGNAGE	L SUM	1	1		

SSR 7
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TERRA ENGINEERING LTD.

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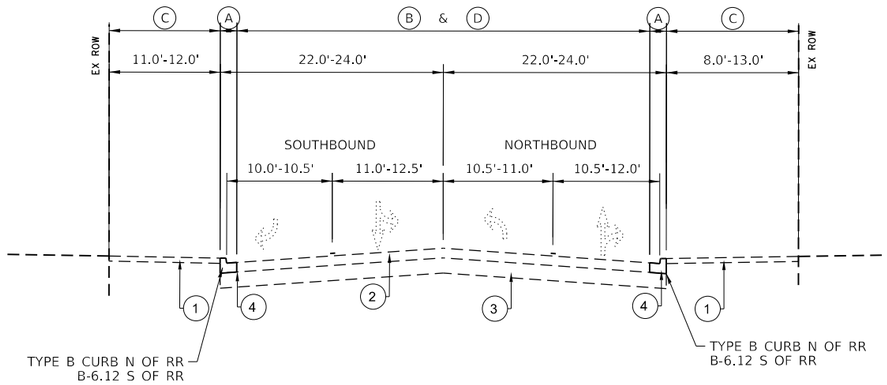
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE
SCALE: NTS | SHEET 7 OF 7 SHEETS | STA. | TO STA.

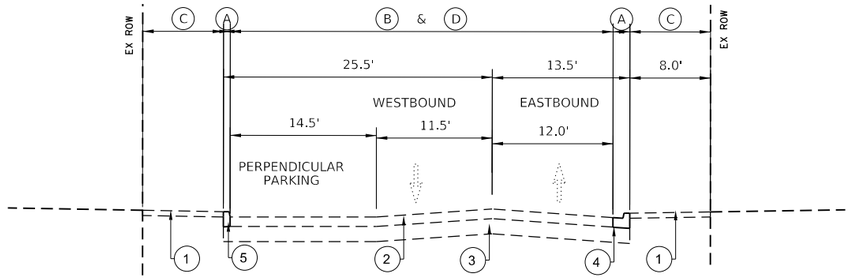
SUMMARY OF QUANTITIES

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	9
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		



EXISTING TYPICAL SECTION

PROSPECT AVE
STA 10+75.24 TO 12+73.7



EXISTING TYPICAL SECTION

RAILROAD AVE
STA 40+86 TO 41+25

LEGEND

1. EXISTING P.C.C. SIDEWALK
2. EXISTING BITUMINOUS SURFACE, VARIES 2.5" TO 6"
3. EXISTING 8" AGGREGATE BASE COURSE (+/-)
4. EXISTING B-6.12 CURB AND GUTTER
5. EXISTING TYPE B CURB
6. EXISTING B-6.24 CURB AND GUTTER
- A. CURB AND GUTTER REMOVAL
- B. HMA SURFACE REMOVAL, 2 3/4"
- C. SIDEWALK REMOVAL
- D. PAVEMENT REMOVAL

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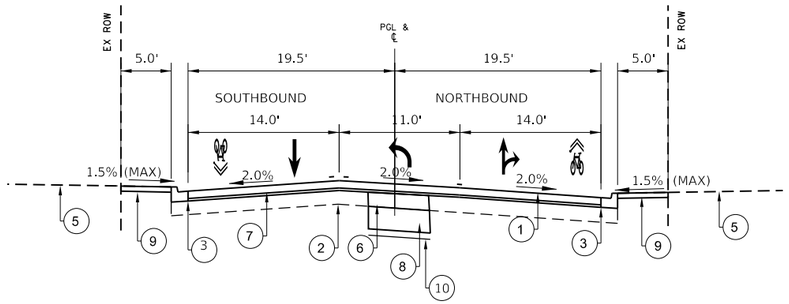
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 1 OF 2 SHEETS | STA. TO STA.

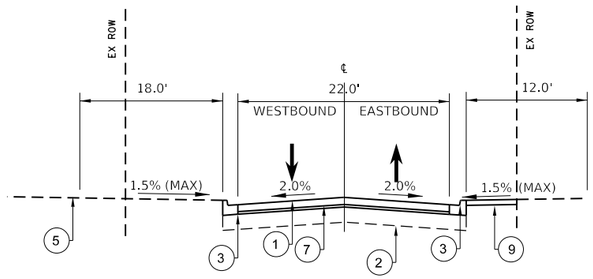
EXISTING TYPICAL SECTIONS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	10
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION

PROSPECT AVE
STA 10+75.24 TO 12+73.7



PROPOSED TYPICAL SECTION

RAILROAD AVE
STA 40+86 TO 41+25

LEGEND

1. PROPOSED HMA SURFACE, IL-9.5 MIX D N50 2"
2. EXISTING AGGREGATE BASE COURSE, 8" (+/-)
3. COMBINATION CURB AND GUTTER, TYPE B-6.12
4. COMBINATION CURB AND GUTTER, TYPE B-6.24
5. TOPSOIL FURNISH AND PLACE, 6"
6. CLASS D PATCH 6"
7. POLYMERIZED HMA BINDER COURSE, IL-4.75, N50 (3/4" TO 1")
8. AGGREGATE SUBGRADE IMPROVEMENT, 12"
9. PORTLAND CEMENT CONCRETE SIDEWALK 5"
10. GEOTECHNICAL FABRIC

NOTE: LOCATIONS OF CLASS D PATCHES TO BE DETERMINED IN THE FIELD

HOT MIX ASPHALT REQUIREMENTS

APPLICATION	MIXTURE TYPE	AIR VOIDS @ NDES
ROADWAY RESURFACING	2" HMA SURFACE COURSE, IL-9.5 MIX D, N50 (IL 9.5 mm)	4% @ 50 GYR
	(1" MAX) 3/4" POLYMERIZED HMA BINDER COURSE, IL-4.75, N50	3.5% @ 50 GYR
PATCHING	CLASS D PATCHES (HMA BINDER IL-19mm)	4% @ 70 GYR

HMA NOTES:

1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112LBS/SQYD/IN.
2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS
3. FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 2 OF 2 SHEETS | STA. | TO STA.

PROPOSED TYPICAL SECTIONS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	11
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

SIGN INSTALLATION SCHEDULE

STREET	STATION	RT/LT	SIGN	DESIGNATION	SIGN PANEL DIMENSIONS (IN)		TYPE A POST (EACH)	TYPE B POST (EACH)	SIGN PANEL TYPE 1 (SQ FT)	SIGN PANEL TYPE 2 (SQ FT)	LENGTH /POST (FT)	TOTAL LENGTH (FT)	REMOVE SIGN ASSEMBLY TYPE A (EACH)	REMOVE SIGN ASSEMBLY TYPE B (EACH)	RELOCATE SIGN PANEL ASSEMBLY TYPE A (EACH)	RELOCATE SIGN PANEL ASSEMBLY TYPE B (EACH)	RELOCATE SIGN PANEL TYPE 1 (SQ FT)	RELOCATE SIGN PANEL TYPE 2 (SQ FT)
PROSPECT AVE	10+57.00	RT	STOP	R1-1	30	30									1			
			ONCOMING TRAFFIC DOES NOT STOP	W4-4bP	24	12												
PROSPECT AVE	11+12.00	RT	STOP	R1-1	30	30									1			
			3-WAY															
			NO LEFT TURN	R3-2	24	24												
			5-6 PM															
PROSPECT AVE	11+18.00	LT	STOP	R1-1	30	30									1			
			CROSS TRAFFIC DOES NOT STOP	W4-4P	24	12												
			NO LEFT TURN	R3-2	24	24												
			5-6PM															
PROSPECT AVE	11+18.00	LT	NO LEFT TURN	R3-2	24	24									1		0	
			5-6PM														0	
PROSPECT AVE	11+21.00	RT	STREET SIGN: S PROSPECT AV												1			
			STREET SIGN: ANN AV															
			NO LEFT TURN	R3-2	24	24												
			5-6PM															
PROSPECT AVE	11+42.00	RT	NOTICE: IT IS A VIOLATION TO CROSS TRACKS BEFORE												1		0	
			NO LEFT TURN	R3-2	24	24											0	
			5-6PM														0	
PROSPECT AVE	11+54.00	LT	STREET SIGN: S PROSPECT AV												1			
			STREET SIGN: RAILROAD AV															
PROSPECT AVE	11+67.00	LT	NO LEFT TURN	R3-2	24	24									1		0	
			5-6PM														0	
PROSPECT AVE	12+43.00	LT	GREEN SIGN												1			
TOTAL							0	0	0	0	0	0	0	0	9	0	0	0

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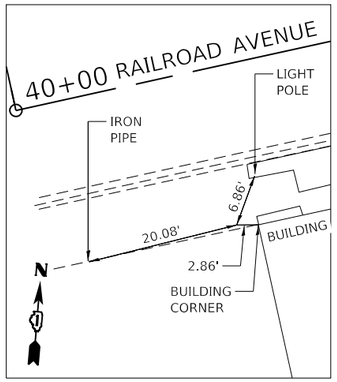
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 1 OF 1 SHEETS | STA. | TO STA.

SIGN SCHEDULE

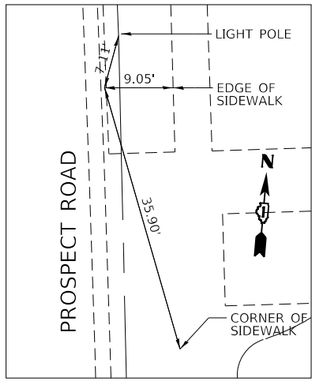
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	12
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			



CONTROL POINT #1

SURVEY POINT

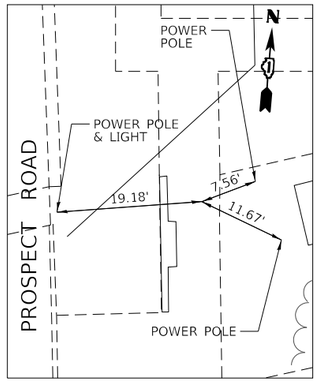
RAILROAD AVENUE
STA. 40+25.23, 21.01' LT
N 1,868,711.40
E 1,087,391.73
ELEV. 722.71



CONTROL POINT #2

SURVEY POINT

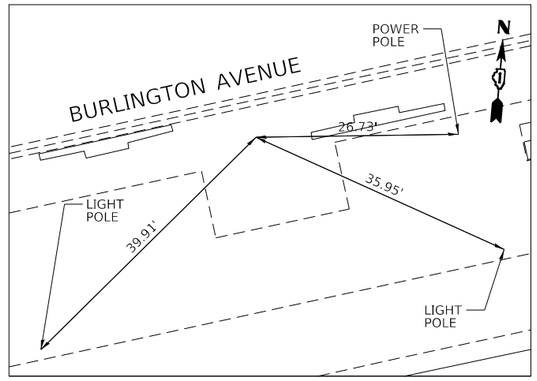
PROSPECT ROAD
STA. 14+54.94, 26.68' RT
N 1,869,087.76
E 1,087,504.05
ELEV. 733.86



CONTROL POINT #3

SURVEY POINT

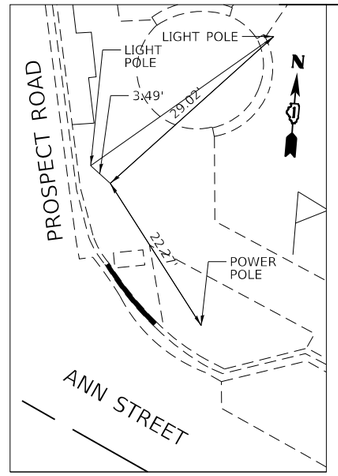
PROSPECT ROAD
STA. 12+74.42, 39.57' RT
N 1,868,910.44
E 1,087,535.98
ELEV. 727.82



CONTROL POINT #4

SURVEY POINT

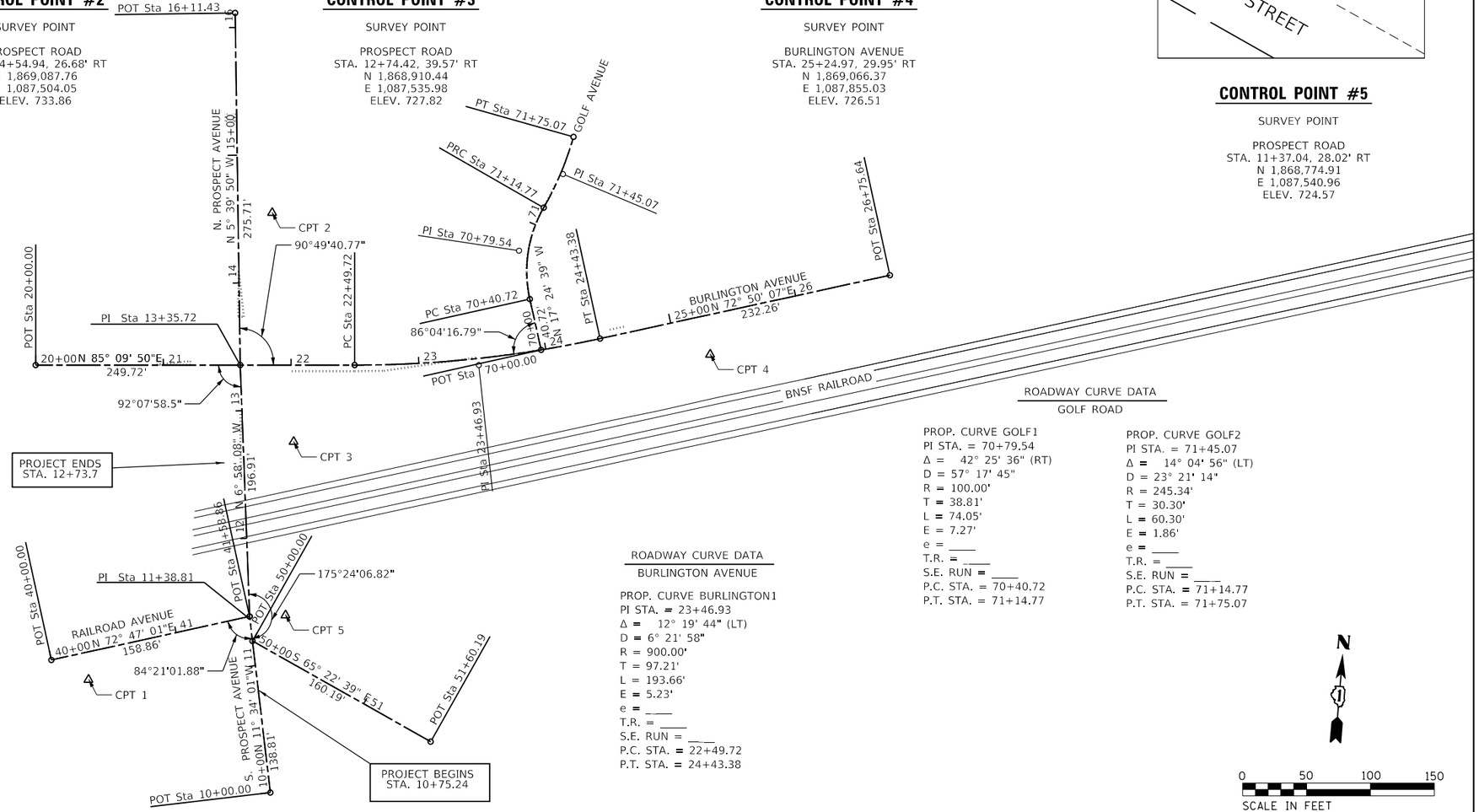
BURLINGTON AVENUE
STA. 25+24.97, 29.95' RT
N 1,869,066.37
E 1,087,855.03
ELEV. 726.51



CONTROL POINT #5

SURVEY POINT

PROSPECT ROAD
STA. 11+37.04, 28.02' RT
N 1,868,774.91
E 1,087,540.96
ELEV. 724.57



DATUM IS NAVD 88

ROADWAY CURVE DATA
BURLINGTON AVENUE

PROP. CURVE BURLINGTON1
PI STA. = 23+46.93
Δ = 12° 19' 44" (LT)
D = 6° 21' 58"
R = 900.00'
T = 97.21'
L = 193.66'
E = 5.23'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 22+49.72
P.T. STA. = 24+43.38

ROADWAY CURVE DATA
GOLF ROAD

PROP. CURVE GOLF1
PI STA. = 70+79.54
Δ = 42° 25' 36" (RT)
D = 57° 17' 45"
R = 100.00'
T = 38.81'
L = 74.05'
E = 7.27'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 70+40.72
P.T. STA. = 71+14.77

PROP. CURVE GOLF2
PI STA. = 71+45.07
Δ = 14° 04' 56" (LT)
D = 23° 21' 14"
R = 245.34'
T = 30.30'
L = 60.30'
E = 1.86'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 71+14.77
P.T. STA. = 71+75.07

N

0 50 100 150
SCALE IN FEET

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 50 | SHEET 1 OF 2 SHEETS | STA. | TO STA.

ALIGNMENT AND TIES

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	13
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		

PLAN AND PROFILE BURLINGTON AVE.

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ALIGNMENT COORDINATES BURLINGTON AVENUE			
	STATION	N	E
POT	20+00.00	1,868,952.98	1,087,329.67
PC	22+49.72	1,868,974.03	1,087,578.50
PI	23+46.93	1,868,982.23	1,087,675.36
PT	24+43.38	1,869,010.91	1,087,768.24
POT	26+75.64	1,869,079.46	1,087,990.16

ALIGNMENT COORDINATES PROSPECT ROAD			
	STATION	N	E
POT	10+00.00	1,868,635.04	1,087,540.99
PI	11+38.81	1,868,771.03	1,087,513.15
PI	13+35.72	1,868,996.48	1,087,489.26
POT	16+11.43	1,868,240.85	1,087,462.05

ALIGNMENT COORDINATES GOLF AVENUE			
	STATION	N	E
POT	70+00.00	1,868,998.22	1,087,723.00
PC	70+40.72	1,869,037.08	1,087,710.82
PI	70+79.54	1,869,074.12	1,087,699.20
PRC	71+14.77	1,869,109.29	1,087,715.62
PI	71+45.07	1,869,136.75	1,087,728.43
PT	71+75.07	1,869,166.50	1,087,734.18

ALIGNMENT COORDINATES RAILROAD AVENUE			
	STATION	N	E
POT	40+00.00	1,868,724.01	1,087,361.41
POT	41+58.86	1,868,771.03	1,087,513.15

ALIGNMENT COORDINATES ANN STREET			
	STATION	N	E
POT	50+00.00	1,868,752.08	1,087,517.03
POT	51+60.19	1,868,685.33	1,087,662.66

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 50 | SHEET 2 OF 2 SHEETS | STA. TO STA.

ALIGNMENT AND TIES

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	14
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

PLAN AND PROFILE BURLINGTON AVE.

BURLINGTON AVENUE

GOLF A

N

20 0 20
scale feet

STA. 12+73.7 PROSPECT AVENUE
END IMPROVEMENT

HMA
SURFACE
REMOVAL,
BUTT
JOINT

HMA SURFACE REMOVAL

SIDEWALK REMOVAL

SIDEWALK
REMOVAL

BIKE RACK REMOVALS

RELOCATE BIKE
FIX-IT STATION

EXISTING STRUCTURE REMOVAL

EXISTING BNSF BOX
TO BE RELOCATED BY OTHERS

CONTRACTOR TO PERFORM HMA
SURFACE REMOVAL AT CROSSING
IN COORDINATION WITH BNSF
CROSSING WORK
STA. 11+86 TO 12+35

BNSF RAILROAD

BNSF RAILROAD

PAVEMENT REMOVAL

BENCH REMOVAL

EXISTING TIMBER
WALL TO BE
REMOVED,
INCLUDED IN
CLEARING

SIDEWALK REMOVAL

RAILROAD AVENUE

COMBINATION CURB AND
GUTTER REMOVAL

BEGIN HMA
SURFACE REMOVAL
STA. 40+85

HMA
SURFACE
REMOVAL,
BUTT
JOINT

BEGIN IMPROVEMENT
STA. 10+72.24

HMA
SURFACE
REMOVAL,
BUTT
JOINT

PROSPECT ROAD
10+00

ANN STREET

HMA
SURFACE
REMOVAL,
BUTT
JOINT

DEMOLITION LEGEND

- SIDEWALK REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL, 2 3/4"
- PAVEMENT REMOVAL
- SURFACE REMOVAL, BUTT-JOINT
- EXISTING STRUCTURE REMOVAL
- CATCH BASIN REMOVAL
- TREE REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL

Default
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

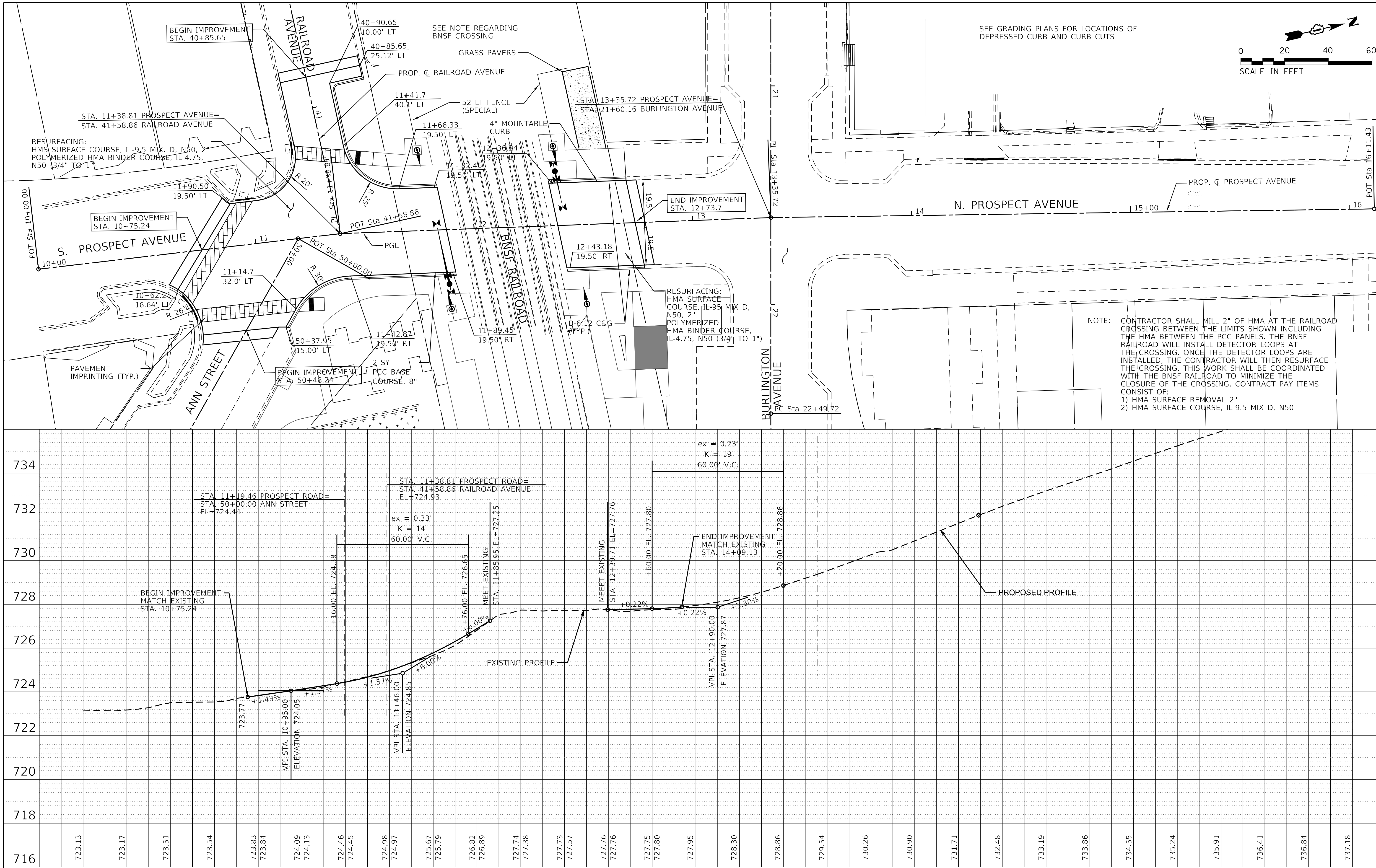
VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 1 OF 1 SHEETS | STA. TO STA.

REMOVALS PLAN

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	15
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE



PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTAT'NS CH'KD
NOTE BOOK
NO.
BY
DATE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 1 OF 1 SHEETS

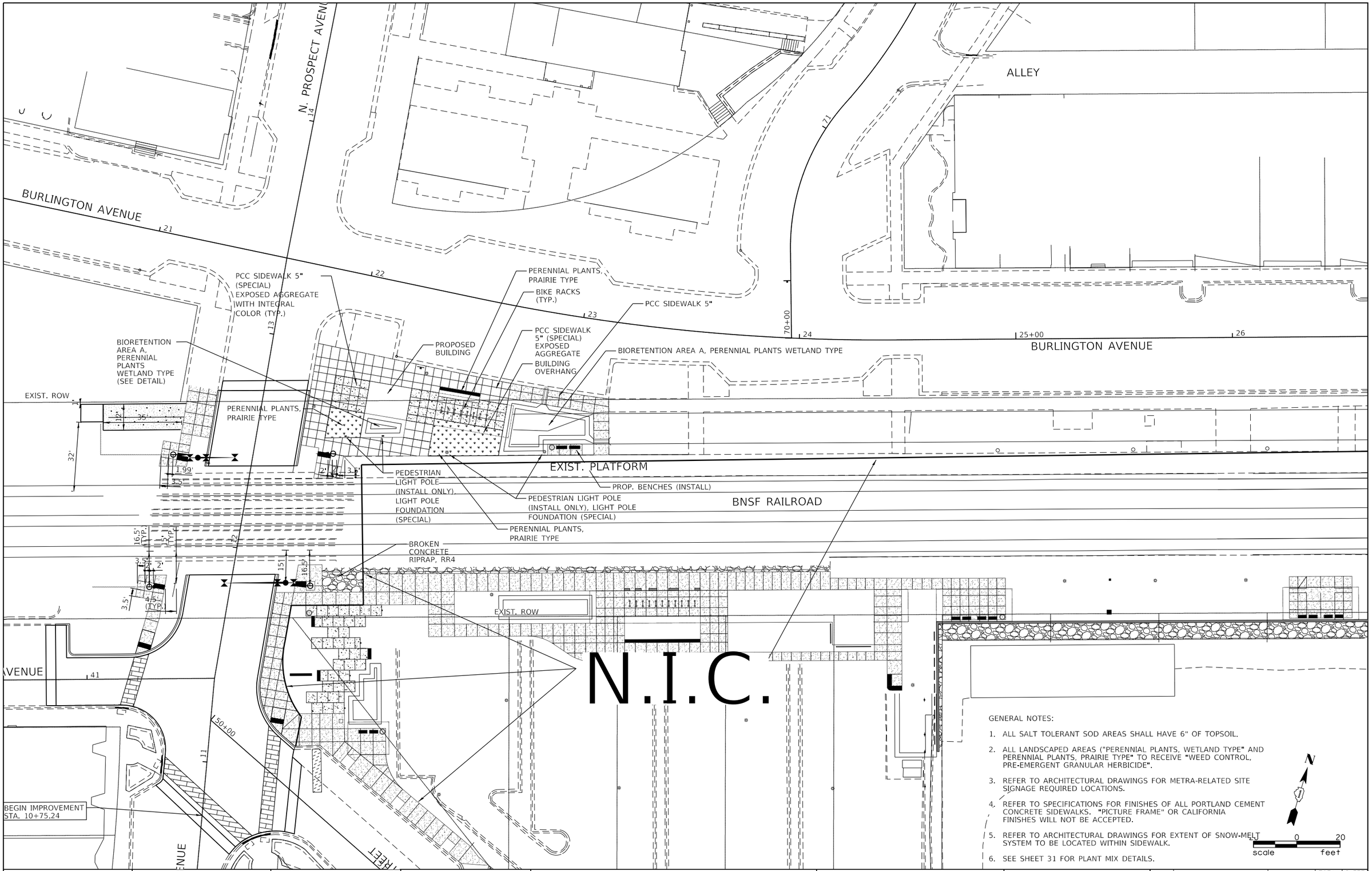
PLAN AND PROFILE
PROSPECT AVENUE

STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	16

CONTRACT NO. 61G62

ILLINOIS FED. AID PROJECT



GENERAL NOTES:

1. ALL SALT TOLERANT SOD AREAS SHALL HAVE 6" OF TOPSOIL.
2. ALL LANDSCAPED AREAS ("PERENNIAL PLANTS, WETLAND TYPE" AND PERENNIAL PLANTS, PRAIRIE TYPE" TO RECEIVE "WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE".
3. REFER TO ARCHITECTURAL DRAWINGS FOR METRA-RELATED SITE SIGNAGE REQUIRED LOCATIONS.
4. REFER TO SPECIFICATIONS FOR FINISHES OF ALL PORTLAND CEMENT CONCRETE SIDEWALKS. "PICTURE FRAME" OR CALIFORNIA FINISHES WILL NOT BE ACCEPTED.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF SNOW-MELT SYSTEM TO BE LOCATED WITHIN SIDEWALK.
6. SEE SHEET 31 FOR PLANT MIX DETAILS.

N

scale 0 20 feet

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 1 OF 1 SHEETS | STA. TO STA.

SITE PLAN

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	17
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

MAINTENANCE OF TRAFFIC - CONSTRUCTION AND TRAFFIC CONTROL NOTES

PROSPECT AVENUE

STAGE 1

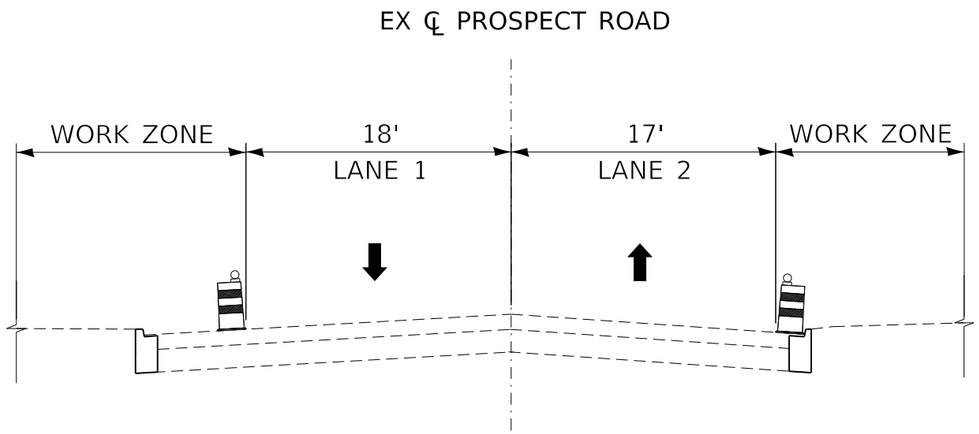
CONSTRUCTION:

- CLOSE DOWN THE AREA AS SHOWN ON MOT DRAWING.

- CONSTRUCT CURB AND GUTTER, PAVEMENT AND STREET SCAPING WORK WITHIN THAT ZONE DEFINING THE PROPOSED DESIGN.

TRAFFIC:

- NORTHBOUND & SOUTHBOUND TRAFFIC USE EXISTING PROSPECT AVENUE ROADWAY REDUCED FOR CONSTRUCTION.



MOT STAGE 1 – TYPICAL SECTION

PROSPECT ROAD
STA 10+75 to STA 12+74

NOTE:

1) HMA SURFACE, PAVEMENT PATCHING AND POLYMERIZED HMA BINDER PLACEMENT TO UTILIZE STANDARD 701501. ONE LANE OF TRAFFIC WITH FLAGGERS TO BE MAINTAINED AT ALL TIMES DURING WORKING HOURS. ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON ALL ROADWAYS DURING NON-WORKING TIMES.

2) CONSTRUCTION OF THE RAILROAD TRACK CROSSING WILL BE DONE BY THE BNSF RAILROAD. HOWEVER, THIS CONTRACT INCLUDES HMA SURFACE REMOVAL AND REPLACEMENT AT THE CROSSING. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH THE BNSF RAILROAD. PROSPECT AVENUE BETWEEN RAILROAD AVENUE AND BURLINGTON AVENUE MAY BE REDUCED TO ONE-WAY, ONE LANE TRAFFIC FOR A MAXIMUM OF ONE WEEK TO ALLOW FOR CONSTRUCTION OF THE CROSSING AND INSTALLATION OF NEW SIGNAL EQUIPMENT.

3) CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS TO ALL BUILDINGS, TRAIN PLATFORMS, AND AVAILABLE PARKING AT ALL TIMES AT THE LOCATIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE A PLAN FOR HOW ACCESS WILL BE MAINTAINED INCLUDING A SEQUENCING PLAN FOR THE STAGING OF THE CLOSURE OF THE SIDEWALKS TO THE ENGINEER FOR APPROVAL. ALL MEANS OF PROVIDING ACCESS SUCH AS TEMPORARY PAVEMENT, STEEL PLATES, ETC. SHALL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

4) ACCESS BY CONTRACTORS VEHICLES AND EQUIPMENT SHALL BE ALONG RICHMOND AVENUE / PARK AVENUE / EASTERN AVENUE FROM 55TH STREET ON THE SOUTH AND PROSPECT AVENUE FROM CHICAGO AVENUE ON THE NORTH. CROSSING OF THE TRACKS ON PROSPECT AVENUE WILL NOT BE PERMITTED.

TERRA ENGINEERING LTD.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 1 OF 2 SHEETS

MAINTENANCE OF TRAFFIC
NOTES & TYPICAL SECTION

STA. TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	18
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

BURLINGTON AVENUE

20+00

21

22

23

① STA. 17+00

② STA. 15+00

① STA. 16+95

② STA. 18+95

① STA. 26+50, LT

② STA. 24+50, LT

MATCH LINE STA

EXIST. PLATFORM

BNSF RAILROAD

13

12

ACCESS TO THE NORTH SIDE TRAIN PLATFORM SHALL BE MAINTAINED AT ALL TIMES UP TO WHEN BNSF BEGINS CONSTRUCTION OF THE CROSSING.

N

0 20 40 60

SCALE IN FEET

24" WHITE PAVEMENT MARKING TAPE (STOP BAR), (TYP.)

41

50+00

11

40+00

RAILROAD AVENUE

ANN STREET

51

10+00

PROSPECT AVENUE

SIDEWALK ACCESS TO BE MAINTAINED AT ALL TIMES ON EITHER THE EAST OR WEST SIDES OF PROSPECT AVENUE BETWEEN BURLINGTON AVENUE AND RAILROAD/ANN STREET EXCEPT WHEN BNSF CONSTRUCTION CLOSES THE ENTIRE CROSSING FOR THEIR WORK.

TRAFFIC CONTROL LEGEND

- WORK ZONE
- TYPE II BARRICADES OR DRUMS @50' C-C W/ STEADY BURN MONO-DIRECTIONAL LIGHT (10' C-C ON RADII AND CURVES, AND 20' C-C ON TAPERS)
- DIRECTION OF TRAVEL
- TYPE III BARRICADE WITH FLASHING LIGHTS
- ① ROAD CONSTRUCTION AHEAD — W20-1103(0)-48
- ② W20-7(0)-48 OR W21-1(0)-48

Default
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TERRA ENGINEERING LTD.

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PLOT DATE = 5/24/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 2 OF 2 SHEETS | STA. | TO STA.

MAINTENANCE OF TRAFFIC
SOUTH SIDE

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	19
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

EROSION CONTROL LEGEND

- TEMPORARY EROSION CONTROL SEEDING
- INLET FILTERS
- PERIMETER EROSION BARRIER

NOTE:
INSTALL FILTERS IN ALL EXISTING INLETS ON PROJECT AND IN ALL NEW CATCH BASINS AND INLETS

N

0 20 40 60
SCALE IN FEET

RAILROAD AVENUE
40+00
41
BEGIN IMPROVEMENT
STA. 40+85.65
℄ RAILROAD AVENUE
STA. 11+38.81
STA. 11+58.86
BEGIN IMPROVEMENT
STA. 10+75.24
S. PROSPECT AVENUE
10+00
11
50+00
ANN STREET
51
END IMPROVEMENT
STA. 50+48.24
12
BNSF RAILROAD
℄ PROSPECT AVENUE
13
END IMPROVEMENT
STA. 12+93.07
BURLINGTON AVENUE
20+00
21
STA. 13+35.72
STA. 21+60.16
14
N. PROSPECT AVENUE
15+00
16
22
23
℄ BURLINGTON AVENUE

Default
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	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 1 OF 1 SHEETS | STA. TO STA.

EROSION CONTROL

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	20
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		

STA. 13+35.72 PROSPECT ROAD
STA. 21+60.16 BURLINGTON AVENUE

PROSPECT AVENUE

BURLINGTON AVENUE

BURLINGTON AVENUE

EXIST. PLATFORM

BNSF RAILROAD

N

scale 20 0 20 feet

MH, TY A, 4' DIA., TY. 1 F, CL
INSTALL OVER EXISTING PIPE
RIM = 727.85
INV (EX) = 724.5 +/-
INV (S) = 724.6

ADJUST EXIST. CLEANOUT
(PAID FOR AS MANDHOLES
TO BE ADJUSTED)

TRENCH DRAIN
RIM = 728.15
7 LF

CB TYPE C
TY 1 F, OL
(INSTALLED ON
EXIST PIPE)
12+47.7, 19.5' RT
RIM = 729.22
INV (EX)=725.3

PIPE UNDERDRAINS
6" (SPECIAL)
60 LF @ 0.58%

CB TYPE C
TY 8 GRATE
22+16.7, 66.6' RT
RIM = 727.68
INV (E)=724.95

CB TYPE C, TY. 1 F, CL
RIM = 727.60
INV = 724.67

TRENCH DRAIN
RIM = 727.40
7 LF

EXISTING PROFILE

MANHOLE
RIM 727.20

18" RC PIPE

EX 12" STORM SEWER

INV. UNKNOWN

INV. EL 724.21

INV. EL 724.51

EX 18" STORM SEWER

CATCH BASIN
STA 24+32

INV. EL 723.67

INV. EL 723.69

INV. EL 723.78

736
734
732
730
728
726
724
722
720

727.20 727.66 728.01 728.31 728.63 728.87 729.05 729.27 729.36 729.34 729.20 729.02 728.84 728.68 728.56 728.56 728.50 728.44 728.35 728.25 728.10 727.86 727.60 727.37 727.24 727.09 726.97 726.83 726.77 726.55

20+00 20+50 21+00 21+50 22+00 22+50 23+00 23+50 24+00 24+50 25+00 25+50

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

Default
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PLOT SCALE = 20	CHECKED -	REVISED -
PLOT DATE = 5/24/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 1 OF 1 SHEETS | STA. TO STA.

DRAINAGE AND UTILITIES
BURLINGTON AVENUE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	21
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		

N

0 10 20
scale feet

N. PROSPECT AVE

14

21 22 23

BURLINGTON AVENUE

13

19.5' 19.5'

727.51
727.95 TC
2%
727.90
2%
727.51
727.95 TC

16', 4" MOUNTABLE CURB

25' (TYP)

END IMPROVEMENT
STA. 12+73.7
MATCH EXISTING

727.39
727.66 TC
727.78
727.39
727.83 TC

STA. 12+39.71
MATCH EXISTING

EXISTING PLATFORM

BNSF RAILROAD

LEGEND

XXX.XX / XXX.XX TC = PROP. EDGE OR TOP OF PAVEMENT ELEV. / PROP. TOP OF CURB ELEV.

Default
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PLOT SCALE = 10	CHECKED -	REVISED -
PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

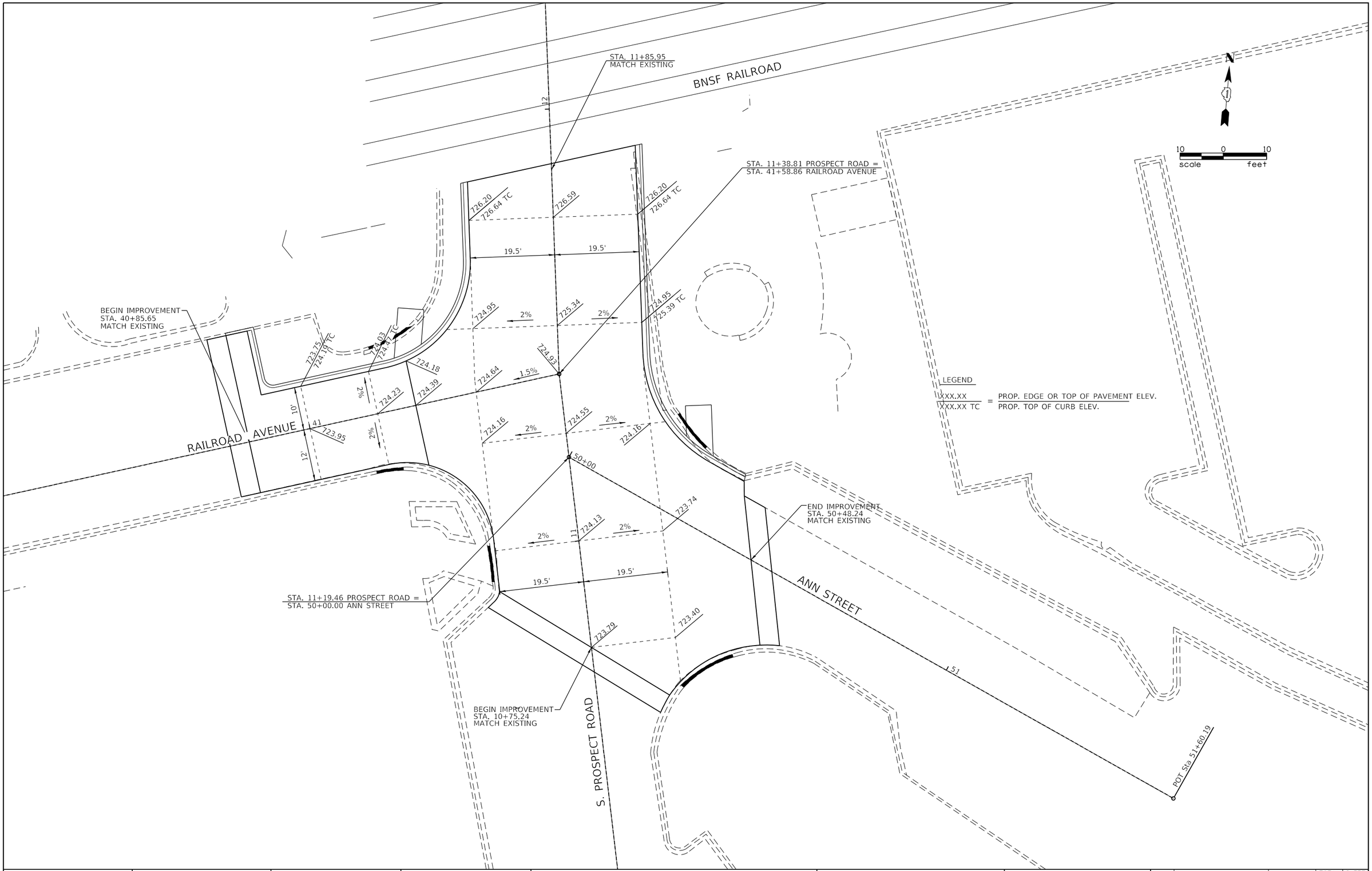
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 10 | SHEET 1 OF 3 SHEETS | STA. TO STA.

GRADING PLAN

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	22
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			



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	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 10 | SHEET 2 OF 3 SHEETS | STA. | TO STA.

GRADING PLAN

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	23
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

N. PROSPECT AVE

14

13

22

23

24

70+00

BURLINGTON AVENUE

BURLINGTON AVENUE

N

0 10 20
scale feet

TC 728.39
TC 728.28
TC 728.64
TC 728.58
728.48
728.25
728.09
TC 727.96
728.44
728.55
728.49
728.11
728.01
727.95
727.84
728.88
TC 728.22
728.39
728.43
728.29
728.25
727.38
728.30
728.21
728.47
728.21
728.20
727.61
727.81
727.41
727.39
727.45
726.85
726.75
726.73
FFE 728.14
728.19
728.19
728.18
728.00
728.08
727.95
727.15
727.23
727.35
727.31
727.98
727.94
727.63
727.56
727.71
727.50
ME±727.19
ME±727.50
ME±727.28
ME±727.40
ME±727.25
727.99
727.07
727.76
TOP OF SLOPE (TYP.)
ME±727.70
TC 727.84
727.67
727.68
727.77
BOTTOM OF SLOPE (TYP.)
727.95
ME±727.75
ME±727.77
ME±727.54
727.57
ME±727.67

EXISTING PLATFORM

BNSF RAILROAD

Default
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	PLOT SCALE = 10	CHECKED -	REVISED -
	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

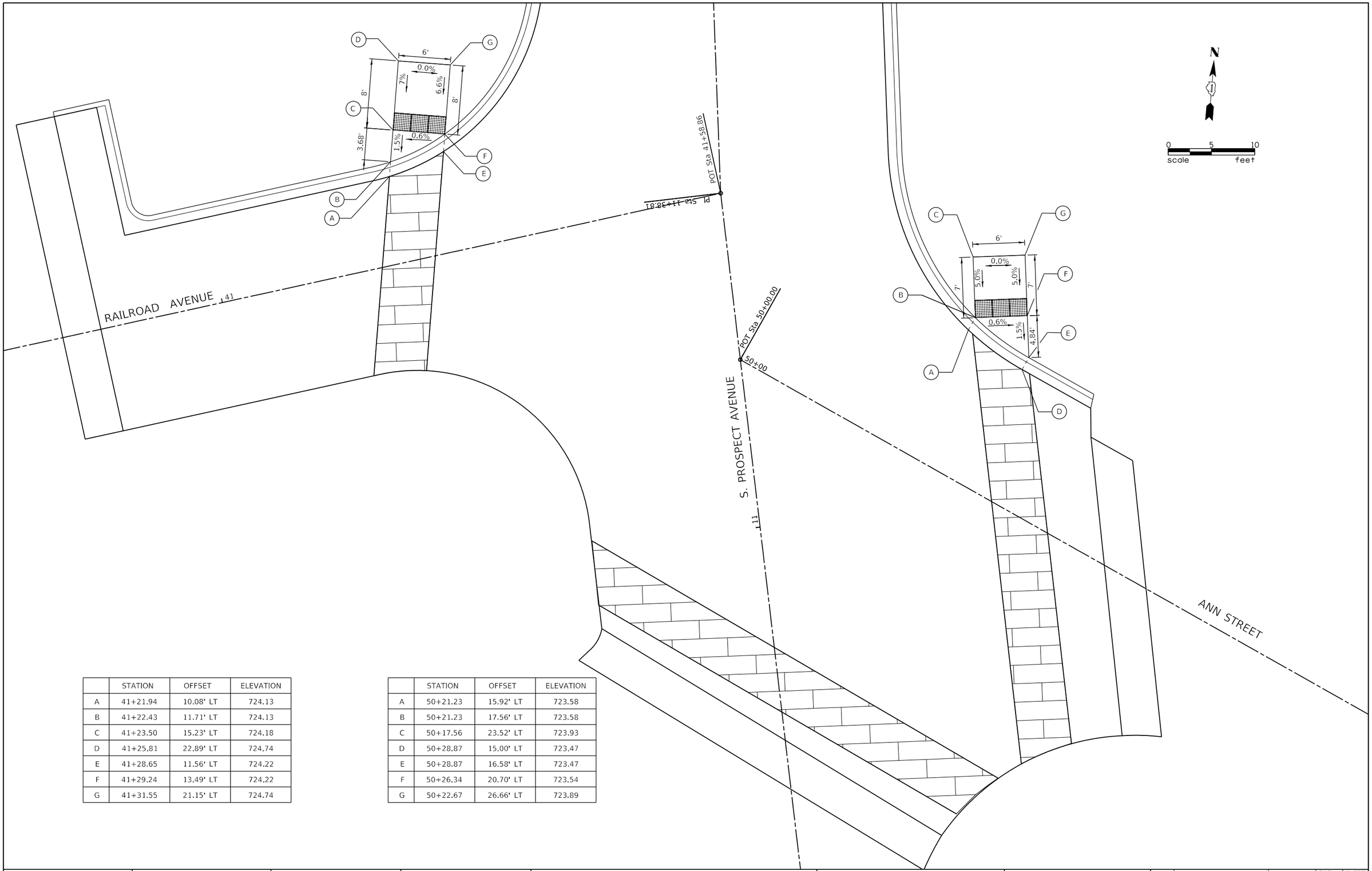
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 10 | SHEET 3 OF 3 SHEETS | STA. TO STA.

GRADING PLAN

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	24
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			



	STATION	OFFSET	ELEVATION
A	41+21.94	10.08' LT	724.13
B	41+22.43	11.71' LT	724.13
C	41+23.50	15.23' LT	724.18
D	41+25.81	22.89' LT	724.74
E	41+28.65	11.56' LT	724.22
F	41+29.24	13.49' LT	724.22
G	41+31.55	21.15' LT	724.74

	STATION	OFFSET	ELEVATION
A	50+21.23	15.92' LT	723.58
B	50+21.23	17.56' LT	723.58
C	50+17.56	23.52' LT	723.93
D	50+28.87	15.00' LT	723.47
E	50+28.87	16.58' LT	723.47
F	50+26.34	20.70' LT	723.54
G	50+22.67	26.66' LT	723.89

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PLOT SCALE = 5	CHECKED -	REVISED -
PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 5 | SHEET 1 OF 1 SHEETS | STA. TO STA.

ADA RAMPS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	25
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

Default
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PAVEMENT MARKING LEGEND

1. THERMOPLASTIC PAVEMENT MARKING - LINE 24" (SOLID WHITE STOP BAR)
2. THERMOPLASTIC PAVEMENT MARKING - LINE 4" (SOLID DOUBLE YELLOW) @ 11" C-C
3. THERMOPLASTIC PAVEMENT MARKING - LINE 6" (SOLID WHITE)
4. THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS (WHITE)
5. THERMOPLASTIC PAVEMENT MARKING - LINE 6" (DOTTED WHITE)
6. THERMOPLASTIC PAVEMENT MARKING - LINE 4" (SOLID WHITE)

N

0 20 40 60
SCALE IN FEET

RAILROAD AVENUE
40+00
BEGIN IMPROVEMENT
STA. 40+85.65
11'
11'
41
STA. 41+14.4
STA. 41+51.81
BEGIN IMPROVEMENT
STA. 10+75.24
STA. 11+38.81
STA. 41+58.86
S. PROSPECT AVENUE
10+00
11
50+00
36.8' RT
END IMPROVEMENT
STA. 50+48.24
1ST
ANN STREET
STA. 11+73.6
14'
14'
14'
12
BNSF RAILROAD
STA. 12+47.7
STA. 12+99.78
14'
14'
13
℄ PROSPECT AVENUE
END IMPROVEMENT
STA. 12+73.7
20+00
BURLINGTON AVENUE
21
22
N. PROSPECT AVENUE
14
15+00
16

Default
V:\2018\18-258 Clarendon Hills Downtown Revitalization\Design\Transportation\CHDR Contract 2\CADD\C4DD Sheets\CH_Pmk_01.dgn

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		DRAWN -	REVISED -		
	PLOT SCALE = 20	CHECKED -	REVISED -		SCALE: 20 SHEET 1 OF 1 SHEETS
	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -		STA. TO STA.

PAVEMENT MARKING PROSPECT AVENUE

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	26
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

"FOR INFORMATION ONLY"
"WORK BY OTHERS"

"GATE AND FENCE LOCATION APPROXIMATE. GATES TO BE LOCATED PER BNSF AND MUTCD STANDARDS"

CONTACT FENCE POST FOR SWING GATE (TYP.) SEE ICC GUIDLINES & FENCING PLAN FOR DETAILS

PROVIDE 4" MOUNTABLE CURB IN FRONT OF BUNGALOW DRIVE

PROPOSED GRASSCRETE ACCESS DRIVE

PROPOSED BNSF BUNGALOW RELOCATION

EMERGENCY EXIT SWING GATE

ENTRANCE GATE

PROP. FENCE

EXIST. PLATFORM

FLEXIBLE DELINEATORS

PROP, LANDSCAPING GRAVEL

BNSF RAILROAD

BNSF RAILROAD

3.5' WIDE EMERGENCY EXIST SIDEWALK (TYP.)

DETECTABLE WARNING (TYP.)

RAILROAD AVENUE

13.75'
19.5'
19.5'
13.75'
35'
32'
10'
3.5'
2'
2'
3.5'
16.5' (TYP.)
20'
3.5'
2'
3.5'
12'
15'
16.5'
R 25'
R 20'
R 30'
13
41
50

Default
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	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

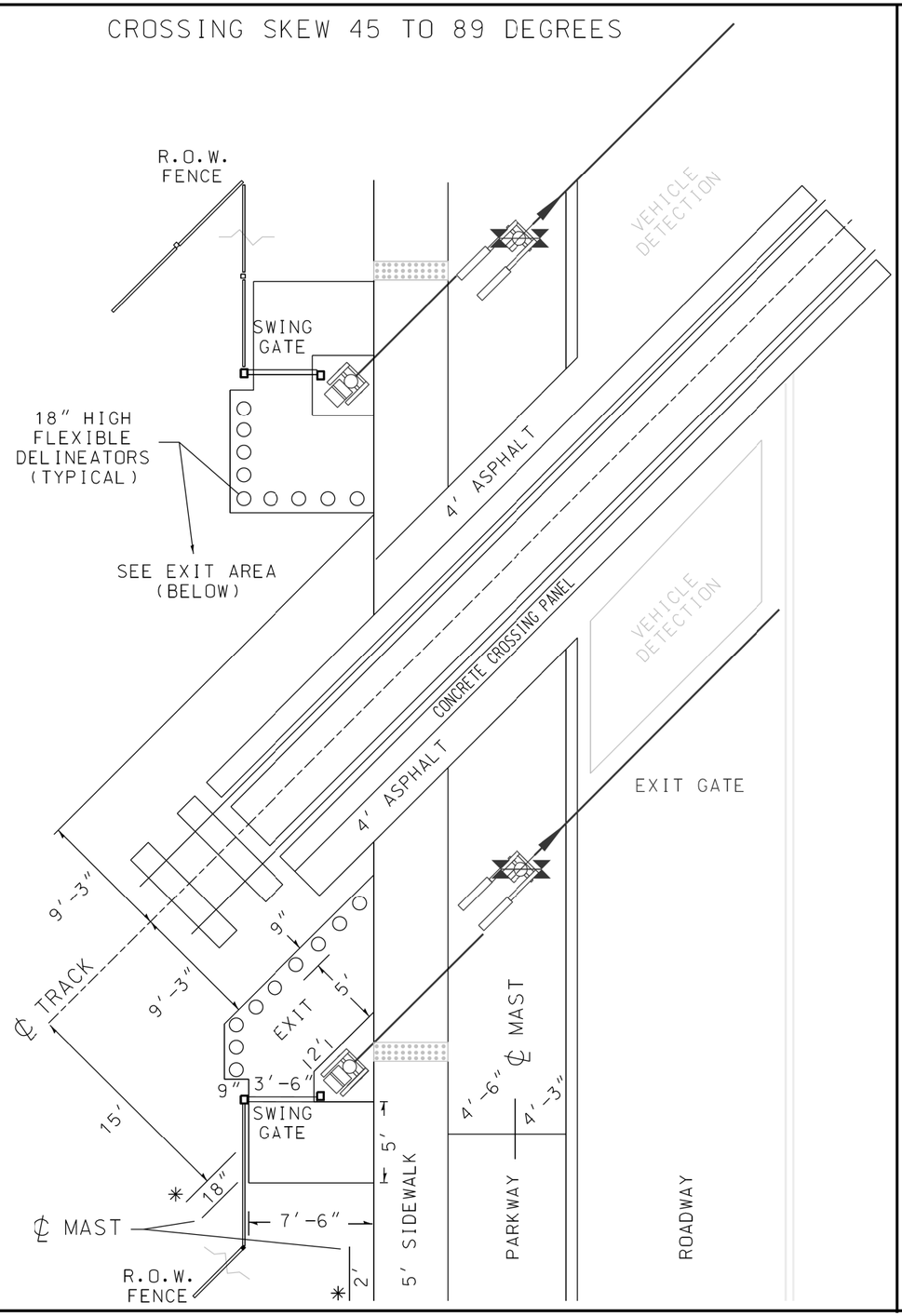
VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: 20 | SHEET 1 OF 3 SHEETS | STA. | TO STA.

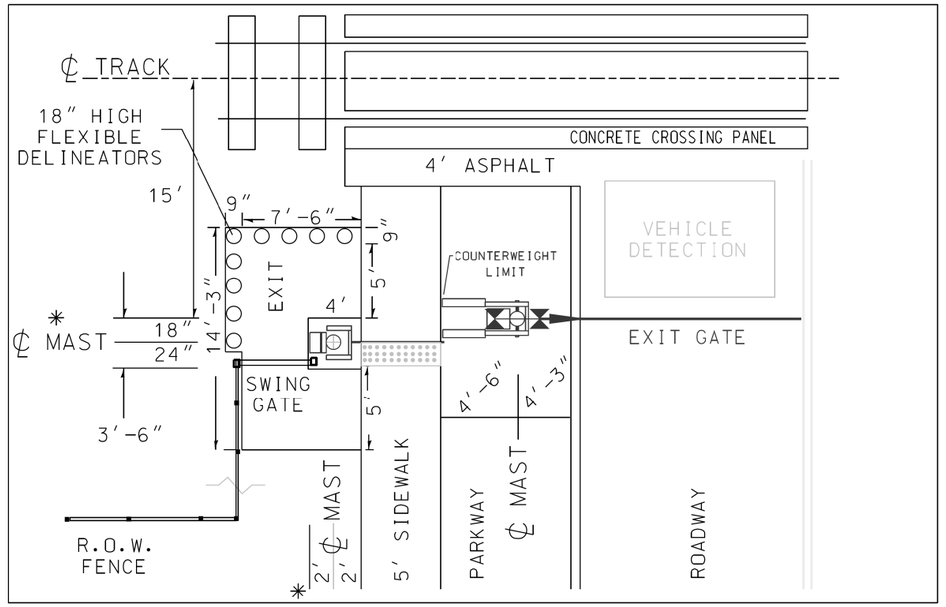
CROSSING IMPROVEMENT
BNSF RAILROAD

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	27
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

CROSSING SKEW 45 TO 89 DEGREES



90 DEGREE



RECOMMENDED CONSTRUCTION SEQUENCE - WARNING DEVICES INSTALLED FIRST. PARALLEL TO TRACKS

1. LOCATE ROADWAY GATE 15 FT FROM CENTERLINE OF TRACK
2. CONDUIT (2) TO ACCOMMODATE ROADWAY AND PEDESTRIAN GATES
3. LAYOUT SIDEWALK
   - A. ALLOW CLEARANCE FROM ROADWAY COUNTERWEIGHTS AND ARMS
   - B. 4'-6" CENTERLINE FOUNDATION TO END OF COUNTERWEIGHTS
   - C. 18" CENTERLINE FOUNDATION TO OUTER ARMS
4. LOCATE PEDESTRIAN GATE 16'-6" FROM CENTERLINE OF TRACK
   - A. ALLOW CLEARANCE FOR GATE ARM BRACKET (24" FOUNDATION CENTERLINE TO SIDEWALK - TYPICAL)
   - B. LOCATE BACK OF MECHANISM/DOOR - 2' FROM FOUNDATION CENTERLINE
   - C. USE PEDESTRIAN GATE MECH WITHOUT COUNTERWEIGHT ARM, OR CUT FLUSH TO MOTOR HOUSING TO ELIMINATE CONFLICT WITH SWING GATE
   - D. INSTALL SONOTUBE FOR SWING GATE CONTACT POST TO ELIMINATE POTENTIAL DAMAGE TO SIGNAL CABLE DURING FENCE INSTALLATION
5. LAYOUT EXIT AREA; FRAME AND POUR SIDEWALK AND EXIT AREA
   - A. PROVIDE 3'-6" x 4' CA-6 "ISLAND"
   - B. * USE CENTERLINE OF PED GATE MAST TO LOCATE EXIT EDGES *
6. INSTALL SWING GATE MINIMIZING GAPS TO PED. GATE. ENSURE GATE HOUSING OPENS
7. INSTALL 18" DELINEATORS - TRACK SIDE EXIT AREA (IN 9" PERIMETER EXTENSION)
8. COMPLETE R/W FENCE AND CONNECTIONS TO SWING GATE
9. ADJUST HINGES AND GATE CLOSER TO ALLOW PROPER OPERATION
10. CHECK 16'-6" ALONG PEDESTRIAN GATE FROM TRACK CENTERLINE FOR PARALLEL

"FOR INFORMATION ONLY"
"WORK BY OTHERS"

PLAN VIEW

REVISION DATE: NOV. 1, 2012

ILLINOIS COMMERCE COMMISSION

DESIGN GUIDANCE
PEDESTRIAN TREATMENTS
HIGH SPEED RAIL - UP

Default
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	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 2 OF 3 SHEETS | STA. | TO STA.

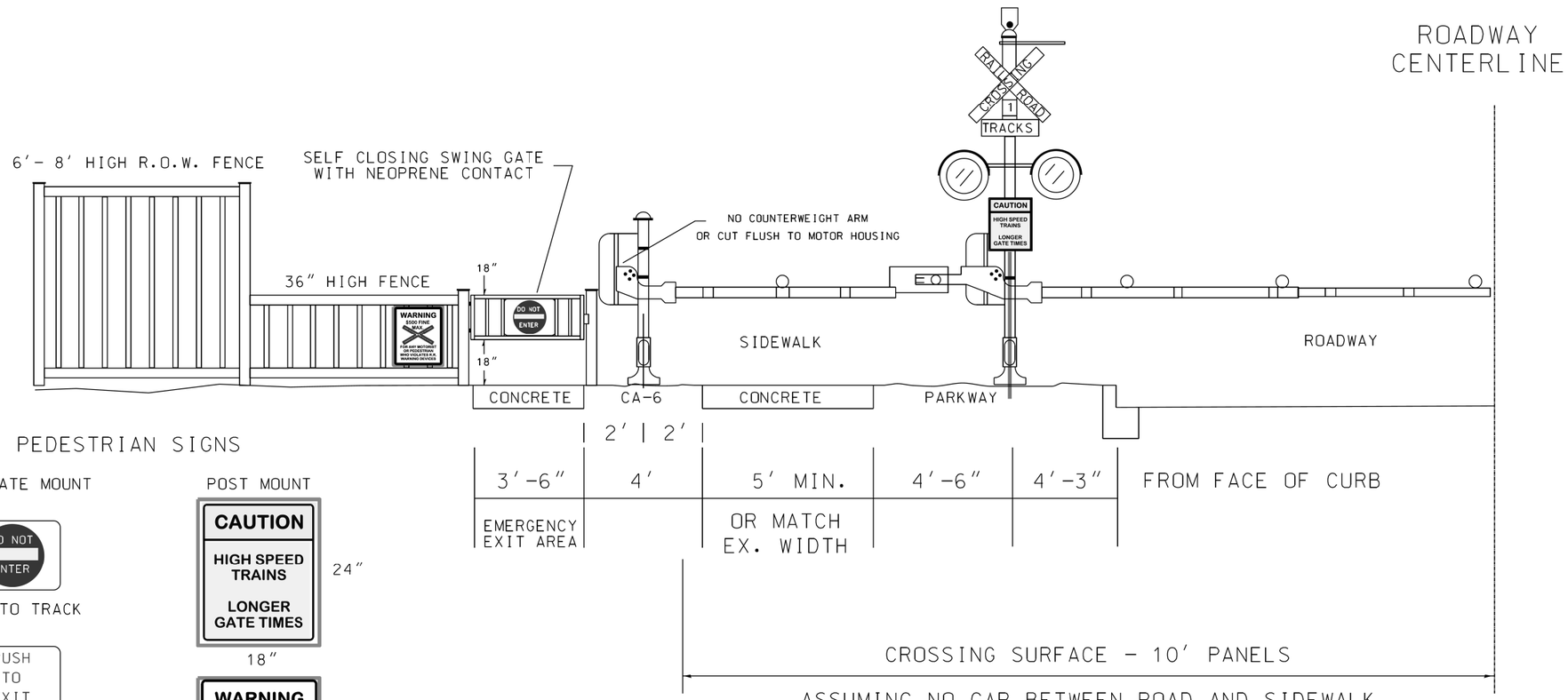
CROSSING IMPROVEMENT
TYPICAL STANDARDS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	28
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			

PEDESTRIAN VIEW AT EXIT GATE – TRAIN APPROACHING

CONCEPTUAL CROSS SECTION (NTS)

NOTES:
1. DESIGN TO COMPLY WITH MUTCD
2. ESCAPE AREA DESIGN– COMPLY WITH CHAPTER 4: "ACCESSIBLE ROUTES" OF ADA AND ABA GUIDELINES AMENDED AUGUST 5, 2005, OR LATEST REVISION
3. DETECTABLE WARNING – TRUNCATED DOMES PER CHAPTER 7: "COMMUNICATION ELEMENTS AND FEATURES," ADA AND ABA GUIDELINES
4. *FINAL DIMENSIONS DETERMINED IN FIELD DUE TO VARIABILITY OF LOCATIONS *



PEDESTRIAN SIGNS

SWING GATE MOUNT

VIEW TO TRACK

VIEW FROM TRACK

POST MOUNT

FENCE MOUNT

"FOR INFORMATION ONLY"
"WORK BY OTHERS"

REVISION DATE: NOV. 1, 2012

ILLINOIS COMMERCE COMMISSION

DESIGN GUIDANCE
PEDESTRIAN TREATMENTS
HIGH SPEED RAIL – UP

PAGE 1 OF 2

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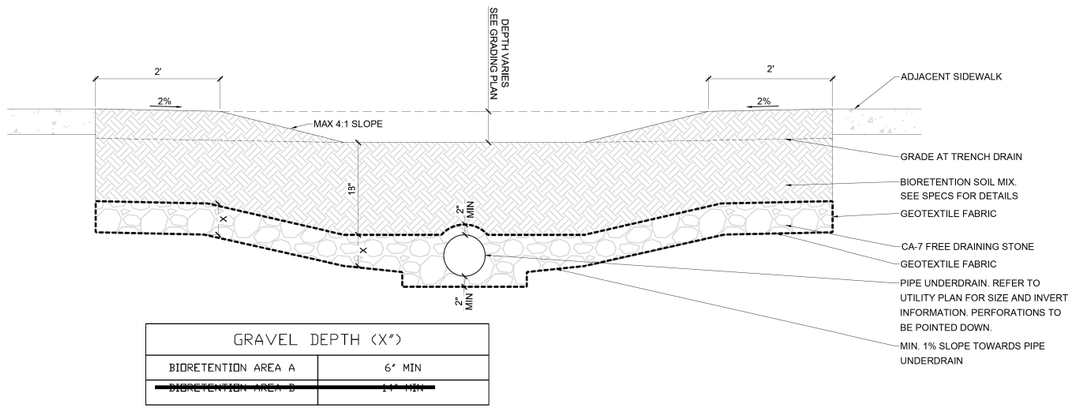
	PLOT SCALE = NTS	CHECKED -	REVISED -
	PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE
SCALE: NTS | SHEET 3 OF 3 SHEETS | STA. | TO STA.

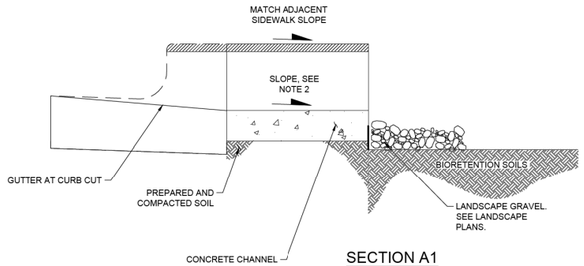
CROSSING IMPROVEMENT
TYPICAL STANDARDS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	29
		CONTRACT NO. 61G62		
		ILLINOIS FED. AID PROJECT		

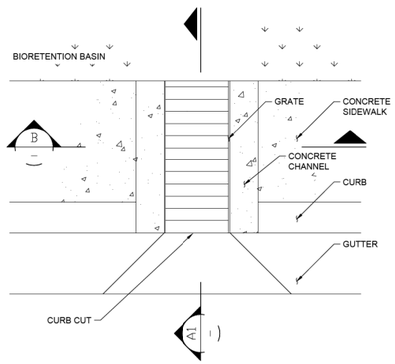


GRAVEL DEPTH (X")	
BIORETENTION AREA A	6" MIN
~~BIORETENTION AREA B~~	~~14" MIN~~

1 BIORETENTION SYSTEM
SCALE: NTS



SECTION A1

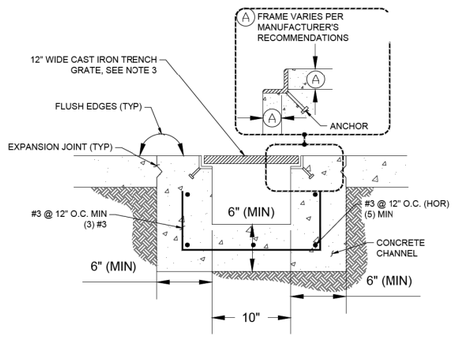


PLAN AT CURB CUT

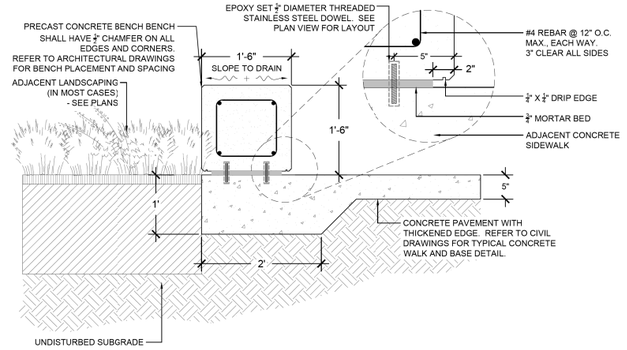
3 TRENCH DRAIN
SCALE: NTS

CONSTRUCTION NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR TRENCH DRAIN ASSEMBLY SHALL CONFORM TO VILLAGE OF CLARENDON HILLS STANDARD SPECIFICATIONS AND APPLICABLE CODES.
2. SLOPE TO PROVIDE AT LEAST 1 INCH DROP OVER LENGTH OF CHANNEL OR A MINIMUM OF 2 PERCENT, WHICHEVER IS LARGER.
3. ALL TRENCH GRATES SHALL BE REMOVABLE, RATED PER THE ANTICIPATED LOADING, AND BOLTED IN PLACE OR OUTFITTED WITH APPROVED TAMPER-RESISTANT LOCKING MECHANISM, FLUSH OR RECESSED IN GRATE.
4. BOND NEW CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH EPOXY AND DOWEL CONNECTION.
5. HORIZONTAL CONTROL JOINTS SHALL BE PROVIDED EVERY 10 LINEAR FEET, OR PER MANUFACTURER'S RECOMMENDATIONS.
6. APPLY EPOXY BONDING AGENT AT ALL TRENCH DRAIN CONSTRUCTION COLD JOINTS.

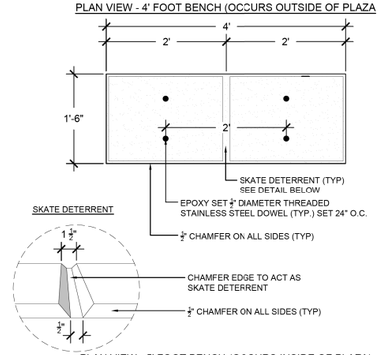


SECTION B

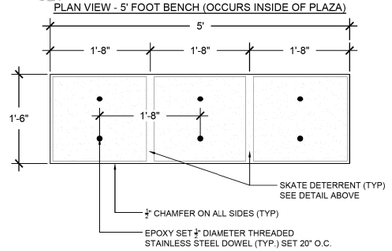


2 PRECAST CONCRETE BENCH
SCALE: NTS

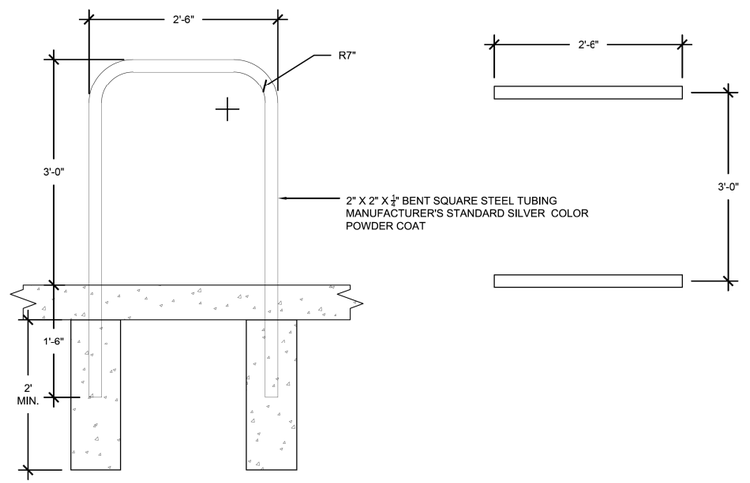
PLAN VIEW - 4' FOOT BENCH (OCCURS OUTSIDE OF PLAZA



PLAN VIEW - 5' FOOT BENCH (OCCURS INSIDE OF PLAZA)



BIKE RACK SHOWN IS BASIS OF DESIGN.



1 BICYCLE RACK DETAIL (IN-GROUND MOUNT)
SCALE: NTS

TERRA ENGINEERING LTD.

USER NAME = DavidL	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = NTS	CHECKED -	REVISED -
PLOT DATE = 5/13/2020	DATE - 4/20/2020	REVISED -

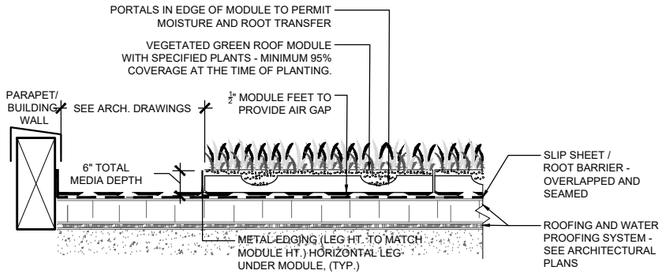
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
PROSPECT AVENUE

SCALE: NTS | SHEET 1 OF 2 SHEETS | STA. TO STA.

DETAILS
MISCELLANEOUS DETAILS

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	30
		CONTRACT NO. 61G62		
	ILLINOIS FED. AID PROJECT			



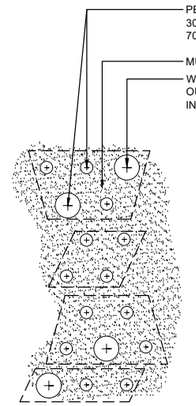
GREEN ROOF TRAY PLANT MIX

SEDUM ALBUM 'JELLY BEANS'
SEDUM AIZOON 'IMMERGRUNCHEN'
SEDUM HYBRIDIUM 'SIBERIAN GOLD'
SEDUM SPURIUM 'GREEN MANTLE'
SEDUM SPURIUM 'WOOD ROSE'
SEDUM SPURIUM 'BRONZE BEAUTY'

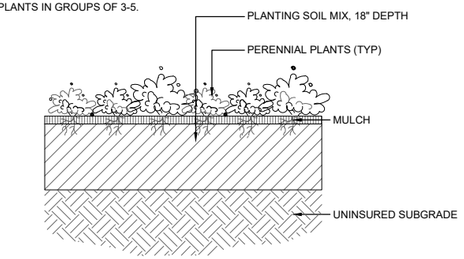
ACCENT PLANTS (3 PER MODULE)
- BOUTELOUA CURTIPENDULA
- CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'
- SPOROBULUS HETEROLEPIS

GREEN ROOF NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR ROOF PLAN DIMENSIONS AND DETAILS.
2. CONTRACTOR SHALL DETERMINE QUANTITIES OF ROOF MODULES NEEDED. LIMITS SHOWN ARE APPROXIMATE; CONTRACTOR SHALL CONFIRM PRIOR TO INSTALLATION.
3. ALUMINUM EDGING SHALL BE INSTALLED AROUND PERIMETER OF ALL EXPOSED ROOF MODULES.
4. COORDINATE MODULES WITH ALL ROOFTOP ELEMENTS INCLUDING VENTS, RTU'S, BALLAST AND OTHER APPURTENANCES.
5. CONTRACTOR SHALL OBSERVE ALL REQUIRED CLEARANCES BETWEEN ROOF ELEMENTS AND GREEN ROOF.
6. COORDINATE PLANT MIX AND SPACING WITH GREEN ROOF TRAY MANUFACTURER.



PLAN



SECTION

NOTES:
1. *PRAIRIE TYPE PERENNIALS* SHALL BE 30/70 MIX AS DETAILED ABOVE.
2. *ORNAMENTAL TYPE PERENNIALS* SHALL BE 100% 1 GALLON SIZE @ 12" O.C. HOWEVER, THEY SHALL STILL BE PLANTED IN GROUPS OF 3-5 AS DETAILED ABOVE.
3. ALL *WETLAND TYPE PERENNIALS* SHALL BE PLANTED ACCORDING TO DETAIL 4 THIS SHEET.

1 TYPICAL VEGETATED ROOF ASSEMBLY SECTION

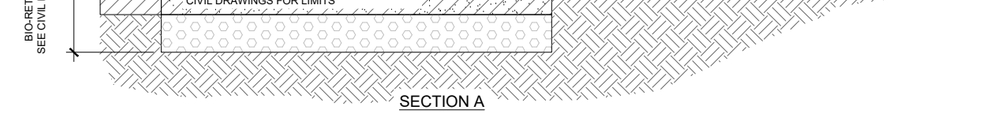
SCALE: NTS

2 VEGETATED ROOF ASSEMBLY INFORMATION

SCALE: NTS

3 PERENNIAL PLANTING - PRAIRIE AND ORNAMENTAL TYPE

SCALE: NTS



SECTION A

LANDSCAPE GRAVEL, ±12" DEPTH (TYP) (SEE DETAIL 6 THIS SHEET FOR EXAMPLE)

SET OVER 8OZ NEEDLE PUNCHED FILTER FABRIC AND COMPACTED SUBGRADE. WHERE LIMESTONE IS ADJACENT TO LANDSCAPE EDGING, EMBED STONE MINIMUM DEPTH 6". APPROXIMATE AREA: 3' X 3'

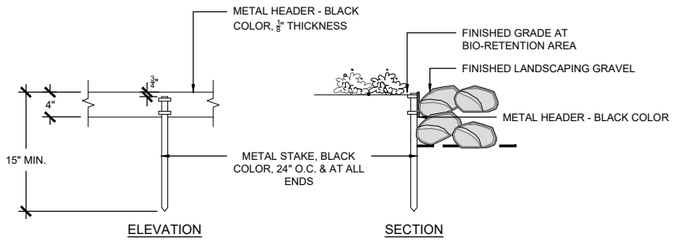
ROCK SIZE DISTRIBUTION:
8"-12": 80%
12"-18": 20%

TRENCH DRAIN - SEE CIVIL DRAWINGS

PORTLAND CEMENT CONCRETE SIDEWALK SEE CIVIL DRAWINGS

4 LANDSCAPING GRAVEL & WETLAND PERENNIAL PLANTING

SCALE: NTS



5 LANDSCAPE EDGING

SCALE: NTS

LANDSCAPING GRAVEL SHALL BE WEATHERED LIMESTONE AND GENERALLY MATCH THE COLORS (BUFFS, TANS, GRAY) AND SHAPE SHOWN IN THE PICTURE. REFER TO DIGITAL PDF FOR COLORS. THE SIZES OF THE STONES SHALL BE 8-36" IN DIAMETER, AS APPROVED BY THE ENGINEER. COLOR IMAGE WILL BE PROVIDED UPON REQUEST.

6 LANDSCAPING GRAVEL EXAMPLE

SCALE: NTS

Perennial Mix Plant Schedule

Village of Clarendon Hills Train Station/Streetscape

	Botanical name	Common name
	PERENNIAL PLANTS, PRAIRIE TYPE	
	12" O.C. SPACING	
	30% @ #1 CONTAINER	
	70% @ 2" DIAMETER PLUG	
EQ. MIX	Allium cernuum	Nodding Onion
	Asclepias tuberosa	Butterfly Weed
	Echinacea purpurea	Purple Coneflower
	Monarda fistulosa	Wild Bergamot
	Ratibida pinnata	Gray-Head Coneflower
	Rudbeckia fulgida	Black-Eyed Susan
	Schizachyrium scoparium	Little Bluestem
	Symphyotrichum laeve	Smooth Aster
	Tradescantia ohiensis	Ohio Spiderwort

	Botanical name	Common name
	PERENNIAL PLANTS, WETLAND TYPE	
	12" O.C. SPACING	
	30% @ #1 CONTAINER	
	70% @ 2" DIAMETER PLUG	
EQ. MIX	Asclepias canadensis	Wild Columbine
	Baptisia australis	Blue Wild Indigo
	Bidens cernua	Nodding Bur Marigold
	Dalea purpurea	Purple Prairie Clover
	Deschamsia caespitosa	Tufted Hair Grass
	Rudbeckia hirta	Black Eyed Susan

NOTE: SOME SPECIES MAY NOT BE AVAILABLE IN #1 CONTAINERS. CONTRACTOR SHALL PROVIDE NURSERY SOURCE LIST AND AVAILABLE SIZES AS PART OF SUBMITTAL PRIOR TO INSTALLATION.

M:_2018\18-258 Clarendon Hills Downtown Revitalization\Design\Site\Drawings
DEFAULT

TERRA ENGINEERING LTD.

USER NAME = WILLIAMP		DESIGNED – SJL		REVISED –	
		DRAWN – WJP		REVISED –	
PLOT SCALE = NTS		CHECKED – KLG		REVISED –	
PLOT DATE = 5/22/2020		DATE – 5/22/2020		REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF CLARENDON HILLS
LANDSCAPE DETAILS

SCALE: NTS | SHEET 2 OF 2 SHEETS | STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	31

CONTRACT NO. 61G62

ILLINOIS | FED. AID PROJECT

Village of Clarendon Hills
Prospect Avenue
Building

1 S Prospect Ave Streetscape & Outbound Shelter

Clarendon Hills, IL, 60514

SCHEDULE OF DRAWINGS

GENERAL DRAWINGS - LEGAT ARCHITECT

A-001 TITLE SHEET
A-011 CODE INFORMATION & SAFETY REFERENCE PLANS
A-021 SYMBOLS AND PROJECT GENERAL NOTES
A-031 BNSF REQUIREMENTS
A-041 METRA REQUIREMENTS
A-042 METRA REQUIREMENTS

STRUCTURAL DRAWINGS - GOODFRIEND MAGRUDER STRUCTURE LLC

S-000 STRUCTURAL NOTES
S-001 OVERALL PLAN
S-101 SHELTER CANOPY PLANS
S-301 CONCRETE DETAILS
S-302 STEEL DETAILS
S-901 3D DRAWINGS

ARCHITECTURAL DRAWINGS - LEGAT ARCHITECTS

AS001 OVERALL SITE PLAN
AS101 STREETSCAPE - SITE PLAN
AS102 METRA SIGNAGE AND WAYFINDING
AS103 METRA SIGNAGE AND WAYFINDING
AS104 METRA SIGNAGE AND WAYFINDING
A-101 SHELTER CANOPY FLOOR PLAN, ROOF PLAN
A-102 SHELTER CANOPY ELEVATIONS AND SECTIONS
A-103 SHELTER CANOPY BOARD FORMED CONCRETE DETAILS
A-311 BUILDING SECTIONS
A-501 EXTERIOR DETAILS
A-502 EXTERIOR DETAILS
A-503 EXTERIOR DETAILS
A-504 EXTERIOR DETAILS
A-511 INTERIOR DETAILS
A-601 DOOR AND FRAME DETAILS

PLUMBING DRAWINGS - dbHMS

PS000 PLUMBING SYMBOLS, NOTES & ABBREVIATIONS
PS100 PLUMBING SITE PLAN

ELECTRICAL DRAWINGS - dbHMS

ES000 ELECTRICAL SYMBOLS, NOTES & ABBREVIATIONS
ES100 ELECTRICAL SITE PLAN
ES101 FLOOR PLANS - ELECTRICAL
ES200 LIGHTING SITE PLAN
ES400 ELECTRICAL RISER DIAGRAMS
ES500 ELECTRICAL SCHEDULES - POWERED EQUIPMENT
ES510 ELECTRICAL SCHEDULES
ES600 PHOTOMETRIC CALCULATION

TECHNOLOGY DRAWINGS - dbHMS

TS000 TECHNOLOGY SYMBOLS, NOTES & ABBREVIATIONS
TS100 TECHNOLOGY SITE PLAN
TS101 FLOOR PLANS - TECHNOLOGY
TS600 TECHNOLOGY DETAILS - STRUCTURED CABLING
TS601 TECHNOLOGY DETAILS - STRUCTURED CABLING

STATE OF ILLINOIS · ZACHERY R. WIESE · 001.021669 · LICENSED ARCHITECT

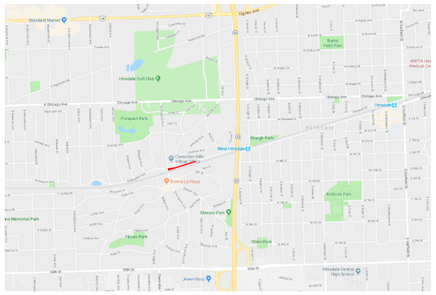
STATE OF ILLINOIS · ROBERT D. MAGRUDER · 081-006128 · CHICAGO, ILLINOIS · LICENSED STRUCTURAL ENGINEER

exp 11/30/2020

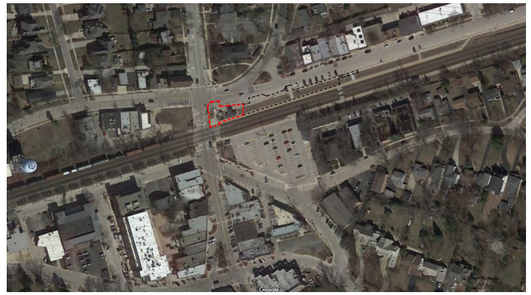
STATE OF ILLINOIS · ZACHERY R. WIESE · 001.021669 · LICENSED ARCHITECT

SACHIN ANAND · 062-058262 · REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

REGIONAL MAP



CAMPUS PLAN



LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED
		DRAWN BY	TZ	REVISED
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

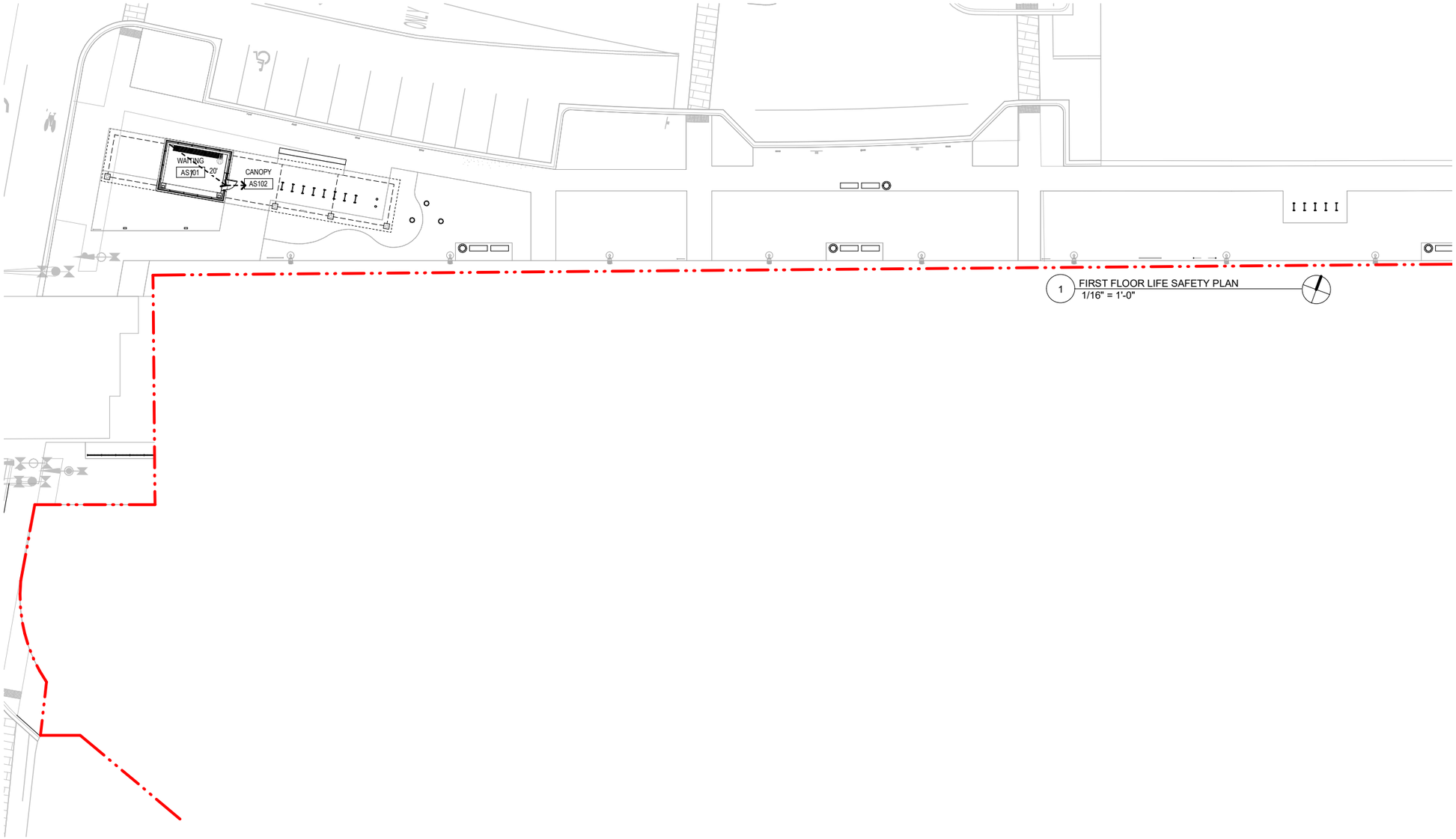
CLARENDON HILLS DOWNTOWN REVITILIZATION

SCALE: As indicated | SHEET | OF

BUILDING
A-001 INDEX

STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	32
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



1 FIRST FLOOR LIFE SAFETY PLAN
1/16" = 1'-0"

BUILDING DATA - NEW CONSTRUCTION	
APPLICABLE CODE	IBC 2015
USE GROUP	A-3
CONSTRUCTION TYPE (TABLE 601)	TYPE 2B
ALLOWABLE HEIGHT (TABLE 504.3)	55 FEET
ALLOWABLE STORIES (TABLE 504.4)	2 STORY
AUTOMATIC SPRINKLER INCREASE (TABLE 504.2)	N/A
MAXIMUM ALLOWABLE HEIGHT	2 STORY / 55 FEET
ACTUAL HEIGHT	HIGHEST ROOF SURFACE 13'-6"
ALLOWABLE AREA (TABLE 506.2)	9,500 SF
AREA INCREASE DUE TO FRONTAGE (506.2)	N/A
AREA INCREASE DUE TO SPRINKLER (TABLE 506.2)	N/A
MAXIMUM ALLOWABLE AREA (506.4)	N/A
TOTAL BUILDING AREA (NEW)	287 SF

FIRE RESISTIVE RATINGS - NEW CONSTRUCTION	
APPLICABLE CODE	IBC 2015
USE (FIRE AREA)	ASSEMBLY
AUTOMATIC SPRINKLER SYSTEM REQUIREMENTS	NO
CONSTRUCTION TYPE	IIB
STRUCTURAL FRAME (TABLE-601)	0-HOUR
BEARING WALLS (TABLE-601)	
EXTERIOR	0-HOUR
INTERIOR	0-HOUR
NONBEARING WALLS AND PARTITIONS (TABLE-601)	
EXTERIOR	0-HOUR
INTERIOR	0-HOUR
EXTERIOR WALL FIRE SEPARATION DISTANCE (TABLE-602)	1-HOUR: < 5' / 1-HOUR: 5' ≥ X < 10' 0-HOUR: 10' ≥ X < 30' / 0-HOUR: ≥ 30'
FLOOR CONSTRUCTION (T-601)	
INCLUDING SUPPORTING BEAMS AND JOISTS	0-HOUR
ROOF CONSTRUCTION (T-601)	
INCLUDING SUPPORTING BEAMS AND JOISTS	0-HOUR
FIRE WALLS / PARTY WALLS (T-705.4)	0-HOUR
CORRIDOR FIRE RESISTANCE RATING (T-1017.1)	0-HOUR

MEANS OF EGRESS - NEW CONSTRUCTION		
	SPRINKLED	**UN-SPRINKLED**
APPLICABLE CODE	IBC 2015	IBC 2015
DOOR/CORRIDOR EGRESS WIDTH (1005.1)	0.15/PERSON	0.2 PERSON
STAIR EGRESS WIDTH (1005.1)	0.2/PERSON	0.3/PERSON
MAX. LENGTH OF EXIT ACCESS TRAVEL (TABLE 1017.2)	250 FEET	200 FEET
MAX. LENGTH OF COMMON PATH EGRESS TRAVEL (1006.2.1)	75 FEET	75 FEET
MAX. LENGTH OF DEAD END CORRIDORS (1018.4)	20 FEET	20 FEET
MINIMUM CORRIDOR WIDTH (1018.2)	44 INCHES	44 INCHES

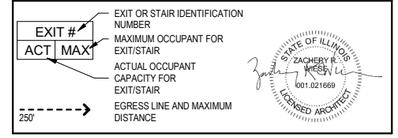
APPLICABLE CODES - NEW CONSTRUCTION

- 2015 INTERNATIONAL BUILDING CODE
- 2015 INTERNATIONAL MECHANICAL & FUEL GAS CODE (MC & IFGC)
- 2015 INTERNATIONAL FIRE CODE (IFC)
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2018 NFPA 101
- ILLINOIS ADMINISTRATIVE CODE, PART 400, ILLINOIS ACCESSIBILITY CODE 2018
- 2014 NATIONAL ELECTRIC CODE
- 77 ILLINOIS ADMINISTRATIVE CODE, PART 890, ILLINOIS PLUMBING CODE 2014
- 1999 FIRE PREVENTION CODE
- 2015 INTERNATIONAL PROPERTY MAINTENANCE CODE (IPMC)
- 28 CFR 35 - NONDISCRIMINATION ON THE BASIS OF DISABILITY IN STAT AND LOCALGOVERNMENT SERVICE; FINAL RULE; DEPARTENT OF JUSTICE; CURRENT EDITION.
- 28 CFR 36 - NONDISCRIMINATION BY PUBLIC ACCOMMOCATIONS AND IN COMMERICAL FACILITIES; FINAL RULE DEPARMTNT OF JUSTICE; CURRENT EDITION.
- 36 CFR 1191 - AMERICANS WITH DISABILITES ACT (ADA) ACCESSIBILITY GUIDLINES FOR BUILDINGS AND FACILITIES; ARCHITECURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES; CURRENT EDITION.
- 19 CFR 1910 - OCCUPATIONAL SAFETY AND HEALTH STANDARDS; CURRENT EDITION

OCCUPANT LOADS -STREETSCAPE

EXIT NO.	ROOM NUMBER	NAME	AREA	SF PER OCCUPANT	OCCUPANT LOAD
	AS101	WAITING	184 SF	5 SF	37
Grand total: 1					37

SAFETY REFERENCE SYMBOLS & ABBREVIATIONS



LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED	
		DRAWN BY	ZW	REVISED	
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED	
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF

BUILDING
A-011 CODE INFORMATION & SAFETY REFERENCE PLANS
STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	33
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

ABBREVIATIONS

ABB	DESCRIPTION
A/C	AIR CONDITIONING
ABV	ABOVE
AC	ARCHTECTURAL CONCRETE
ACM	ALUMINUM COMPOSITE MATERIAL
ACT	ACOUSTIC CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
ADO	AUTOMATIC DOOR OPENER
ADOP	AUTOMATIC DOOR OPENER ON PEDESTAL
AEC	ARCHITECTURALLY EXPOSED CONCRETE
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIB	AIR INFILTRATION BARRIER
ALT	ALTERNATE
ALUM / AL	ALUMINUM
ANOD	ANODIZED
AOR	AREA OF REFUGE
AP	ACCESS PANEL
APPROX	APPROXIMATELY
ARA	AREA OF RESCUE ASSISTANCE
ARCH	ARCHITECTURAL
AS	ACOUSTICAL SEALANT
ASH	ADJUSTABLE SHOWER HEAD
AWP	ACOUSTIC WALL PANEL
B	BASE CABINET
B/	BOTTOM OF
BBT	BIO-BASED TILE
BD	BOARD
BF	BOTTLE FILLER
BLK	BLOCKING
BO	BY OWNER
BRZ	BRONZE
BS	BOTH SIDES
BSMT	BASEMENT
CB	CATCH BASIN
CD	CORNICE DRAIN
CG	CORNER GUARD
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CP	CENTER POINT
CPT	CARPET (BROADLOOM)
CPTT	CARPET TILE
CR	CARD READER
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
CTF	CERAMIC TILE FLOOR
CTW	CERAMIC TILE WALL
D	DATA OUTLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DLO	DAYLITE OPENING
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DW	DOMESTIC WATER
DWG	DRAWING
EA	EACH
EC	EXPOSED CONSTRUCTION
EF	EACH FACE
EH	EXHAUST HOOD
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
EMS	ENTRANCE MAT SYSTEMS
EP	ELECTRICAL PANEL
EQ	EQUAL
EX / EXIST	EXISTING
EXP	EXPOSED
EXR	EXISTING TO REMAIN
F	FLUSH DOOR
F/	FACE OF
FAAP	FIRE ALARM SYSTEM ANNUNCIATOR PANEL
FAB	FABRIC
FACP	FIRE ALARM CONTROL PANEL
FAP-X	FABRIC WRAPPED ACOUSTIC PANEL - (X = THICKNESS OF THE PANEL)
FB	FACE BRICK
FBN	FLIP BENCH
FBO	FURNISHED BY OWNER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FECB	FIRE EXTINGUISHER, CABINET AND BLANKET
FF	FACTORY FINISH
FG	FULL GLASS DOOR
FG-2	FULL GLASS DOOR - PAIR
FH	FULL HEIGHT

ABBREVIATIONS

ABB	DESCRIPTION
FLR	FLOOR
FOF	FACE OF FOUNDATION
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FT	FOOT / FEET
GA	GAUGE
GALV	GALVANIZED
GAS	GAS METER AND REGULATOR
GC	GENERAL CONTRACTOR
GL	GLASS
GL BLK	GLASS BLOCK
GLZ	GLAZING
GRND	GROUND
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HB	HOSE BIBB
HD	ELECTRIC HAND DRYER
HDS	HIGH DENSITY STORAGE
HDWR	HARDWARE
HG	HALF GLASS DOOR
HG-2	HALF GLASS DOOR PAIR
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HPC	HIGH PERFORMANCE COATING
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWH	HOT WATER HEATER
ID	INSIDE DIAMETER
IFH	INFRARED HEATER
IN	INCH
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IPS	INTERIOR PAINT SYSTEM
JC	JANITOR'S CLOSET
JT	JOINT
KS	KNEE SPACE
LAM	LAMINATED
LAV	LAVATORY
LIN	LINOLEUM
LP	LOW POINT
LTL	LINTEL
LVR	LOUVER
LVT	LUXURY VINYL TILE
M	MIRROR
MAT'L	MATERIAL
MAX	MAXIMUM
MB#	MARKERBOARD (#DENOTES WIDTH, REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS
MCM	METAL COMPOSITION MATERIAL
MD	MASONRY DIMENSION
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MED	MEDIUM
MEZZ	MEZZANINE
MFR / MANUF	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM / MINUTE
MISC	MISCELLANEOUS
ML	MATCH LINE
MO	MASONRY OPENING
MP	METAL PANEL
MST	MOSAIC TILE
MSTB	MOSAIC TILE BASE
MT	METAL TRANSITION
MTD	MOUNTED
MTL	METAL
MU	MECHANICAL UNIT
MWL	METAL WARDROBE LOCKER
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NL	NARROW LIGHT DOOR
NLR	NARROW LIGHT DOOR - RATED
NLR-2	NARROW LIGHT DOOR - RATED PAIR
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OCD	OVERHEAD COILING DOOR
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OSB	ORIENTED STRAND BOARD
OSD	OPEN SITE DRAIN
PART	PARTITION
PATT	PATTERN
PC	PRECAST CONCRETE
PCO	POLISHED CONCRETE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLWD	PLYWOOD
PNT	PAINT
PR	PAIR
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH

ABBREVIATIONS

ABB	DESCRIPTION
PSM	MANUAL PROJECTION SCREEN
PT	PORCELAIN TILE
PTB	PORCELAIN TILE BASE
PTD	PAPER TOWEL DISPENSER
PTD	PAINTED
PTF	PORCELAIN TILE FLOOR
PTST	PORCELAIN TILE STAIR TREAD
PTTWS	PORCELAIN TILETACTILE WARNING STRIP
PTW	PORCELAIN TILE WALL
PVC	POLYVINYL CHLORIDE
Q	QUAD POWER OUTLET
QT	QUARRY TILE
QTY	QUANTITY
R	RISER
RAD	RADIUS
RAL	ROOF LADDER
RBST	RUBBER STAIR TREAD
RD	ROOF DRAIN
REF	REFERENCE / REFER TO
REF	REFRIDGERATOR
REINF	REINFORCED
REQD	REQUIRED
RES	RESINOUS FLOORING
RESB	RESINOUS INTEGRAL BASE
REV	REVISION
RF	RUBBER FLOOR
RFT	RUBBER FLOOR TILE
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RP	RESIN PANEL
RSE	ROLLER SHADE - MOTORIZED
RSES	SKYLIGHT ROLLER SHADE - MOTORIZED
RSL	ROLLER SHADE LEFT CONTROL
RSR	ROLLER SHADE RIGHT CONTROL
RT	RESILIENT TRANSITION
RTU	ROOF TOP UNIT
RUBR	RUBBER
SC	SHOWER CURTAIN
SD	SOAP DISPENSER
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SPEC	SPECIFICATION
SPM	SINGLE PLY MEMBRANE
SQ	SQUARE
SS / ST STL	STAINLESS STEEL
SSF	SOLID SURFACE
SSG	SILICONE STRUCTURAL GLAZING
ST	SEALANT TAPE
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
STT	STONE THRESHOLD
SUSP	SUSPENDED
SV	SHEET VINYL
T	TREAD
T	TALL STORAGE CABINET
T/	TOP OF
TB#	TACKBOARD (# DENOTES WIDTH; REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS)
TBR	TOWEL BAR
TC	TOILET COMPARTMENT
TD	TRENCH DRAIN
TEL	TELEPHONE
TFF	TOP OF FINISH FLOOR
THK	THICK
TPO	THERMOPLASTIC OLEFIN
TRZ	TERRAZZO
TS#	TACK STRIP (# DENOTES WIDTH; REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS)
TYP	TYPICAL
UC	UNDER COUNTER
UNO	UNLESS NOTED OTHERWISE
VB	VAPOR BARRIER
VB	VINYL BASE
VC	VOLUME CONTROL
VCT	VINYL COMPOSITION TILE
VDB	VISUAL DISPLAY BOARD
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VP	VENT PIPE
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	WALL CABINET
W/	WITH
W/O	WITHOUT
WCO	WALL CLEAN OUT
WD	WOOD
WM	WALKOFF MAT
WP	WATERPROOF
WPNL	WOOD PANEL
WPT	WORK POINT
WWF	WELDED WIRE FABRIC
YCO	YARD CLEAN OUT

GENERAL NOTES

1. ALL WORK SHALL BE COMPLIANT WITH THE CODES, ORDINANCES, AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION OVER THE PROJECT LOCATION.
2. THE TRADE CONTRACTORS' PERSONNEL SHALL NOT BE ALLOWED ON THE PROJECT SITE WITHOUT COMPLYING WITH THE OWNER'S SECURITY PROTOCOLS.
3. WHERE CONFLICTS EXIST WITHIN OR BETWEEN PARTS OF THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND APPLICABLE STANDARDS, CODES, ORDINANCES, AND REGULATIONS THE MORE STRINGENT OR HIGH QUALITY OR GREATER QUALITY REQUIREMENT(S) SHALL APPLY. LARGE-SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL-SCALE DRAWINGS; FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS; AND NOTED MATERIALS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATIONS.
4. THE CONTRACT DOCUMENTS IDENTIFY THE MINIMUM AMOUNT OF WORK REQUIRED. TRADE CONTRACTORS SHALL PROVIDE THE EXTENT OF WORK NECESSARY FOR A COMPLETE INSTALLATION.
5. REFER TO THE PROJECT SPECIFICATIONS FOR PRODUCTS, MATERIALS, AND PROCEDURES NOT IDENTIFIED ON THE CONTRACT DRAWINGS.
6. THE ACTUAL AREA(S) OF WORK SHALL BE KEPT TO THE MINIMUM REQUIRED TO PROPERLY EXECUTE THE CONTRACT REQUIREMENTS. EXISTING DIMENSIONS AND HATCHED AREAS INDICATED ON CONTRACT DOCUMENTS ARE FOR GENERAL REFERENCE AND BIDDING PURPOSES ONLY.
7. PRIOR TO BIDDING, THE TRADE CONTRACTORS SHALL FIELD VERIFY THE EXTENT OF WORK REQUIRED TO PROPERLY EXECUTE THE CONTRACT REQUIREMENTS. ADDITIONAL WORK THAT IS REQUIRED, WAS VISIBLE, AND COULD HAVE BEEN IDENTIFIED DURING BIDDING SHALL BE COMPLETED BY THE RESPONSIBLE TRADE CONTRACTOR(S) AT NO ADDITIONAL COST TO THE OWNER.
8. THE TRADE CONTRACTORS SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OR CONSTRUCTION MANAGER OF ANY CONFLICTS WITH THE CONSTRUCTION DOCUMENTS PRIOR TO PREPARING SUBMITTALS OR BEGINNING ANY WORK.
9. THE TRADE CONTRACTORS SHALL PROVIDE ALL TEMPORARY CONSTRUCTION AND/OR SHORING REQUIRED TO PROPERLY EXECUTE THE REQUIREMENTS OF THEIR CONTRACT.
10. ALL EXTERIOR OPENINGS SHALL BE SECURED AT ALL TIMES WHEN WORK IS NOT BEING PERFORMED. THE TRADE CONTRACTORS SHALL NOT REMOVE EXISTING DOORS, FRAMES, WINDOWS. ETC. UNTIL REPLACEMENTS ARE ONSITE AND READY FOR INSTALLATION. IF INSTALLATION OF DOORS, FRAMES, WINDOWS, ETC. CANNOT BE COMPLETED BY THE END OF THE WORK DAY, THE RESPONSIBLE TRADE CONTRACTORS SHALL PROVIDE TEMPORARY WEATHERPROOF CONSTRUCTION AS REQUIRED TO SECURE THE BUILDING TO THE SATISFACTION OF THE OWNER AND RESTORE AFFECTED SURFACES TO THEIR ORIGINAL CONDITION.
11. PATCHING, REPAIRING, AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE EXISTING ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE IN MATERIAL, FINISH, COLOR, TEXTURE AND SHEEN. REFER TO THE CONTRACT DRAWINGS FOR EXISTING BUILDING CONSTRUCTION TO REMAIN.
12. TRADE CONTRACTORS SHALL PROTECT THEIR WORK AND EXISTING CONSTRUCTION, FINISHES, AND EQUIPMENT TO REMAIN TO PREVENT DAMAGE. ANY WORK AND/OR EXISTING FINISHES TO REMAIN DAMAGED DURING THE REMOVAL OF EXISTING WORK OR THE INSTALLATION OF NEW WORK SHALL BE REPAIRED, REPLACED, AND REFINISHED BY THE RESPONSIBLE TRADE CONTRACTOR TO MATCH THE ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE OWNER AND ENGINEER.
13. THE ARCHITECT SHALL REVIEW AND APPROVE LOCATIONS FOR ALL JUNCTION BOXES AND RACEWAYS PRIOR TO INSTALLATION OF WIRING / CABLING.
14. EXISTING SITE FEATURES, MATERIALS, AMENITIES, LANDSCAPING, ETC. DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE RESTORED, REPAIRED, OR REPLACED BY THE RESPONSIBLE TRADE CONTRACTOR(S) AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE OWNER AND ENGINEER.
15. CONTRACTOR SHALL COORDINATE THE WORK WITH ALL PARTIES INVOLVED SO THAT THE CONSTRUCTION CAN PROCEED SMOOTHLY, WITHOUT TRADE INTERFERENCE OR WASTE OF TIME AND MATERIAL.
16. NOT USED.
17. SUBSTITUTIONS: PRODUCTS PROPOSED FOR SUBSTITUTION THAT DO NOT MEET OR EXCEED ALL ASPECTS OF THE PRODUCTS SPECIFIED WILL NOT BE CONSIDERED.
18. NOT USED
19. NOT USED
20. SUBMITTALS: APPLY CONTRACTOR'S STAMP, SIGNED OR INITIALED CERTIFYING THAT REVIEW, APPROVAL, VERIFICATION OF PRODUCTS REQUIRED, FIELD DIMENSIONS, ADJACENT CONSTRUCTION WORK, AND COORDINATION OF INFORMATION IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORK AND CONTRACT DOCUMENTS.
21. MOCK-UP: BEFORE INSTALLING PORTIONS OF THE WORK WHERE MOCK-UPS ARE REQUIRED, CONSTRUCT MOCK-UPS IN LOCATION AND SIZE INDICATED FOR EACH FORM OF CONSTRUCTION AND FINISH REQUIRED TO COMPLY WITH THE FOLLOWING REQUIREMENTS, USING MATERIALS INDICATED FOR THE COMPLETED WORK. THE PURPOSE OF MOCK-UP IS TO DEMONSTRATE THE PROPOSED RANGE OF AESTHETIC EFFECTS AND WORKMANSHIP. ACCEPTED MOCK-UPS ESTABLISH THE STANDARD OF QUALITY THE ARCHITECT WILL USE TO JUDGE THE WORK. OBTAIN ARCHITECT'S APPROVAL OF MOCK-UPS BEFORE STARTING WORK, FABRICATION, OR CONSTRUCTION. ARCHITECT WILL ISSUE WRITTEN COMMENTS WITHIN SEVEN (7) WORKING DAYS OF INITIAL REVIEW AND EACH SUBSEQUENT FOLLOW UP REVIEW OF EACH MOCK-UP. WHERE MOCK-UP HAS BEEN ACCEPTED BY ARCHITECT AND IS SPECIFIED IN PRODUCT SPECIFICATION SECTIONS TO BE REMOVED, PROTECT MOCK-UP THROUGHOUT CONSTRUCTION, REMOVE MOCK-UP AND CLEAR AREA WHEN DIRECTED TO DO SO BY ARCHITECT.
22. MANUFACTURERS' FIELD SERVICES: WHEN SPECIFIED IN INDIVIDUAL SPECIFICATION SECTIONS, REQUIRE MATERIAL OR PRODUCT SUPPLIERS OR MANUFACTURERS TO PROVIDE QUALIFIED STAFF PERSONNEL TO OBSERVE SITE CONDITIONS, CONDITIONS OF SURFACES AND INSTALLATION, QUALITY OF WORKMANSHIP, START-UP OF EQUIPMENT, TEST, ADJUST AND BALANCE OF EQUIPMENT AS APPLICABLE, AND TO INITIATE INSTRUCTIONS WHEN NECESSARY. REPORT OBSERVATIONS AND SITE DECISIONS OR INSTRUCTIONS GIVEN TO APPLICATORS ORINSTALLERS THAT ARE SUPPLEMENTAL OR CONTRARY TO MANUFACTURERS' WRITTEN INSTRUCTIONS.
23. USE OF PRODUCTS HAVING ANY OF THE FOLLOWING CHARACTERISTICS IS NOT PERMITTED: MADE USING OR CONTAINING CFC'S OR HCFC'S AND MATERIALS CONTAINING LEAD, CADMIUM, OR ASBESTOS.
24. COORDINATE SCHEDULING, SUBMITTALS, AND WORK OF THE VARIOUS SECTIONS OF THE PROJECT MANUAL TO ENSURE EFFICIENT AND ORDERLY SEQUENCE OF INSTALLATION OF INTERDEPENDENT CONSTRUCTION ELEMENTS, WITH PROVISIONS FOR ACCOMMODATING ITEMS INSTALLED LATER. NOTIFY AFFECTED UTILITY COMPANIES AND COMPLY WITH THEIR REQUIREMENTS. VERIFY THAT UTILITY REQUIREMENTS AND CHARACTERISTICS OF NEW OPERATING EQUIPMENT ARE COMPATIBLE WITH BUILDING UTILITIES. COORDINATE WORK OF VARIOUS SECTIONS HAVING INTERDEPENDENT RESPONSIBILITIES FOR INSTALLING, CONNECTING TO, AND PLACING IN SERVICE, SUCH EQUIPMENT. COORDINATE SPACE REQUIREMENTS, SUPPORTS, AND INSTALLATION OF MECHANICAL AND ELECTRICAL WORK THAT ARE INDICATED DIAGRAMMATICALLY ON DRAWINGS. FOLLOW ROUTING INDICATED FOR PIPES, DUCTS, AND CONDUIT, AS CLOSELY AS PRACTICABLE; PLACE RUNS PARALLEL WITH LINES OF BUILDING. UTILIZE SPACES EFFICIENTLY TO MAXIMIZE ACCESSIBILITY FOR OTHER INSTALLATIONS, FOR MAINTENANCE, AND FOR REPAIRS. IN FINISHED AREAS EXCEPT AS OTHERWISE INDICATED, CONCEAL PIPES, DUCTS, AND WIRING WITHIN THE CONSTRUCTION. COORDINATE LOCATIONS OF FIXTURES AND OUTLETS WITH FINISH ELEMENTS.
25. CLOSEOUT DOCUMENTATION SUBMITTAL: FINAL CLOSEOUT DOCUMENTATION SHALL BE SUBMITTED IN ELECTRONIC .PDF FORMAT AND BURNED TO COMPACT DISKS WHICH UTILIZES A CUSTOMIZABLE DOCUMENT MANAGEMENT VIEWING SYSTEM. ALL CLOSEOUT DOCUMENTS SHALL BE CREATED OR SCANNED TO BE COMPATIBLE WITH THE ELECTRONIC FORMAT IDENTIFIED. INCLUDE SCANNED COPIES OF WARRANTIES AND BONDS WITH ELECTRONIC SUBMITTAL. THE FOLLOWING DOCUMENTS SHALL BE THE MINIMUM INCLUDED ON THE FINAL CLOSEOUT DOCUMENTATION CD.
    - CHAPTER 1 - PROJECT DIRECTORY: DIRECTORY, LISTING NAMES, ADDRESSES, TELEPHONE NUMBERS, EMAIL ADDRESSES, AND WEB SITE ADDRESSES OF ARCHITECT, ENGINEER(S), CONSTRUCTION MANAGER, TRADE CONTRACTOR(S), SUB-CONTRACTORS, AND MAJOR EQUIPMENT SUPPLIERS.
    - CHAPTER 2 - CONTRACT DOCUMENTS: ISSUED FOR BIDDING DRAWINGS, ISSUED FOR BIDDING PROJECT MANUAL AND SPECIFICATIONS, ADDENDA, ISSUED FOR CONSTRUCTION DRAWINGS, ISSUED FOR CONSTRUCTION PROJECT MANUAL AND SPECIFICATIONS.
    - CHAPTER 3 - SUBMITTALS:APPROVED SUBMITTALS FOR REVIEW, REVIEWED SUBMITTALS FOR INFORMATION, DOCUMENTATION OF SELECTED FINISH SAMPLES, MANUFACTURER'S INSTRUCTIONS FOR ASSEMBLY, INSTALLATION, ADJUSTING, AND MAINTENANCE.
    - CHAPTER 4 - RECORD DOCUMENTS: FIELD SKETCHES, AS-BUILT DRAWINGS, AS-BUILT PROJECT MANUAL AND SPECIFICATIONS, CHANGE ORDERS AND OTHER DOCUMENTED MODIFICATIONS TO THE CONTRACT.
    - CHAPTER 5 - OPERATIONS & MAINTENANCE DATA:
    - CHAPTER 6 - TRAINING VIDEOS:
    - CHAPTER 7 - PROJECT CERTIFICATIONS AND WARRANTIES:
26. TRAINING: PROVIDE AN ON-SITE TRAINING CONFERENCE WHICH INCLUDES REPRESENTATIVES FROM THE OWNER, ARCHITECT, ENGINEERS, AND GENERAL CONTRACTOR TO PRESENT THE COMPLETED ELECTRONIC CLOSEOUT DOCUMENTATION SUBMITTAL AND INSTRUCT ALL ATTENDEES ON HOW TO INTERFACE WITH THE SOFTWARE AND ITS CONTENT. TRAINING OF OWNER PERSONNEL IN OPERATION AND MAINTENANCE IS REQUIRED FOR: HVAC SYSTEMS AND EQUIPMENT; PLUMBING EQUIPMENT; ELECTRICAL SYSTEMS AND EQUIPMENT; ITEMS SPECIFIED IN INDIVIDUAL PRODUCT SECTIONS. TRAINING TO BE COMPLETED NOT LESS THAN 2 WEEKS PRIOR TO SUBSTANTIAL COMPLETION.
27. PROJECT RECORD DOCUMENTS: MAINTAIN ON SITE ONE SET OF THE FOLLOWING RECORD DOCUMENTS; RECORD ACTUAL REVISIONS TO THE WORK: DRAWINGS, SPECIFICATIONS, ADDENDA, AND CHANGE ORDERS AND OTHER MODIFICATIONS TO THE CONTRACT. LEGIBLY MARK EACH ITEM TO RECORD ACTUAL CONSTRUCTION INCLUDING - MEASURED HORIZONTAL AND VERTICAL LOCATIONS OF UNDERGROUND UTILITIES AND APPURTENANCES, REFERENCED TO PERMANENT SURFACE IMPROVEMENTS. MEASURED LOCATIONS OF INTERNAL UTILITIES AND APPURTENANCES CONCEALED IN CONSTRUCTION, REFERENCED TO VISIBLE AND ACCESSIBLE FEATURES OF THE WORK. FIELD CHANGES OF DIMENSION AND DETAIL. DETAILS NOT ON ORIGINAL CONTRACT DRAWINGS.
28. OPERATION AND MAINTENANCE DATA: SOURCE DATA: FOR EACH PRODUCT OR SYSTEM, LIST NAMES, ADDRESSES AND TELEPHONE NUMBERS OF SUBCONTRACTORS AND SUPPLIERS, INCLUDING LOCAL SOURCE OF SUPPLIES AND REPLACEMENT PARTS. PRODUCT DATA: MARK EACH SHEET TO CLEARLY IDENTIFY SPECIFIC PRODUCTS AND COMPONENT PARTS, AND DATA APPLICABLE TO INSTALLATION. DELETE INAPPLICABLE INFORMATION. DRAWINGS: SUPPLEMENT PRODUCT DATA TO ILLUSTRATE RELATIONS OF COMPONENT PARTS OF EQUIPMENT AND SYSTEMS, TO SHOW CONTROL AND FLOW DIAGRAMS. DO NOT USE PROJECT RECORD DOCUMENTS AS MAINTENANCE DRAWINGS. TYPED TEXT: AS REQUIRED TO SUPPLEMENT PRODUCT DATA. PROVIDE LOGICAL SEQUENCE OF INSTRUCTIONS FOR EACH PROCEDURE, INCORPORATING MANUFACTURER'S INSTRUCTIONS.
29. OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES: FOR EACH PRODUCT, APPLIED MATERIAL, AND FINISH: PRODUCT DATA, WITH CATALOG NUMBER, SIZE, COMPOSITION, AND COLOR AND TEXTURE DESIGNATIONS; INFORMATION FOR RE-ORDERING CUSTOM MANUFACTURED PRODUCTS. PROVIDE INSTRUCTIONS FOR CARE AND MAINTENANCE: MANUFACTURER'S RECOMMENDATIONS FOR CLEANING AGENTS AND METHODS, PRECAUTIONS AGAINST DETRIMENTAL CLEANING AGENTS AND METHODS, AND RECOMMENDED SCHEDULE FOR CLEANING AND MAINTENANCE.
30. OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS: FOR EACH ITEM OF EQUIPMENT AND EACH SYSTEM: DESCRIPTION OF UNIT OR SYSTEM, AND COMPONENT PARTS; IDENTIFY FUNCTION, NORMAL OPERATING CHARACTERISTICS, AND LIMITING CONDITIONS; INCLUDE PERFORMANCE CURVES, WITH ENGINEERING DATA AND TESTS; COMPLETE NOMENCLATURE AND MODEL NUMBER OF REPLACEABLE PARTS. WHERE ADDITIONAL INSTRUCTIONS ARE REQUIRED, BEYOND THE MANUFACTURER'S STANDARD PRINTED INSTRUCTIONS, HAVE INSTRUCTIONS PREPARED BY PERSONNEL EXPERIENCED IN THE OPERATION AND MAINTENANCE OF THE SPECIFIC PRODUCTS. PANELBOARD CIRCUIT DIRECTORIES: PROVIDE ELECTRICAL SERVICE CHARACTERISTICS, CONTROLS, AND COMMUNICATIONS; TYPED. OPERATING PROCEDURES: INCLUDE START-UP, BREAK-IN, AND ROUTINE NORMAL OPERATING INSTRUCTIONS AND SEQUENCES. INCLUDE REGULATION, CONTROL, STOPPING, SHUT-DOWN, AND EMERGENCY INSTRUCTIONS. INCLUDE SUMMER, WINTER, AND ANY SPECIAL OPERATING INSTRUCTIONS. MAINTENANCE REQUIREMENTS: INCLUDE ROUTINE PROCEDURES AND GUIDE FOR PREVENTATIVE MAINTENANCE AND TROUBLE SHOOTING; DISASSEMBLY, REPAIR, AND REASSEMBLY INSTRUCTIONS; AND ALIGNMENT, ADJUSTING, BALANCING, AND CHECKING INSTRUCTIONS. PROVIDE SERVICING AND LUBRICATION SCHEDULE, AND LIST OF LUBRICANTS REQUIRED. INCLUDE MANUFACTURER'S PRINTED OPERATION AND MAINTENANCE INSTRUCTIONS. INCLUDE SEQUENCE OF OPERATION BY CONTROLS MANUFACTURER. PROVIDE ORIGINAL MANUFACTURER'S PARTS LIST, ILLUSTRATIONS, ASSEMBLY DRAWINGS, AND DIAGRAMS REQUIRED FOR MAINTENANCE. PROVIDE CONTROL DIAGRAMS BY CONTROLS MANUFACTURER AS INSTALLED. PROVIDE CHARTS OF VALVE TAG NUMBERS, WITH LOCATION AND FUNCTION OF EACH VALVE, KEYED TO FLOW AND CONTROL DIAGRAMS. PROVIDE LIST OF ORIGINAL MANUFACTURER'S SPARE PARTS, CURRENT PRICES, AND RECOMMENDED QUANTITIES TO BE MAINTAINED IN STORAGE. INCLUDE TEST AND BALANCING REPORTS.

GENERAL REFLECTIVE CEILING NOTES

1. ALL CEILING ELEVATIONS IDENTIFIED DENOTE HEIGHT ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
2. REFER TO MECHANICAL, PLUMBING, ELECTRICAL, FIRE PROTECTION, AND TECHNOLOGY DRAWINGS FOR CEILING MOUNTED EQUIPMENT AND COMPONENTS NOT IDENTIFIED ON ARCHITECTURAL DRAWINGS.
3. PRIOR TO BEGINNING ANY WORK, NOTIFY THE ARCHITECT IF QUANTITY AND/OR SPACING OF LIGHT FIXTURES ON ELECTRICAL DRAWINGS DOES NOT MATCH QUANTITY AND/OR SPACING OF LIGHT FIXTURES ON ARCHITECTURAL DRAWINGS.
4. PRIOR TO BEGINNING ANY WORK, NOTIFY THE ARCHITECT IF QUANTITY AND/OR SPACING OF LOW VOLTAGE DEVICES ON ELECTRICAL DRAWINGS DOES NOT MATCH QUANTITY AND/OR SPACING ON ARCHITECTURAL DRAWINGS.

GENERAL FINISH NOTES

1. ALL NEW CONSTRUCTION SHALL BE PRIMED AND FINISH PAINTED UNLESS MATERIALS ARE PRE-FINISHED. REFER TO THE FINISH PLANS AND THE PROJECT MANUAL FOR ADDITIONAL INFORMATION. NEW PARTITIONS AND SOFFITS ARE TO BE PRIME PAINTED FOR FULL HEIGHT OF PARTITION OR SOFFIT. SIGHT-EXPOSED SURFACES OF NEW PARTITIONS AND SOFFITS ARE TO BE FINISH PAINTED.
2. CONCRETE IS TO BE PROTECTED FROM DAMAGE AND STAINING AFTER THE SLAB HAS BEEN POURED FOR THE DURATION OF THE PROJECT

GENERAL ROOF NOTES

1. ALL INSULATION JOINTS, HORIZONTAL AND VERTICAL, ARE TO BE STAGGERED.
2. ALL INSULATION JOINTS GREATER THAN 1/4" ARE TO BE FILLED W/ INSULATION STRIPS.
3. ALL ROOF PENETRATIONS, INCLUDING VENT STACKS, ROOF CURBS, AND PIPE SUPPORT CURBS ARE TO BE A MINIMUM OF 8" ABOVE THE ROOFING MEMBRANE.
4. FIELD VERIFY ALL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS INCLUDING TAPERED INSULATION DRAWINGS W/ ALL DRAIN LOCATIONS.
5. ALL COUNTERFLASHING, COPING, AND MISC. METAL FLASHINGS PIECES ARE TO HAVE SEALANT APPLIED AT THEIR END CONDITIONS.
6. ALL COUNTERFLASHING, COPING, AND MISC. METAL FLASHING PIECES THAT ARE TO BE SEAMED INTO SINGLE-PLY MEMBRANE (PVC) ROOF ARE TO BE COATED IN PVC FOR CONTINUOUS THERMAL WELD APPLICATIONS
7. ALL EXPOSED FASTENERS TO BE CORROSION RESISTIVE, HAVE NEOPRENE WASHERS, AND BE COVERED W/ SEALANT FOLLOWING ARCHITECT'S APPROVAL.
8. APPLY SINGLE PLY MEMBRANE (PVC) MANUFACTURER'S SEALANT OVER FASTENER HEADS AT BASE FLASHING SECUREMENT.
9. DRAINS AND SCUPPERS TO BE FLASHED AS PER MANUFACTURER'S SPECIFICATIONS.
10. PROVIDE COUNTERFLASHING FOR ALL VERTICAL FLANGES ON ENDWALL FLASHING PIECES.
11. WHEN CONDITIONS REQUIRE END WALL FLASHING TO BE INSTALLED, COORDINATE INSTALLATION SO THAT END WALL FLASHING AND COUNTERFLASHING COVERING IT ARE NOT DOUBLE FASTENED - ONLY ONE FASTENER IS REQUIRED TO SECURE BOTH PIECES.
12. SCREW FASTENERS FOR INSULATION ARE TO BE INSTALLED THROUGH TOP FLUTES OF METAL DECK ONLY.
13. ALL WOOD BLOCKING TO BE MITERED AND SCREWED, UNLESS NOTED OTHERWISE.
14. ALL COPING JOINTS TO ALIGN WITH CENTER OF METAL PANEL JOINTS AND MULLIONS, UNLESS NOTED OTHERWISE.

ROOF CONSTRUCTION NOTES

ROOF AREA: OUTBOUND SHELTER

1. INSTALL ONE LAYER OF 3" RIGID POLYISOCYANURATE INSULATION AND ONE LAYER OF 2 1/2" RIGID POLYISOCYANURATE (R30 AVERAGE MINIMUM OVER CONDITIONED SPACES AND NO LESS THAN 5 1/2" TOTAL), STAGGER JOINTS - MECHANICALLY FASTEN FIRST LAYER INTO TOP FLUTES OF ACOUSTIC METAL DECK - EXPOSED FASTENERS WILL NOT BE ACCEPTED, SET SECOND LAYER IN INSULATION ADHESIVE.
2. INSTALL TAPERED RIGID INSULATION AND SADDLES, SET IN INSULATION ADHESIVE. TAPERED RIGID INSULATION SHALL BE NO LESS THAN 1/2" AT LOWEST POINT OF SLOPES INDICATED
3. INSTALL 1/2" COVER BOARD, SET IN INSULATION ADHESIVE.
4. FULLY-ADHERED SINGLY-PLY MEMBRANE (PVC)
5. INSTALL 40 MIL ROOT BARRIER AND SLIP SHEET UNDER GREEN ROOF TRAYS OR AS RECOMMENDED PER GREEN ROOF TRAY MANUFACTURER'S INSTALLATION INSTRUCTIONS
6. INSTALL GREEN ROOF TRAYS AND PERIMETER SLOTTED EDGING TRIM PER MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
7. INSTALL PREFINISHED COPINGS, ENDWALL FLASHINGS, COUNTER FLASHINGS AND SCUPPERS.

ROOF FLASHING NOTES

1. ALL INSULATION JOINTS, HORIZONTAL AND VERTICAL, ARE TO BE STAGGERED.
2. ALL INSULATION JOINTS GREATER THAN 1/4" ARE TO BE FILLED W/ INSULATION STRIPS.
3. ALL ROOF PENETRATIONS, INCLUDING VENT STACKS, ROOF CURBS, AND PIPE SUPPORT CURBS ARE TO BE A MINIMUM OF 8" ABOVE THE ROOFING MEMBRANE.
4. FIELD VERIFY ALL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS INCLUDING TAPERED INSULATION DRAWINGS W/ ALL DRAIN LOCATIONS.
5. ALL COUNTERFLASHING, COPING, AND MISC. METAL FLASHINGS PIECES ARE TO HAVE SEALANT APPLIED AT THEIR END CONDITIONS.
6. ALL COUNTERFLASHING, COPING, AND MISC. METAL FLASHING PIECES THAT ARE TO BE SEAMED INTO SINGLE-PLY MEMBRANE (PVC) ROOF ARE TO BE COATED IN PVC FOR CONTINUOUS THERMAL WELD APPLICATIONS
7. ALL EXPOSED FASTENERS TO BE CORROSION RESISTIVE, HAVE NEOPRENE WASHERS, AND BE COVERED W/ SEALANT FOLLOWING ARCHITECT'S APPROVAL.
8. APPLY SINGLE PLY MEMBRANE (PVC) MANUFACTURER'S SEALANT OVER FASTENER HEADS AT BASE FLASHING SECUREMENT.
9. DRAINS AND SCUPPERS TO BE FLASHED AS PER MANUFACTURER'S SPECIFICATIONS.
10. PROVIDE COUNTERFLASHING FOR ALL VERTICAL FLANGES ON ENDWALL FLASHING PIECES.
11. WHEN CONDITIONS REQUIRE END WALL FLASHING TO BE INSTALLED, COORDINATE INSTALLATION SO THAT END WALL FLASHING AND COUNTERFLASHING COVERING IT ARE NOT DOUBLE FASTENED - ONLY ONE FASTENER IS REQUIRED TO SECURE BOTH PIECES.
12. SCREW FASTENERS FOR INSULATION ARE TO BE INSTALLED THROUGH TOP FLUTES OF METAL DECK ONLY.
13. ALL WOOD BLOCKING TO BE MITERED AND SCREWED, UNLESS NOTED OTHERWISE.
14. ALL COPING JOINTS TO ALIGN WITH CENTER OF METAL PANEL JOINTS AND MULLIONS, UNLESS NOTED OTHERWISE.

DRAWING TITLE KEY

1 — ROOM NUMBER - DIRECTION
SCALE — SHEET REFERRED FROM

FLOOR PLAN LEGEND

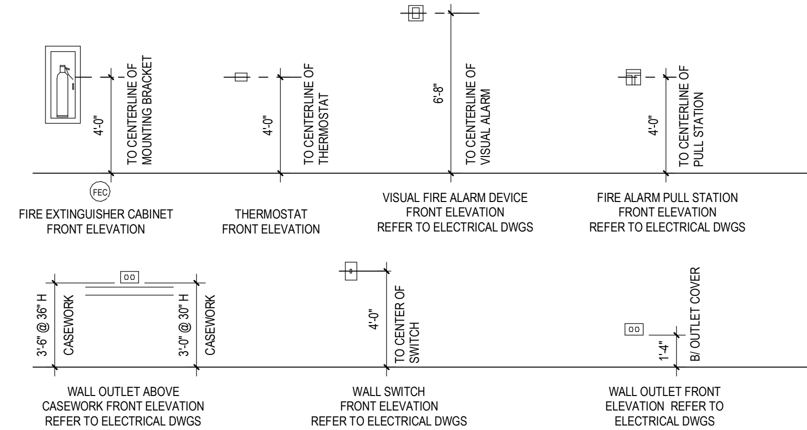
SYMBOL	DESCRIPTION
1 / A-311	WALL SECTION TAG
1 / A-301	BUILDING SECTION TAG
S3F	WALL TYPE - REFER TO A-611 FOR WALL TYPES
101	DOOR NUMBER - REFER TO A-601 FOR DOOR AND FRAME SCHEDULE
	ROOM NAME AND NUMBER
A-211 (1, 2, 3, 4)	INTERIOR ELEVATION TAG
A-201 1	EXTERIOR ELEVATION TAG
0	COLUMN TAG AND COLUMN CENTERLINE
A-602 1	STOREFRONT, CURTAIN WALL, AND WINDOW TYPE
ES	EMERGENCY SHUT-OFF
FD	FLOOR DRAIN

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION
	FINISHED CEILING ELEVATION
	SURFACE MOUNTED LED LINEAR FIXTURE - 8' LENGTHS - REFER TO REFLECTED CEILING PLAN
⊗	EMERGENCY EXIT SIGN
-----------	RECESSED BUSWAY SYSTEM - REFER TO ELECTRICAL DRAWINGS
SD	SMOKE DETECTOR
OS	OCCUPANCY SENSOR
DS	DAYLIGHT SENSOR
SC	SECURITY CAMERA
AV	AV SPEAKERS

TYPICAL MOUNTING HEIGHTS

NOTE: NOT ALL FIXTURES, EQUIPMENT, ACCESSORIES, AND DEVICES SHOWN ARE APPLICABLE FOR THIS PROJECT



BNSF REQUIREMENTS

EXHIBIT "C"

CONTRACTOR REQUIREMENTS

1.01 General:

- **1.01.01** The Contractor must cooperate with **BNSF RAILWAY COMPANY**, hereinafter referred to as "**Railway**" where work is over or under on or adjacent to Railway property and/or right-of-way, hereafter referred to as "Railway Property", during the construction of ______________________________ ____________.

- **1.01.02** The Contractor must execute and deliver to the Railway duplicate copies of the Exhibit "C-1" Agreement, in the form attached hereto, obligating the Contractor to provide and maintain in full force and effect the insurance called for under Section 3 of said Exhibit "C-1". Questions regarding procurement of the Railroad Protective Liability Insurance should be directed to Rosa Martinez at Marsh, USA, 214-303-8519.

- **1.01.03** The Contractor must plan, schedule and conduct all work activities so as not to interfere with the movement of any trains on Railway Property.

- **1.01.04** The Contractor's right to enter Railway's Property is subject to the absolute right of Railway to cause the Contractor's work on Railway's Property to cease if, in the opinion of Railway, Contractor's activities create a hazard to Railway's Property, employees, and/or operations. Railway will have the right to stop construction work on the Project if any of the following events take place: (i) Contractor (or any of its subcontractors) performs the Project work in a manner contrary to the plans and specifications approved by Railway; (ii) Contractor (or any of its subcontractors), in Railway's opinion, prosecutes the Project work in a manner which is hazardous to Railway property, facilities or the safe and expeditious movement of railroad traffic; (iii) the insurance described in the attached Exhibit C-1 is canceled during the course of the Project; or (iv) Contractor fails to pay Railway for the Temporary Construction License or the Easement. The work stoppage will continue until all necessary actions are taken by Contractor or its subcontractor to rectify the situation to the satisfaction of Railway's Division Engineer or until additional insurance has been delivered to and accepted by Railway. In the event of a breach of (i) this Agreement, (ii) the Temporary Construction License, or (iii) the Easement, Railway may immediately terminate the Temporary Construction License or the Easement. Any such work stoppage under this provision will not give rise to any liability on the part of Railway. Railway's right to stop the work is in addition to any other rights Railway may have including, but not limited to, actions or suits for damages or lost profits. In the event that Railway desires to stop construction work on the Project, Railway agrees to immediately notify the following individual in writing:

  ____
  ____
  ____
  ____

- **1.01.05** The Contractor is responsible for determining and complying with all Federal, State and Local Governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, CERCLA), and health and safety laws and regulations. The Contractor hereby indemnifies, defends and holds harmless Railway for, from and against all fines or penalties imposed or assessed by Federal, State and Local Governmental Agencies against the Railway which arise out of Contractor's work under this Agreement.

- **1.01.06** The Contractor must notify **(Agency)** at ______________ and Railway's Manager Public Projects, telephone number (__) ______ at least thirty (30) calendar days before commencing any work on Railway Property. Contractor's notification to Railway must refer to Railway's file ___________.

- **1.01.07** For any bridge demolition and/or falsework above any tracks or any excavations located with any part of the excavations located within, whichever is greater, twenty-five (25) feet of the nearest track or intersecting a slope from the plane of the top of rail on a 2 horizontal to 1 vertical slope beginning at eleven (11) feet from centerline of the nearest track, both measured perpendicular to center line of track, the Contractor must furnish the Railway five sets of working drawings showing details of construction affecting Railway Property and tracks. The working drawing must include the proposed method of installation and removal of falsework, shoring or cribbing, not included in the contract plans and two sets of structural calculations of any falsework, shoring or cribbing. For all excavation and shoring submittal plans, the current "BNSF-UPRR Guidelines for Temporary Shoring" must be used for determining the design loading conditions to be used in shoring design, and all calculations and submittals must be in accordance with the current "BNSF-UPRR Guidelines for Temporary Shoring". All submittal drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. All calculations must take into consideration railway surcharge loading and must be designed to meet American Railway Engineering and Maintenance-of-Way Association (previously known as American Railway Engineering Association) Coopers E-80 live loading standard. All drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. The Contractor must not begin work until notified by the Railway that plans have been approved. The Contractor will be required to use lifting devices such as, cranes and/or winches to place or to remove any falsework over Railway's tracks. In no case will the Contractor be relieved of responsibility for results obtained by the implementation of said approved plans.

- **1.01.08** Subject to the movement of Railway's trains, Railway will cooperate with the Contractor such that the work may be handled and performed in an efficient manner. The Contractor will have no claim whatsoever for any type of damages or for extra or additional compensation in the event his work is delayed by the Railway.

1.02 Contractor Safety Orientation

- **1.02.01 No employee of the Contractor, its subcontractors, agents or invitees may enter Railway Property without first having completed Railway's Engineering Contractor Safety Orientation, found on the web site www.contractororientation.com. The Contractor must ensure that each of its employees, subcontractors, agents or invitees completes Railway's Engineering Contractor Safety Orientation through internet sessions before any work is performed on the Project. Additionally, the Contractor must ensure that each and every one of its employees, subcontractors, agents or invitees possesses a card certifying completion of the Railway Contractor Safety Orientation before entering Railway Property. The Contractor is responsible for the cost of the Railway Contractor Safety Orientation. The Contractor must renew the Railway Contractor Safety Orientation annually. Further clarification can be found on the web site or from the Railway's Representative.**

1.03 Railway Requirements

- **1.03.01** The Contractor must take protective measures as are necessary to keep railway facilities, including track ballast, free of sand, debris, and other foreign objects and materials resulting from his operations. Any damage to railway facilities resulting from Contractor's operations will be repaired or replaced by Railway and the cost of such repairs or replacement must be paid for by the Agency.

- **1.03.02** The Contractor must notify the Railway's Division Engineer ______________ at (____)____________ and provide blasting plans to the Railway for review seven (7) calendar days prior to conducting any blasting operations adjacent to or on Railway's Property.

- **1.03.03** The Contractor must abide by the following temporary clearances during construction:
  - 15'-0" Horizontally from centerline of nearest track
  - 21'-6" Vertically above top of rail
  - 27'-0" Vertically above top of rail for electric wires carrying less than 750 volts
  - 28'-0" Vertically above top of rail for electric wires carrying 750 volts to 15,000 volts
  - 30'-0" Vertically above top of rail for electric wires carrying 15,000 volts to 20,000 volts
  - 34'-0" Vertically above top of rail for electric wires carrying more than 20,000 volts

- **1.03.04** Upon completion of construction, the following clearances shall be maintained: **[Note to Drafter: The vertical clearance should mirror the final negotiated design clearance]**
  - 25' Horizontally from centerline of nearest track
  - 23' 6" Vertically above top of rail

- **1.03.05** Any infringement within State statutory clearances due to the Contractor's operations must be submitted to the Railway and to the **(Agency)** and must not be undertaken until approved in writing by the Railway, and until the **(Agency)** has obtained any necessary authorization from the State Regulatory Authority for the infringement. No extra compensation will be allowed in the event the Contractor's work is delayed pending Railway approval, and/or the State Regulatory Authority's approval.

- **1.03.06** In the case of impaired vertical clearance above top of rail, Railway will have the option of installing tell-tales or other protective devices Railway deems necessary for protection of Railway operations. The cost of tell-tales or protective devices will be borne by the Agency.

- **1.03.07** The details of construction affecting the Railway's Property and tracks not included in the contract plans must be submitted to the Railway by **(Agency)** for approval before work is undertaken and this work must not be undertaken until approved by the Railway.

- **1.03.08** At other than public road crossings, the Contractor must not move any equipment or materials across Railway's tracks until permission has been obtained from the Railway. The Contractor must obtain a "Temporary Construction Crossing Agreement" from the Railway prior to moving his equipment or materials across the Railways tracks. The temporary crossing must be gated and locked at all times when not required for use by the Contractor. The temporary crossing for use of the Contractor will be constructed and, at the completion of the project, removed at the expense of the Contractor.

- **1.03.09** Discharge, release or spill on the Railway Property of any hazardous substances, oil, petroleum, constituents, pollutants, contaminants, or any hazardous waste is prohibited and Contractor must immediately notify the Railway's Resource Operations Center at 1(800) 832-5452, of any discharge, release or spills in excess of a reportable quantity. Contractor must not allow Railway Property to become a treatment, storage or transfer facility as those terms are defined in the Resource Conservation and Recovery Act or any state analogue.

- **1.03.10** The Contractor upon completion of the work covered by this contract, must promptly remove from the Railway's Property all of Contractor's tools, equipment, implements and other materials, whether brought upon said property by said Contractor or any Subcontractor, employee or agent of Contractor or of any Subcontractor, and must cause Railway's Property to be left in a condition acceptable to the Railway's representative.

1.04 Contractor Roadway Worker on Track Safety Program and Safety Action Plan:

- **1.04.01** Each Contractor that will perform work within 25 feet of the centerline of a track must develop and implement a Roadway Worker Protection/On Track Safety Program and work with Railway Project Representative to develop an on track safety strategy as described in the guidelines listed in the on track safety portion of the Safety Orientation. This Program must provide Roadway Worker protection/on track training for all employees of the Contractor, its subcontractors, agents or invitees. This training is reinforced at the job site through job safety briefings. Additionally, each Contractor must develop and implement the Safety Action Plan, as provided for on the web site **www.contractororientation.com**, which will be made available to Railway prior to commencement of any work on Railway Property. During the performance of work, the Contractor must audit its work activities. The Contractor must designate an on-site Project Supervisor who will serve as the contact person for the Railway and who will maintain a copy of the Safety Action Plan, safety audits, and Material Safety Datasheets (MSDS), at the job site.

- **1.04.02** Contractor shall have a background investigation performed on all of its employees, subcontractors and agents who will be performing any services for Railroad under this Agreement which are determined by Railroad in its sole discretion **a)** to be on Railroad's property, or **b)** that require access to Railroad Critical Infrastructure, Railroad Critical Information Systems, Railroad's Employees, Hazardous Materials on Railroad's property or is being transported by or otherwise in the custody of Railroad, or Freight in Transit involving Railroad.
  The required background screening shall at a minimum meet the rail industry background screening criteria defined by the e-RAILSAFE Program as outlined at http://www.e-railsafe.com, in addition to any other applicable regulatory requirements.
  Contractor shall obtain written consent from all its employees, subcontractors or agents screened in compliance with the e-RAILSAFE Program to participate in the Program on their behalf and to release completed background information to Railroad's designee. Contractor shall be subject to periodic audit to ensure compliance.
  Contractor subject to the e-RAILSAFE Program hereunder shall not permit any of its employees, subcontractors or agents to perform services hereunder who are not first approved under e-RAILSAFE Program standards. Railroad shall have the right to deny entry onto its premises or access as described in this section above to any of Contractor's employees, subcontractors or agents who do not display the authorized identification badge issued by a background screening service meeting the standards set forth in the e-RAILSAFE Program, or who in Railroad's opinion, which may not be unreasonable, may pose a threat to the safety or security of Railroad's operations, assets or personnel.
  Contractors shall be responsible for ensuring that its employees, subcontractors and agents are United States citizens or legally working in the United States under a lawful and appropriate work VISA or other work authorization.

1.05 Railway Flagger Services:

- **1.05.01** The Contractor must give Railway's **Roadmaster (telephone ________)** a minimum of thirty (30) calendar days advance notice when flagging services will be required so that the Roadmaster can make appropriate arrangements (i.e., bulletin the flagger's position). If flagging services are scheduled in advance by the Contractor and it is subsequently determined by the parties hereto that such services are no longer necessary, the Contractor must give the Roadmaster five (5) working days advance notice so that appropriate arrangements can be made to abolish the position pursuant to union requirements.

- **1.05.02** Unless determined otherwise by Railway's Project Representative, Railway flagger will be required and furnished when Contractor's work activities are located over, under and/or within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned beyond 25-feet from the track centerline could foul the track in the event of tip over or other catastrophic occurrence, but not limited thereto for the following conditions:
  - **1.05.02a** When, upon inspection by Railway's Representative, other conditions warrant.
  - **1.05.02b** When any excavation is performed below the bottom of tie elevation, if, in the opinion of Railway's representative, track or other Railway facilities may be subject to movement or settlement.
  - **1.05.02c** When work in any way interferes with the safe operation of trains at timetable speeds.
  - **1.05.02d** When any hazard is presented to Railway track, communications, signal, electrical, or other facilities either due to persons, material, equipment or blasting in the vicinity.
  - **1.05.02e** Special permission must be obtained from the Railway before moving heavy or cumbersome objects or equipment which might result in making the track impassable.

- **1.05.03** Flagging services will be performed by qualified Railway flaggers.
  - **1.05.03a** Flagging crew generally consists of one employee. However, additional personnel may be required to protect Railway Property and operations, if deemed necessary by the Railways Representative.
  - **1.05.03b** Each time a flagger is called, the minimum period for billing will be the eight (8) hour basic day.
  - **1.05.03c** The cost of flagger services provided by the Railway will be borne by **(Agency)**. The estimated cost for one (1) flagger is approximately between $800.00-$1,600.00 for an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays. The estimated cost for each flagger includes vacation allowance, paid holidays, Railway and unemployment insurance, public liability and property damage insurance, health and welfare benefits, vehicle, transportation, meals, lodging, radio, equipment, supervision and other costs incidental to performing flagging services. Negotiations for Railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase actual or estimated flagging rates. **THE FLAGGING RATE IN EFFECT AT THE TIME OF PERFORMANCE BY THE CONTRACTOR HEREUNDER WILL BE USED TO CALCULATE THE ACTUAL COSTS OF FLAGGING PURSUANT TO THIS PARAGRAPH.**
  - **1.05.03d** The average train traffic on this route is ______ freight trains per 24-hour period at a timetable speed ______ MPH and ______ passenger trains at a timetable speed of ______ MPH.

1.06 Contractor General Safety Requirements

- **1.06.01** Work in the proximity of railway track(s) is potentially hazardous where movement of trains and equipment can occur at any time and in any direction. All work performed by contractors within 25 feet of any track must be in compliance with FRA Roadway Worker Protection Regulations.

- **1.06.02** Before beginning any task on Railway Property, a thorough job safety briefing must be conducted with all personnel involved with the task and repeated when the personnel or task changes. If the task is within 25 feet of any track, the job briefing must include the Railway's flagger, as applicable, and include the procedures the Contractor will use to protect its employees, subcontractors, agents or invitees from moving any equipment adjacent to or across any Railway track(s).

- **1.06.03** Workers must not work within 25 feet of the centerline of any track without an on track safety strategy approved by the Railway's Project Representative. When authority is provided, every contractor employee must know: (1) who the Railway flagger is, and how to contact the flagger, (2) limits of the authority, (3) the method of communication to stop and resume work, and (4) location of the designated places of safety. Persons or equipment entering flag/work limits that were not previously job briefed, must notify the flagger immediately, and be given a job briefing when working within 25 feet of the center line of track.

- **1.06.04** When Contractor employees are required to work on the Railway Property after normal working hours or on weekends, the Railway's representative in charge of the project must be notified. A minimum of two employees must be present at all times.

- **1.06.05** Any employees, agents or invitees of Contractor or its subcontractors under suspicion of being under the influence of drugs or alcohol, or in the possession of same, will be removed from the Railway's Property and subsequently released to the custody of a representative of Contractor management. Future access to the Railway's Property by that employee will be denied.

- **1.06.06** Any damage to Railway Property, or any hazard noticed on passing trains must be reported immediately to the Railway's representative in charge of the project. Any vehicle or machine which may come in contact with track, signal equipment, or structure (bridge) and could result in a train derailment must be reported immediately to the Railway representative in charge of the project and to the Railway's Resource Operations Center at 1(800) 832-5452. Local emergency numbers are to be obtained from the Railway representative in charge of the project prior to the start of any work and must be posted at the job site.

- **1.06.07** For safety reasons, all persons are prohibited from having pocket knives, firearms or other deadly weapons in their possession while working on Railway's Property.

- **1.06.08** All personnel protective equipment (PPE) used on Railway Property must meet applicable OSHA and ANSI specifications. Current Railway personnel protective equipment requirements are listed on the web site, **www.contractororientation.com**, however, a partial list of the requirements include: a) safety glasses with permanently affixed side shields (no yellow lenses); b) hard hats; c) safety shoe with: hardened toes, above-the-ankle lace-up and a defined heel; and d) high visibility retro-reflective work wear. The Railway's representative in charge of the project is to be contacted regarding local specifications for meeting requirements relating to hi-visibility work wear. Hearing protection, fall protection, gloves, and respirators must be worn as required by State and Federal regulations. **(NOTE – Should there be a discrepancy between the information contained on the web site and the information in this paragraph, the web site will govern.)**

- **1.06.09 THE CONTRACTOR MUST NOT PILE OR STORE ANY MATERIALS, MACHINERY OR EQUIPMENT CLOSER THAN 25'-0" TO THE CENTER LINE OF THE NEAREST RAILWAY TRACK. MATERIALS, MACHINERY OR EQUIPMENT MUST NOT BE STORED OR LEFT WITHIN 250 FEET OF ANY HIGHWAY/RAIL AT-GRADE CROSSINGS OR TEMPORARY CONSTRUCTION CROSSING, WHERE STORAGE OF THE SAME WILL OBSTRUCT THE VIEW OF A TRAIN APPROACHING THE CROSSING. PRIOR TO BEGINNING WORK, THE CONTRACTOR MUST ESTABLISH A STORAGE AREA WITH CONCURRENCE OF THE RAILWAY'S REPRESENTATIVE.**

- **1.06.10** Machines or vehicles must not be left unattended with the engine running. Parked machines or equipment must be in gear with brakes set and if equipped with blade, pan or bucket, they must be lowered to the ground. All machinery and equipment left unattended on Railway's Property must be left inoperable and secured against movement. (See internet Engineering Contractor Safety Orientation program for more detailed specifications)

- **1.06.11** Workers must not create and leave any conditions at the work site that would interfere with water drainage. Any work performed over water must meet all Federal, State and Local regulations.

- **1.06.12** All power line wires must be considered dangerous and of high voltage unless informed to the contrary by proper authority. For all power lines the minimum clearance between the lines and any part of the equipment or load must be; 200 KV or below - 15 feet; 200 to 350 KV - 20 feet; 350 to 500 KV - 25 feet; 500 to 750 KV - 35 feet; and 750 to 1000 KV - 45 feet. If capacity of the line is not known, a minimum clearance of 45 feet must be maintained. A person must be designated to observe clearance of the equipment and give a timely warning for all operations where it is difficult for an operator to maintain the desired clearance by visual means.

1.07 Excavation:

- **1.07.01** Before excavating, the Contractor must determine whether any underground pipe lines, electric wires, or cables, including fiber optic cable systems are present and located within the Project work area. The Contractor must determine whether excavation on Railway's Property could cause damage to buried cables resulting in delay to Railway traffic and disruption of service to users. Delays and disruptions to service may cause business interruptions involving loss of revenue and profits. Before commencing excavation, the Contractor must contact **BNSF's Field Engineering Representative (_____________)**. All underground and overhead wires will be considered HIGH VOLTAGE and dangerous until verified with the company having ownership of the line. **It is the Contractor's responsibility to notify any other companies that have underground utilities in the area and arrange for the location of all underground utilities before excavating.**

- **1.07.02** The Contractor must cease all work and notify the Railway immediately before continuing excavation in the area if obstructions are encountered which do not appear on drawings. If the obstruction is a utility and the owner of the utility can be identified, then the Contractor must also notify the owner immediately. If there is any doubt about the location of underground cables or lines of any kind, no work must be performed until the exact location has been determined. There will be no exceptions to these instructions.

- **1.07.03** All excavations must be conducted in compliance with applicable OSHA regulations and, regardless of depth, must be shored where there is any danger to tracks, structures or personnel.

- **1.07.04** Any excavations, holes or trenches on the Railway's Property must be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas must be secured and left in a condition that will ensure that Railway employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations must be back filled as soon as possible.

1.08 Hazardous Waste, Substances and Material Reporting:

- **1.08.01** If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to Railway's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor must immediately: (a) notify the Railway's Resource Operations Center at 1(800) 832-5452, of such discovery: (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties: and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.

1.09 Personal Injury Reporting

- **1.09.01** The Railway is required to report certain injuries as a part of compliance with Federal Railroad Administration (FRA) reporting requirements. Any personal injury sustained by an employee of the Contractor, subcontractor or Contractor's invitees while on the Railway's Property must be reported immediately (by phone mail if unable to contact in person) to the Railway's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form contained herein is to be completed and sent by Fax to the Railway at 1(817) 352-7595 and to the Railway's Project Representative no later than the close of shift on the date of the injury.

BNSF RAILWAY — NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION

(If injuries are in connection with rail equipment accident/incident, highway rail grade crossing accident or automobile accident, ensure that appropriate information is obtained, forms completed and that data entry personnel are aware that injuries relate to that specific event.)

Injured Person Type:

- ☐ Passenger on train (C)
- ☐ Non-employee (N) (i.e. emp of another railroad, or non-BNSF emp involved in vehicle accident, including company vehicles)
- ☐ Contractor/safety sensitive (F)
- ☐ Contractor/non-safety sensitive (G)
- ☐ Volunteer/safety sensitive (H)
- ☐ Volunteer/other non-safety sensitive (I)
- ☐ Non-trespasser (D) - to include highway users involved in highway rail grade crossing accidents who did not go around or through gates
- ☐ Trespasser (E) - to include highway users involved in highway rail grade crossing accidents who went around or through gates
- ☐ Non-trespasser (J) - Off railroad property

If train involved, Train ID: ______________

Transmit attached information to Accident/Incident Reporting Center by:
Fax 1-817-352-7595 or by Phone 1-800-697-6736 **or email to:** Accident-Reporting.Center@BNSF.com

Officer Providing Information:

______________ ______________ ______________
(Name) (Employee No.) (Phone #)

REPORT PREPARED TO COMPLY WITH FEDERAL ACCIDENT REPORTING REQUIREMENTS AND PROTECTED FROM DISCLOSURE PURSUANT TO 49 U.S.C. 20903 AND 83 U.S.C. 490

NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION

INFORMATION REQUIRED TO BE COLLECTED PURSUANT TO FEDERAL REGULATION. IT SHOULD BE USED FOR COMPLIANCE WITH FEDERAL REGULATIONS ONLY AND IT IS NOT INTENDED TO PRESUME ACCEPTANCE OF RESPONSIBILITY OR LIABILITY.

1. Accident City/St: ______________ 2. Date: ________ Time: ________
County: ______________ (if non BNSF location) 3. Temperature: ________ 4. Weather: ________
Mile Post / Line Segment: ______________
5. Driver's License No (and state) or other ID: ______________ SSN (required): ______________
6. Name (last, first, mi): ______________
7. Address: ______________ City: ________ St: ________ Zip: ________
8. Date of Birth: ______________ and/or Age: ________ (if available) Gender: ________
Phone Number: ______________ Employer: ______________
9. Injury: ______________ (i.e., Laceration, etc.) 10. Body Part: ______________ (i.e., Hand, etc.)
11. Description of Accident (To include location, action, result, etc.): ______________
12. Treatment:
- ☐ First Aid Only
- ☐ Required Medical Treatment ______________
- ☐ Other Medical Treatment ______________

13. Dr. Name: ______________ Date: ________
14. Dr. Address: Street: ______________ City: ________ St: ________ Zip: ________
15. Hospital Name: ______________
16. Hospital Address: Street: ______________ City: ________ St: ________ Zip: ________
17. Diagnosis: ______________

REPORT PREPARED TO COMPLY WITH FEDERAL ACCIDENT REPORTING REQUIREMENTS AND PROTECTED FROM DISCLOSURE PURSUANT TO 49 U.S.C. 20903 AND 83 U.S.C. 490

EXHIBIT "C-1"

Agreement Between
BNSF RAILWAY COMPANY
and the
CONTRACTOR

Railway File: ______________________

Agency Project: ______________________

<%Contractor.LegalName%> [Insert contractor's legal name here](hereinafter called "Contractor"), has entered into an agreement (hereinafter called "Agreement") dated __________, 201_, **[***Drafter's Note: insert the date of the contract between the Agency and the Contractor here]** with **[Drafter's Note: insert the name of the Agency here]** for the performance of certain work in connection with the following project:______________. Performance of such work will necessarily require Contractor to enter **BNSF RAILWAY COMPANY** (hereinafter called "Railway") right of way and property (hereinafter called "Railway Property"). The Agreement provides that no work will be commenced within Railway Property until the Contractor employed in connection with said work for **[insert Agency name here]** (i) executes and delivers to Railway an Agreement in the form hereof, and (ii) provides insurance of the coverage and limits specified in such Agreement and Section 3 herein. If this Agreement is executed by a party who is not the Owner, General Partner, President or Vice President of Contractor, Contractor must furnish evidence to Railway certifying that the signatory is empowered to execute this Agreement on behalf of Contractor.

Accordingly, in consideration of Railway granting permission to Contractor to enter upon Railway Property and as an inducement for such entry, Contractor, effective on the date of the Agreement, has agreed and does hereby agree with Railway as follows:

1) RELEASE OF LIABILITY AND INDEMNITY

Contractor hereby waives, releases, indemnifies, defends and holds harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or any work performed on or about Railway's property or right-of-way. **THE LIABILITY ASSUMED BY CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, EXCEPT TO THE EXTENT THAT SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE INTENSIONAL MISCONDUCT OR GROSS NEGLIGENCE OF RAILWAY.**
THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it will adjust and settle all claims made against Railway, and will, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring Contractor to indemnify Railway to the fullest extent permitted by applicable law. **THROUGH THIS AGREEMENT THE PARTIES EXPRESSLY INTEND FOR CONTRACTOR TO INDEMNIFY RAILWAY FOR RAILWAY'S ACTS OF NEGLIGENCE.**
It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

2) TERM

This Agreement is effective from the date of the Agreement until (i) the completion of the project set forth herein, and (ii) full and complete payment to Railway of any and all sums or other amounts owing and due hereunder.

3) INSURANCE

Contractor shall, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

A. Commercial General Liability insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of $2,000,000 each occurrence and an aggregate limit of at least $4,000,000 but in no event less than the amount otherwise carried by the Contractor. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limit to the following:

- Bodily Injury and Property Damage
- Personal Injury and Advertising Injury
- Fire legal liability
- Products and completed operations

This policy shall also contain the following endorsements, which shall be indicated on the certificate of insurance:

- The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- Waiver of subrogation in favor of and acceptable to Railway.
- Additional insured endorsement in favor of and acceptable to Railway.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to ***Railway*** employees.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy with regard to the work being performed under this agreement.

B. Business Automobile Insurance. This insurance shall contain a combined single limit of at least $1,000,000 per occurrence, and include coverage for, but not limited to the following:

- Bodily injury and property damage
- Any and all vehicles owned, used or hired

The policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Railway.
- Additional insured endorsement in favor of and acceptable to Railway.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

C. Workers Compensation and Employers Liability insurance including coverage for, but not limited to:

- Contractor's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 by disease policy limit, $500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Railway.

D. Railroad Protective Liability insurance naming only the ***Railway*** as the Insured with coverage of at least $2,000,000 per occurrence and $6,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 12 04 and include the following:

- Endorsed to include the Pollution Exclusion Amendment
- Endorsed to include the Limited Seepage and Pollution Endorsement.
- Endorsed to remove any exclusion for punitive damages.
- No other endorsements restricting coverage may be added.
- The original policy must be provided to the ***Railway*** prior to performing any work or services under this Agreement
- Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured' care, custody, and control arising out of the acts or omissions of the contractor named on the Declarations.

In lieu of providing a Railroad Protective Liability Policy, Licensee may participate (if available) in Railway's Blanket Railroad Protective Liability Insurance Policy.

Other Requirements:

Where allowable by law, all policies (applying to coverage listed above) shall contain no exclusion for punitive damages.

Contractor agrees to waive its right of recovery against ***Railway*** for all claims and suits against ***Railway***. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against ***Railway*** for all claims and suits. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against ***Railway*** for loss of its owned or leased property or property under Contractor's care, custody or control.

Allocated Loss Expense shall be in addition to all policy limits for coverages referenced above.

Contractor is not allowed to self-insure without the prior written consent of ***Railway.*** If granted by ***Railway***, any self-insured retention or other financial responsibility for claims shall be covered directly by Contractor in lieu of insurance. Any and all ***Railway*** liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by Contractor's insurance will be covered as if Contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

Prior to commencing services, Contractor shall furnish to ***Railway*** an acceptable certificate(s) of insurance from an authorized representative evidencing the required coverage(s), endorsements, and amendments. The certificate should be directed to the following address:

BNSF Railway Company
c/o CertFocus
P.O. Box 140528
Kansas City, MO 64114
Toll Free: 877-576-2378
Fax number: 817-840-7487
Email: BNSF@certfocus.com
www.certfocus.com

Contractor shall notify ***Railway*** in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration.

Any insurance policy shall be written by a reputable insurance company acceptable to ***Railway*** or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.

If coverage is purchased on a "claims made" basis, Contractor hereby agrees to maintain coverage in force for a minimum of three years after expiration, cancellation or termination of this Agreement. Annually Contractor agrees to provide evidence of such coverage as required hereunder.

Contractor represents that this Agreement has been thoroughly reviewed by Contractor's insurance agent(s)/broker(s), who have been instructed by Contractor to procure the insurance coverage required by this Agreement.

Not more frequently than once every five years, ***Railway*** may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by Contractor, Contractor shall require that the subcontractor shall provide and maintain insurance coverage(s) as set forth herein, naming ***Railway*** as an additional insured, and shall require that the subcontractor shall release, defend and indemnify ***Railway*** to the same extent and under the same terms and conditions as Contractor is required to release, defend and indemnify ***Railway*** herein.

Failure to provide evidence as required by this section shall entitle, but not require, ***Railway*** to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section shall not operate as a waiver of Contractor's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by Contractor shall not be deemed to release or diminish the liability of Contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by ***Railway*** shall not be limited by the amount of the required insurance coverage.

In the event of a claim or lawsuit involving ***Railway*** arising out of this agreement, Contractor will make available any required policy covering such claim or lawsuit.

These insurance provisions are intended to be a separate and distinct obligation on the part of the Contractor. Therefore, these provisions shall be enforceable and Contractor shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable in the jurisdiction in which the work covered hereunder is performed.
For purposes of this section, ***Railway*** shall mean "Burlington Northern Santa Fe LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

4) SALES AND OTHER TAXES

In the event applicable sales taxes of a state or political subdivision of a state of the United States are levied or assessed in connection with and directly related to any amounts invoiced by Contractor to Railway ("Sales Taxes"), Railway shall be responsible for paying only the Sales Taxes that Contractor separately states on the invoice or other billing documents provided to Railway; *provided, however,* that (i) nothing herein shall preclude Railway from claiming whatever Sales Tax exemptions are applicable to amounts Contractor bills Railway, (ii) Contractor shall be responsible for all sales, use, excise, consumption, services and other taxes which may accrue on all services, materials, equipment, supplies or fixtures that Contractor and its subcontractors use or consume in the performance of this Agreement, (iii) Contractor shall be responsible for Sales Taxes (together with any penalties, fines or interest thereon) that Contractor fails to separately state on the invoice or other billing documents provided to Railway or fails to collect at the time of payment by Railway of invoiced amounts (except where Railway claims a Sales Tax exemption), and (iv) Contractor shall be responsible for Sales Taxes (together with any penalties, fines or interest thereon) if Contractor fails to issue separate invoices for each state in which Contractor delivers goods, provides services or, if applicable, transfers intangible rights to Railway.

Upon request, Contractor shall provide Railway satisfactory evidence that all taxes (together with any penalties, fines or interest thereon) that Contractor is responsible to pay under this Agreement have been paid. If a written claim is made against Contractor for Sales Taxes with respect to which Railway may be liable for under this Agreement, Contractor shall promptly notify Railway of such claim and provide Railway copies of all correspondence received from the taxing authority. Railway shall have the right to contest, protest, or claim a refund, in Railway's own name, any Sales Taxes paid by Railway to Contractor or for which Railway might otherwise be responsible for under this Agreement; provided, however, that if Railway is not permitted by law to contest any such Sales Tax in its own name, Contractor shall, if requested by Railway at Railway's sole cost and expense, contest in Contractor's own name the validity, applicability or amount of such Sales Tax and allow Railway to control and conduct such contest.

Railway retains the right to withhold from payments made under this Agreement amounts required to be withheld under tax laws of any jurisdiction. If Contractor is claiming a withholding exemption or a reduction in the withholding rate of any jurisdiction on any payments under this Agreement, before any payments are made (and in each succeeding period or year as required by law), Contractor agrees to furnish to Railway a properly completed exemption form prescribed by such jurisdiction. Contractor shall be responsible for any taxes, interest or penalties assessed against Railway with respect to withholding taxes that Railway does not withhold from payments to Contractor.

5) EXHIBIT "C" CONTRACTOR REQUIREMENTS

The Contractor must observe and comply with all provisions, obligations, requirements and limitations contained in the Agreement, and the Contractor Requirements set forth on Exhibit "C" attached to the Agreement and this Agreement, including, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site. Contractor shall execute a Temporary Construction Crossing Agreement or Private Crossing Agreement (http://www.bnsf.com/communities/faqs/permits-real-estate/), for any temporary crossing requested to aid in the construction of this Project, if approved by BNSF.

6) TRAIN DELAY

Contractor is responsible for and hereby indemnifies and holds harmless Railway (including its affiliated railway companies, and its tenants) for, from and against all damages arising from any unscheduled delay to a freight or passenger train which affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further provided below, for the economic losses arising from loss of use of equipment, contractual loss of incentive pay and bonuses and contractual penalties resulting from train delays, whether caused by Contractor, or subcontractors, or by the Railway performing work under this Agreement. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use of equipment, Contractor will be billed the current freight train hour rate per train as determined from Railway's records. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

Additionally, the parties acknowledge that passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer(s). Under these arrangements, if Railway does not meet its contract service commitments, Railway may suffer loss of performance or incentive pay and/or be subject to penalty payments. Contractor is responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor or its subcontractors.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the extent consistent with Railway confidentiality obligations. The rate then in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of train delay pursuant to this agreement.

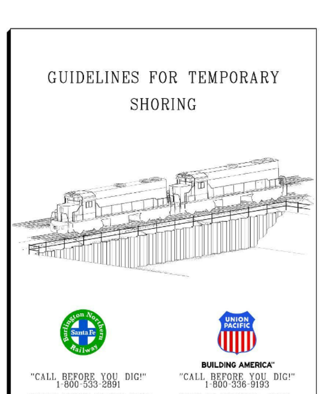
Contractor and its subcontractors must give Railway's representative (____________________) _____ (__) weeks advance notice of the times and dates for proposed work windows. Railway and Contractor will establish mutually agreeable work windows for the project. Railway has the right at any time to revise or change the work windows due to train operations or service obligations. Railway will not be responsible for any additional costs or expenses resulting from a change in work windows. Additional costs or expenses resulting from a change in work windows shall be accounted for in Contractor's expenses for the project.

Contractor and subcontractors must plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed by its duly authorized officer the day and year first above written.

<%Contractor.LegalName%>	**BNSF Railway Company**
By: ______________	By: ______________
Printed Name: ______________	Name: ______________ Manager Public Projects
Title: ______________	Accepted and effective this ______day of 20__.

Contact Person: ______________
Address: ______________
City: ______________
State: ________ Zip: ________
Fax: ______________
Phone: ______________
E-mail: ______________



GUIDELINES FOR TEMPORARY SHORING Published October 25, 2004

STATE OF ILLINOIS · ZACHERY R. WIESE · 001.021669 · LICENSED ARCHITECT

LEGAT ARCHITECTS — DESIGN | PERFORMANCE | SUSTAINABILITY			
USER NAME		DESIGNED BY	EM/TZ
		DRAWN BY	TZ
PLOT SCALE	12" = 1'-0"	CHECKED BY	EW
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20

REVISED / REVISED / REVISED / REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: 12" = 1'-0" SHEET OF

BUILDING
A-031 BNSF REQUIREMENTS
STA. TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	35
		CONTRACT NO. 61G62		
	ILLINOIS	FED. AID PROJECT		

METRA REQUIREMENTS

METRA REQUIREMENTS
1.01 RAILROAD COORDINATION
A. RAILROAD FLAGMAN REQUIREMENTS

1. RAILROAD FLAGMEN ARE GENERALLY PERSONNEL FROM THE RAILROAD WHO ACT AS WARNING DEVICES FOR THE APPROACH OF TRAINS. THEY CANNOT AUTHORIZE ANY DEVIATIONS TO THE PLANS AND SPECIFICATIONS, OR APPROVE OR INSPECT WORK. RAILROAD FLAGMEN WILL NOT BE USED AS ON-STREET FLAGMEN. ON-STREET FLAGMEN ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. RAILROAD FLAGMEN MAY WORK A MAXIMUM OF TWELVE (12) HOURS A DAY, ALTHOUGH IN MOST CASES IN THE SUBURBAN TERRITORY, CURFEWS EXIST THAT DO NOT ALLOW WORK DURING RUSH HOUR PERIODS. THE LENGTH OF THE WORKING DAY MUST BE ESTABLISHED WITH THE RAILROAD BEFORE WORK IS STARTED. (SEE CURFEW BELOW
3. AT NO TIME WILL MACHINERY BE ALLOWED TO CROSS THE TRACKS OR SET UP ON THE TRACKS WITHOUT PRIOR PERMISSION FROM THE RAILROAD'S AUTHORIZED REPRESENTATIVE. THIS TYPE OF WORK WILL REQUIRE SPECIAL PROTECTION AND SHOULD BE AVOIDED.
4. RAILROAD FLAGMEN MUST BE ORDERED WITH A TWO (2) WORKING DAY NOTICE TO THE RAILROAD. WHEN NOTICE IS GIVEN, THE FOLLOWING INFORMATION MUST BE PROVIDED.
   A. CONTRACTOR'S NAME
   B. PROJECT NAME
   C. STARTING TIME
   D. PHONE NUMBER
   E. BILLING ADDRESS
   F. LOCATION OF WORK
   G. NUMBER OF DAYS NEEDED
   H. GRANT NUMBER
5. ANY TIME WORK IS PERFORMED WITHIN 25 FEET OF THE CENTER OF THE NEAREST SET OF RAILS, FLAGMEN WILL BE NECESSARY. RAILROAD FLAGMEN MAY ALSO BE REQUIRED AS THE RAILROAD DEEMS NECESSARY.
6. THERE ARE A LIMITED NUMBER OF FLAGMEN AVAILABLE. EVERY REASONABLE EFFORT WILL BE MADE TO PROVIDE THE CONTRACTOR WITH A RAILROAD FLAGMAN, HOWEVER, IF THE RAILROAD FLAGMAN IS NOT PRESENT AS REQUESTED, THE APPROPRIATE RAILROAD OFFICIAL MUST BE NOTIFIED BEFORE WORK IS TO BEGIN. AT NO TIME MAY THE CONTRACTOR WORK WITHIN 25 FEET OF THE TRACK WITHOUT A FLAGMAN.
7. WHEN A RAILROAD FLAGMAN INFORMS THE CONTRACTOR'S FOREMAN THAT A TRAIN IS APPROACHING, ALL WORK MUST CEASE AND OPERATORS CLEAR THE TRACKS AND DISMOUNT MACHINES. IF THIS IS NOT DONE, THE FLAGMAN WILL NOT ALLOW THE TRAIN TO PASS. ANY TRAIN DELAYS OF THIS TYPE WILL NOT BE TOLERATED. DAMAGES MAY BE ASSESSED TO THE CONTRACTOR FOR TRAIN DELAYS OF THIS TYPE
8. RAILROAD FLAGMEN WILL BE PROVIDED TO THE JOB AT NO COST TO THE CONTRACTOR. HOWEVER, IF A RAILROAD FLAGMAN IS REQUESTED AND SUPPLIED AND THE CONTRACTOR DOES NOT WORK, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FOR THE FLAGMAN'S TIME.
9. THE FINAL DECISION FOR THE NEED FOR RAILROAD FLAGMEN WILL BE WITH METRA AND SUBJECT TO THE APPROVAL OF METRA'S CONSTRUCTION MANAGER. 10. THE CONTRACTOR MUST OBEY ALL SIGNALS AND DIRECTIONS GIVEN BY THE FLAGMAN AND MUST TAKE WHATEVER ACTIONS ARE NECESSARY TO ENSURE COMPLIANCE WITH THE SIGNALS AND DIRECTIONS.

B. WORK CURFEW

1. NO WORK WITHIN 25 FEET OF THE TRACK WILL BE DONE DURING MORNING AND EVENING RUSH HOURS. NO WORK WILL BE DONE BETWEEN 5:30AM AND 9:00AM, AND 3:00 PM AND 7:30 PM MONDAY THROUGH FRIDAY. THE EXACT WORK CURFEW FOR THE PROJECT MUST BE ESTABLISHED WITH THE RAILROAD/OPERATING DEPARTMENT BEFORE THE WORK IS STARTED.
2. ANY WORK WITHIN 25"- 0" OF THE CENTER LINE OF THE TRACK WILL REQUIRE A FLAGGER. 3. EQUIPMENT OR MATERIALS ALLOWED BY METRA'S CONSTRUCTION MANAGER AND METRA, TO REMAIN AT TRACK LEVEL, OUTSIDE OF THE ABOVE MENTIONED TIMES, MUST BE STORED NOT LESS THAN 15 FEET AWAY FROM THE CENTERLINE OF THE TRACK.

C. PASSENGER/PEDESTRIAN PROTECTION

1. ALL WORK MUST BE PROTECTED BY A BARRICADE SYSTEM AND PROPER SIGNAGE, AS REQUIRED BY THE RAILROAD/AUTHORIZED REPRESENTATIVE, TO BE PROVIDED BY THE CONTRACTOR AT HIS COST. NO BARRICADING CAN BE PLACED CLOSER THAN 9'-6" TO THE CENTERLINE OF THE NEAREST TRACK. EXCAVATIONS WILL BE COVERED AND/OR COMPLETELY SURROUNDED WITH A POSITIVE BARRIER.

D. WORK SCHEDULING AND NOTIFICATIONS

1. WORK MUST BE SCHEDULED AND PROGRESS IN SUCH A MANNER AS TO REDUCE THE IMPACT ON THE COMMUTING PUBLIC. ALL REQUESTS TO CLOSE A PORTION OF THE PLATFORM MUST BE SCHEDULED IN ADVANCE AND PERMISSION GRANTED BY THE RAILROAD/AUTHORIZED REPRESENTATIVE. A COPY OF THE WEEKLY SCHEDULE OF ACTIVITIES MUST BE PRESENTED TO THE RAILROAD/AUTHORIZED REPRESENTATIVE PRIOR TO THE WEEK'S ACTIVITIES. A CLEAR UNDERSTANDING OF THE CONTRACTOR'S ACTIVITIES AND PERMISSION TO PROCEED WITH CONSTRUCTION WORK THAT IMPACTS COMMUTER MUST BE OBTAINED. ONLY A PORTION OF THE PLATFORM MAY BE TAKEN OUT OF SERVICE AT ANY TIME FOR RECONSTRUCTION.

E. FAILURE TO COMPLY

1. SHOULD THERE BE ANY VIOLATION OF THESE RESTRICTIONS, A STOP WORK ORDER WILL BE ISSUED AND ALL WORK WILL CEASE UNTIL THE RAILROAD AND METRA ARE SATISFIED THAT ALL PROBLEMS ARE RESOLVED AND THE REQUIREMENTS OF THIS CONDITION ARE MET. NO COSTS OF A WORK STOPPAGE MAY BE PASSED ON TO THE RAILROAD, METRA, OR DUPAGE COUNTY.

F. WEEKEND, HOLIDAY AND NIGHT WORK

1. THE CONTRACTOR MAY BE ALLOWED TO WORK WEEKENDS, HOLIDAYS, OR AFTER HOURS AT NIGHT. ALL ARRANGEMENTS MUST BE MADE THREE (3) DAYS IN ADVANCE FOR SITE ACCESS, STATION SECURITY AND LOCK-UP. ALL WORK MUST BE APPROVED IN ADVANCE AND COORDINATED WITH THE RAILROAD OPERATIONS.

1.02 AS-BUILT PLANS

A. THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF DRAWINGS, SHOWING ALL CHANGES MADE TO THE ORIGINAL PLANS, ON SITE AT ALL TIMES AT THE DISPOSAL OF THE PROJECT MANAGER AND FOR REFERENCE AT ALL PROGRESS MEETINGS. UPON COMPLETION OF THE PROJECT CLOSEOUT, ONE (1) SET OF MARKED-UP PRINTS FOR AS-BUILT PLANS, REFLECTING ALL CHANGES TO THE ORIGINAL PLANS, SHALL BE SUBMITTED TO METRA FOR THEIR RECORDS.

1.03 SAFETY INSTRUCTIONS

A. IF IN THE OPINION OF THE RAILROAD REPRESENTATIVE ANY OF CONTRACTOR'S OR ANY OF ITS SUBCONTRACTOR'S EQUIPMENT IS UNSAFE FOR USE ON THE RAILROAD'S RIGHT-OF-WAY, THE CONTRACTOR, AT THE REQUEST OF THE RAILROAD REPRESENTATIVE SHALL REMOVE SUCH EQUIPMENT FROM THE RAILROAD'S RIGHT-OF-WAY.
B. IF THE RAILROAD REPRESENTATIVE HAS GIVEN THE CONTRACTOR PERMISSION TO USE CERTAIN EQUIPMENT ON ANY TRACKAGE AT THE JOB SITE, CONTRACTOR SHALL ENSURE THAT EACH AND ALL OF ITS EMPLOYEES RESPONSIBLE FOR OPERATING ANY MOTIVE POWER INCLUDING, WITHOUT LIMITATION, ANY HY-RAIL EQUIPMENT (SUCH EQUIPMENT HEREAFTER BEING REFERRED TO AS "MOTIVE POWER") ON ANY TRACKAGE OF RAILROAD WILL BE TRAINED TO KNOW AND UNDERSTAND AND WILL COMPLY WITH RAILROAD'S OPERATING RULES APPLICABLE TO THE OPERATION AND USE OF SUCH MOTIVE POWER.
C. IN THE EVENT CONTRACTOR'S EMPLOYEES USE ANY SUCH MOTIVE POWER TO MOVE ANY RAIL CARS OR OTHER RAILBOUND EQUIPMENT EQUIPPED WITH AIR BRAKES, CONTRACTOR SHALL FURTHER ENSURE THAT THE EMPLOYEES ARE TRAINED TO KNOW AND UNDERSTAND AND WILL COMPLY WITH RAILROAD'S RULES FOR HANDLING SUCH MOTIVE POWER, CARS AND EQUIPMENT AND THAT CONTRACTOR'S EMPLOYEES PERFORM ALL REQUIRED TESTS OF THE OPERATING SYSTEMS OF ANY MOTIVE POWER, CARS AND OTHER EQUIPMENT BEFORE AND AFTER MOVEMENT CONTRACTOR ACKNOWLEDGES RECEIPT OF RAILROAD'S APPLICABLE RULES GOVERNING:
   1. OPERATION AND USE OF MOTIVE POWER, CARS AND OTHER EQUIPMENT AND THE MOVEMENT OF SUCH MOTIVE POWER, CARS AND EQUIPMENT BY RAIL AND
   2. OPERATION AND USE OF ANY HY-RAIL VEHICLES OFF RAIL.

METRA CONSTRUCTION PROCEDURES
PART 1 GENERAL
1.01 DESCRIPTION OF WORK

A. IT IS IMPERATIVE THAT THE CONTRACTOR COMPLETE ALL CONSTRUCTION OPERATIONS, AS SHOWN ON THE DRAWINGS AND SPECIFIED IN THESE DETAILED SPECIFICATIONS, WITHOUT INTERRUPTION TO METRA COMMUTER SERVICE OR ANY FREIGHT SERVICE OPERATING ON THIS LINE.
B. THE ROADWAYS IN THE VICINITY OF THE PROJECT MUST BE KEPT OPEN TO PEDESTRIANS AND STREET TRAFFIC IN EACH DIRECTION AT ALL TIMES, EXCEPT AS OTHERWISE SPECIFIED ELSEWHERE OR HEREIN.

2.01 NOT USED
3.01 EXECUTION REQUIREMENTS

A. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'SBEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR, AND HAVE CONTROL OVER, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT, UNLESS THE CONTRACT DOCUMENTS GIVE OTHER SPECIFIC INSTRUCTIONS CONCERNING THESE MATTERS.
B. AS WORK PROGRESSES, CHANGES OR MODIFICATIONS IN SUCH PROCEDURES, METHODS AND EQUIPMENT MAY BE REQUIRED. IN SUCH AN EVENT, FURTHER WORK SHALL BE PERFORMED ONLY IN ACCORDANCE WITH SUCH CHANGES OR MODIFICATIONS AS SHALL HAVE BEEN SUBMITTED TO AND APPROVED BY METRA'S CONSTRUCTION MANAGER IN WRITING.
C. THE CONTRACTOR SHALL, IN GENERAL, FOLLOW THE PROCEDURE AND SEQUENCE OF OPERATIONS AS SPECIFIED IN THE CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF THE WORK. THE ORDER IN WHICH THE VARIOUS OPERATIONS OR STAGES ARE SPECIFIED IS BASED ON THE REQUIREMENT THAT RAILROAD AND VEHICULAR TRAFFIC MUST BE MAINTAINED AT ALL TIMES WITH A MINIMUM AMOUNT OF INCONVENIENCE OR INTERFERENCE TO TRAIN AND VEHICLE MOVEMENTS. ONLY THE PRINCIPAL ITEMS OF WORK TO BE PERFORMED ARE LISTED OR SHOWN, AND IT SHALL BE UNDERSTOOD THAT IT IS NOT THE INTENTION TO MENTION EVERY DETAIL OF THE WORK OR TO ENUMERATE ALL OF THE ITEMS OF THE CONTRACT WHICH MAY ENTER INTO ITS COMPLETION.
D. THE CONTRACTOR SHALL OBTAIN FROM THE MUNICIPALITY PERMISSION AND PERMITS FOR ANY STREET CLOSURES NECESSARY TO COMPLETE THE WORK. A MINIMUM OF ONE WEEK ADVANCED NOTICE MUST BE GIVEN TO THE MUNICIPALITY PRIOR TO ANY CLOSURE.REGARDLESS OF THE ORDER IN WHICH THE CONSTRUCTION OPERATIONS ARE LISTED, THE CONTRACTOR WILL BE EXPECTED TO CONCURRENTLY PROCEED WITH AS MANY CONSTRUCTION OPERATIONS AS POSSIBLE IN ORDER TO EXPEDITE THE
E. OF THE CONTRACT. PRIOR TO THE CONTRACTOR STARTING WORK, A JOINT CONFERENCE SHALL BE HELD BETWEEN ALL INTERESTED PARTIES, AT WHICH TIME A FINAL SCHEDULE OF OPERATIONS SHALL BE ADOPTED. AFTER THIS SCHEDULE HAS BEEN ADOPTED, NO DEVIATIONS BY THE CONTRACTOR WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM METRA'S CONSTRUCTION MANAGER. NO WORK SHALL BE PERFORMED BEFORE NOTICE TO PROCEED IS GIVEN BY METRA'S CONSTRUCTION MANAGER AND METRA.
F. THE MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK IN EACH STAGE SHALL BE FURNISHED BY THE ONE PERFORMING THE WORK UNLESS OTHERWISE SPECIFIED HEREIN.
G. THE CONTRACTOR HAS THE RESPONSIBILITY TO ENSURE THAT ALL MATERIAL SUPPLIERS AND SUBCONTRACTORS, THEIR AGENTS, AND EMPLOYEES ADHERE TO THE CONTRACT DOCUMENTS, AND THAT THEY ORDER MATERIALS ON TIME, TAKING INTO ACCOUNT THE CURRENT MARKET AND DELIVERY CONDITIONS, SO THAT THEY PROVIDE MATERIALS ON TIME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SPACE REQUIREMENTS, LOCATIONS, AND ROUTING OF ALL MATERIALS AND EQUIPMENT REQUIRED UNDER THIS AGREEMENT.
H. IF AT ANY TIME BEFORE THE COMMENCEMENT OR DURING THE PROGRESS OF THE WORK, THE MATERIALS AND EQUIPMENT USED OR TO BE USED APPEAR TO METRA'S CONSTRUCTION MANAGER AS INSUFFICIENT OR IMPROPER FOR SECURING THE QUALITY OF WORK REQUIRED OR THE REQUIRED RATE OF PROGRESS, METRA'S CONSTRUCTION MANAGER MAY ORDER THE CONTRACTOR TO INCREASE ITS EFFICIENCY, OR TO IMPROVE THE CHARACTER OF ITS EQUIPMENT, AND THE CONTRACTOR SHALL CONFORM TO SUCH ORDER. HOWEVER, THE FAILURE OF METRA'S CONSTRUCTION MANAGER TO DEMAND AN INCREASE OF SUCH EFFICIENCY OR IMPROVEMENT SHALL NOT RELEASE THE CONTRACTOR FROM ITS OBLIGATION OR RESPONSIBILITY TO SECURE THE QUALITY OF WORK OR RATE OF PROGRESS REQUIRED UNDER THIS CONTRACT.
I. THE CONTRACTOR SHALL BE RESPONSIBLE TO METRA FOR ACTS AND OMISSIONS OF THE CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS AND THEIR EMPLOYEES, AND OTHER PERSONS OR ENTITIES PERFORMING PORTIONS OF THE WORK FOR, OR ON BEHALF OF, THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS.
J. ALL EMPLOYEES AND SUBCONTRACTORS OF THE CONTRACTOR SHALL BE QUALIFIED BY TRAINING AND EXPERIENCE TO PERFORM THEIR ASSIGNED TASKS.
K. THE CONTRACTOR WILL NOT PERMIT AT ANY TIME ALCOHOL, CONTROLLED SUBSTANCES OR FIREARMS TO BE PRESENT AT THE PROJECT SITE.

METRA TESTING AND INSPECTION SERVICES
1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SPECIAL CONDITIONS AND OTHER SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. THE CONTRACTOR SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM TESTING AND INSPECTION SERVICES AS REQUIRED BY OTHER SECTIONS OF THIS SPECIFICATION, INCLUDING INSPECTION, SAMPLING AND TESTING FOR BUT NOT LIMITED TO THE FOLLOWING:
   1. SOILS, AGGREGATES
   2. CAISSONS
   3. BITUMINOUS CONCRETING PAVING
   4. CONCRETE, REINFORCEMENT
   5. MASONRY
   6. STRUCTURAL STEEL
   7. STEEL DECK
   8. METAL FABRICATIONS, STEEL STAIRS
   9. PAINTING
   10. MECHANICAL
   11. ELECTRICAL
B. CONTRACTOR'S OBLIGATIONS
   1. TESTING AND INSPECTION BY THE CONTRACTOR SHALL IN NO WAY RELIEVE THE CONTRACTOR'S OBLIGATIONS TO PERFORM THE WORK OF THE CONTRACT HEREIN SPECIFIED.
   2. TESTING SHALL BE REQUIRED ON ALL WORK TO SHOW COMPLIANCE WITH THE CONTRACT DOCUMENTS WHETHER OR NOT THEY ARE SPECIFICALLY INDICATED, AT NO ADDITIONAL COST TO METRA.
   3. AFTER TESTING, SHOULD ANY MATERIAL OR WORK BE FOUND TO BE DEFECTIVE OR INFERIOR, SUCH MATERIAL AND/OR WORK SHALL BE REMOVED AND REPLACED WITH NEW SOUND MATERIAL AND/OR WORK. REMOVAL AND REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE. A RETEST OF NEW MATERIAL AND/OR WORK WILL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

1.3 CONTRACTOR'S TESTING AND INSPECTION AGENCY

A. THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL TESTS AND INSPECTIONS TO SHOW THAT THE REQUIREMENTS OF THE CONTRACT HAVE BEEN FULFILLED, INCLUDING ALL TESTS REQUIRED BY LAW, ORDINANCES, RULES AND REGULATIONS GOVERNING THE WORK.
B. THE CONTRACTOR SHALL SUBMIT THE NAMES, QUALIFICATIONS AND SCOPE OF SERVICES OF EACH INDEPENDENT TESTING AGENCY FOR METRA'S APPROVAL WITHIN 30 DAYS OF THE CONTRACTOR'S NOTICE TO PROCEED.
C. CONTRACTOR SHALL SUBMIT ONE (1) CERTIFIED ORIGINAL OF EACH TEST RESULT AND/OR REPORT TO METRA'S CONSTRUCTION MANAGER.

1.4 QUALIFICATIONS OF CONTRACTOR'S TESTING AND INSPECTION AGENCIES:

A. AGENCIES SHALL MEET BASIC REQUIREMENTS OF ASTM E 329, "STANDARD SPECIFICATION FOR AGENCIES ENGAGED IN CONSTRUCTION INSPECTION, TESTING, OR SPECIAL INSPECTION."
B. AGENCIES SHALL BE AUTHORIZED TO OPERATE IN THE STATE WHERE THE MATERIAL IS BEING MANUFACTURED OR FABRICATED.
C. THE AGENCIES' TESTING EQUIPMENT SHALL BE CALIBRATED AT REQUIRED INTERVALS WITH PROOF OF CALIBRATION BY DEVICES OF ACCURACY TRACEABLE TO EITHER:
   1. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
   2. ACCEPTED VALUES OF NATURAL PHYSICAL CONSTANTS.
D. REPORTS PREPARED BY THE AGENCIES SHALL BE SIGNED BY THE APPROPRIATE LICENSED PROFESSIONAL ENGINEER OR DESIGNATED REPRESENTATIVE IN ACCORDANCE WITH STATE LICENSING BOARD REQUIREMENTS. CERTIFICATION OF ENGINEERING TECHNICIANS IN THE VARIOUS SERVICE AREAS IS ENCOURAGED AND MUST BE PROVIDED WHERE CERTIFICATION IS REQUIRED.
E. AN INDEPENDENT TESTING AGENCY IS ONE FREE FROM ANY CONFLICT OF INTEREST. THEY ARE NOT AFFILIATED WITH ANY INSTITUTION, COMPANY OR TRADE GROUP THAT MIGHT AFFECT THEIR ABILITY TO CONDUCT INVESTIGATIONS, RENDER REPORTS, OR GIVE PROFESSIONAL, OBJECTIVE AND UNBIASED COUNSEL.

1.5 DUTIES OF CONTRACTOR'S TESTING AND INSPECTION AGENCIES:

A. THE DUTIES OF THE CONTRACTOR'S TESTING AND INSPECTION AGENCY INCLUDE THE FOLLOWING:
   1. PROVIDE QUALIFIED PERSONNEL TO PERFORM REQUIRED INSPECTIONS.
   2. COOPERATE AND COMPLY WITH THE REQUIREMENTS OF METRA AND CONTRACTOR.
   3. PERFORM SPECIFIED INSPECTIONS, SAMPLING AND TESTING OF MATERIALS OF CONSTRUCTION AS REQUIRED OR REQUESTED BY METRA TO ASCERTAIN COMPLIANCE OF MATERIALS AND WORKMANSHIP WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
   4. WITHIN 24 HOURS OF OBSERVATION, DIRECTLY NOTIFY METRA'S CONSTRUCTION MANAGER AND CONTRACTOR, IN WRITING, OF ANY OBSERVED IRREGULARITIES OR DEFICIENCIES OF THE WORK, MATERIALS OR PRODUCTS.
   5. WITHIN 24 HOURS OF INSPECTION OR RECEIPT OF TESTING AND INSPECTION RESULTS, SUBMIT COPIES DIRECTLY TO METRA'S CONSTRUCTION MANAGER. EACH REPORT SHALL INCLUDE, AS A MINIMUM, AMONG OTHER ITEMS:
      a. DATE ISSUED.
      b. PROJECT NAME AND NUMBER.
      c. TESTING AND INSPECTION AGENCY NAME, ADDRESS AND TELEPHONE NUMBER.
      d. NAME AND SIGNATURE OF INSPECTOR.
      e. DATE AND TIME OF SAMPLING, INSPECTION OR TESTING.
      f. RECORD OF TEMPERATURE AND WEATHER CONDITIONS.
      g. IDENTIFICATION OF PRODUCTS AND SPECIFICATIONS SECTION.
      h. LOCATION OF SAMPLE OR TEST WITHIN THE PROJECT AREA.
      i. DESIGNATION OF THE WORK AND TYPE OF INSPECTION OR TEST.
      j. RESULTS OF TESTS AND COMPLIANCE WITH CONTRACT DOCUMENTS.
      k. INTERPRETATION OF TEST RESULTS INCLUDING COMMENTS OR PROFESSIONAL
      OPINION AS TO WHETHER INSPECTED OR TESTED WORK COMPLIES WITH THE CONTRACT REQUIREMENTS.
      l. RECOMMENDATIONS ON RETESTING IF THE TESTED OR INSPECTED WORK IS NOT IN COMPLIANCE.

1.6 CONTRACTOR'S RESPONSIBILITIES:

A. CONTRACTOR SHALL COOPERATE WITH METRA AND THE TESTING AND INSPECTION AGENCY WITH REGARD TO THEIR DETERMINATIONS OF THE CONTRACTOR'S COMPLIANCE WITH THE CONTRACT REQUIREMENTS AND SHALL PROVIDE ACCESS TO THE WORK.

B. PROVIDE A TESTING AND INSPECTION PLAN LISTING THE TESTING REQUIRED PER CONTRACTUAL DOCUMENTS FOR VARIOUS WORK ACTIVITIES AND MATERIALS DURING CONSTRUCTION.

C. PREPARE A LIST (LOG) OF THE INSPECTION, MEASURING, AND TEST EQUIPMENT REQUIRING CALIBRATION INCLUDING ITS CALIBRATION STATUS.

D. SECURE AND DELIVER ADEQUATE QUANTITIES OF REPRESENTATIONAL SAMPLES OF PROPOSED MATERIALS FOR TESTING TO THE TESTING AND INSPECTION AGENCY.

E. FURNISH COPIES OF PRODUCT TEST REPORTS.
F. FURNISH INCIDENTAL LABOR AND FACILITIES:
   1. TO PROVIDE ACCESS TO THE WORK TO BE TESTED.
   2. TO OBTAIN AND HANDLE SAMPLES AT THE PROJECT SITE OR AT THE SOURCE OF THE PRODUCT TO BE TESTED.
   3. TO FACILITATE INSPECTIONS AND TESTS.
   4. FOR STORAGE AND CURING OF TEST SAMPLES.
G. NOTIFY THE TESTING AND INSPECTION AGENCY SUFFICIENTLY IN ADVANCE OF OPERATIONS TO ALLOW FOR ASSIGNMENT OF THEIR PERSONNEL AND SCHEDULING OF TESTS.
H. AT THE DISCRETION OF METRA, THE CONTRACTOR MAY BE REQUIRED TO EMPLOY AND PAY FOR THE SERVICES OF A SEPARATE, EQUALLY QUALIFIED INDEPENDENT TESTING AND INSPECTION AGENCY TO PERFORM ADDITIONAL INSPECTIONS, SAMPLING AND TESTING REQUIRED WHEN INITIAL TESTS INDICATE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS.
I. CONTRACTOR SHALL PAY FOR ALL COSTS RELATED TO PRODUCTS AND/OR MATERIAL TESTING, IN ACCORDANCE WITH ESTABLISHED REQUIREMENTS AND AS SPECIFIED.

1.7 METRA'S CONSTRUCTION MANAGER'S RESPONSIBILITIES:

A. METRA, THROUGH ITS CONSTRUCTION MANAGER, MAY PERFORM SEPARATE QUALITY ASSURANCE TESTING ON ANY MATERIAL OR WORKMANSHIP TO INSURE CONTRACT REQUIREMENTS ARE MET.

2.01 NOT USED
3.01 REPAIR AND PROTECTION

A. GENERAL: UPON COMPLETION OF INSPECTION, TESTING, SAMPLE-TAKING AND SIMILAR SERVICES, THE CONTRACTOR SHALL REPAIR DAMAGED CONSTRUCTION AND RESTORE SUBSTRATES AND FINISHES TO ELIMINATE DEFICIENCIES, INCLUDING DEFICIENCIES IN VISUAL QUALITIES OF EXPOSED FINISHES.
B. PROTECT CONSTRUCTION EXPOSED BY OR FOR QUALITY CONTROL SERVICE ACTIVITIES, AND PROTECT REPAIRED CONSTRUCTION.
C. REPAIR AND PROTECTION IS THE CONTRACTOR'S RESPONSIBILITY, REGARDLESS OF THE ASSIGNMENT OF RESPONSIBILITY FOR INSPECTION, TESTING OR SIMILAR SERVICE.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIME AND COST TO REPAIR ANY DAMAGED CONSTRUCTION OR RESTORATION CAUSED EITHER DIRECTLY OR INDIRECTLY BY TESTING OR THE TESTING AGENCY.

METRA REFERENCE STANDARDS AND DEFINITIONS
1.01 DESCRIPTION

A. VARIOUS STANDARDS ARE REFERENCED THROUGHOUT THE CONTRACT DOCUMENTS. THIS SECTION SPECIFIES THE FOLLOWING:
   1. APPLICABILITY OF REFERENCE STANDARDS.
   2. PROVISION OF REFERENCE STANDARDS AT THE SITE.
   3. ACRONYMS USED IN THE CONTRACT DOCUMENTS FOR REFERENCE STANDARDS.
   4. SOURCE OF REFERENCE STANDARDS.
B. CERTAIN TERMS USED IN THE CONTRACT DOCUMENTS ARE DEFINED IN THIS SECTION.

1.02 DEFINITIONS

A. WHEREVER IN THE CONTRACT DOCUMENTS THE FOLLOWING TERMS, OR PRONOUNS IN PLACE OF THEM, OR ABBREVIATIONS THEREOF ARE USED, THE INTENT AND MEANING SHALL BE INTERPRETED AS FOLLOWS:

1. ADDENDA: ADDENDA ARE WRITTEN OR GRAPHIC INSTRUMENTS ISSUED BY METRA WHICH MODIFY OR INTERPRET THE BIDDING DOCUMENTS BY ADDITIONS, DELETIONS, CLARIFICATIONS, OR CORRECTIONS.
2. AGREEMENT: SHALL MEAN A PROPOSAL OR CONTRACT EXECUTED BY METRA.
3. ALTERNATE: AN ALTERNATE BID (OR ALTERNATE) IS AN AMOUNT STATED IN THE BID TO BE ADDED TO OR DEDUCTED FROM THE AMOUNT OF THE BASE BID IF THE CORRESPONDING CHANGE IN THE WORK, AS DESCRIBED IN THE BIDDING DOCUMENTS, IS ACCEPTED.
4. APPROVED: THE TERM APPROVED, WHEN USED IN CONJUNCTION WITH METRA'S CONSTRUCTION MANAGER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO METRA'S CONSTRUCTION MANAGER'S DUTIES AND RESPONSIBILITIES AS STATED IN THE CONDITIONS OF THE CONTRACT
5. AUTHORITY: THIS TERM SHALL MEAN THE NORTHEAST ILLINOIS REGIONAL COMMUTER RAILROAD CORPORATION (METRA).
6. BASE BID: THE BASE BID IS THE SUM STATED IN THE BID FOR WHICH THE BIDDER OFFERS TO PERFORM THE WORK DESCRIBED IN THE BIDDING DOCUMENTS AS THE BASE, TO WHICH WORK MAY BE ADDED OR FROM WHICH WORK MAY BE OMITTED, FOR SUMS STATED IN ALTERNATE ADDITIVES AND DEDUCTIONS.
7. BID: A BID IS A COMPLETE AND PROPERLY SIGNED PROPOSAL TO DO THE WORK, OR DESIGNATED PORTION THEREOF, FOR THE SUMS STIPULATED THEREIN, SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BIDDING DOCUMENTS. THE TERM BID IS USED INTERCHANGEABLY WITH PROPOSAL.
8. BIDDER: A BIDDER IS A PERSON OR ENTITY WHO SUBMITS A BID.
9. BIDDING DOCUMENTS: BIDDING DOCUMENTS INCLUDE THE INVITATION TO BID, INSTRUCTIONS TO BIDDERS, THE BID FORM, OTHER SAMPLE BIDDING AND CONTRACT FORMS, AND THE PROPOSED CONTRACT DOCUMENTS INCLUDING ADDENDA ISSUED PRIOR TO THE DATE FOR RECEIPT OF BIDS.
10. CALENDAR DAY: SHALL MEAN EVERY DAY SHOWN ON THE CALENDAR.
11. CONSULTANT: SHALL MEAN THE FIRM OF AN ARCHITECTURAL/ENGINEERING COMPANY OR THEIR DULY AUTHORIZED REPRESENTATIVE.
12. CONTRACT DOCUMENTS: THE CONTRACT DOCUMENTS PROPOSED FOR THE WORK CONSIST OF THE METRA-CONTRACTOR AGREEMENT, THE CONDITIONS OF THE CONTRACT (GENERAL, SUPPLEMENTARY AND OTHER CONDITIONS), THE DRAWINGS, THE SPECIFICATIONS, ALL ADDENDA ISSUED PRIOR TO THE DATE FOR RECEIPT OF BIDS, AND ALL MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT.
13. CONTRACT SUM: THE CONTRACT SUM IS STATED IN THE AGREEMENT AND, INCLUDING AUTHORIZED ADJUSTMENTS, IS THE TOTAL AMOUNT PAYABLE BY METRA TO THE CONTRACTOR FOR PERFORMANCE OF THE WORK UNDER THE CONTRACT DOCUMENTS.
14. CONTRACTOR: SHALL MEAN THE INDIVIDUAL, FIRM, PARTNERSHIP, OR CORPORATION DIRECTLY CONTRACTING WITH METRA FOR PERFORMANCE OF THE PRESCRIBED WORK.
15. DIRECTED, REQUESTED, ETC.: WHERE NOT OTHERWISE EXPLAINED, TERMS SUCH AS "DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", "ACCEPTED", AND "PERMITTED" MEAN "DIRECTED BY METRA'S CONSTRUCTION MANAGER", "REQUESTED BY METRA'S CONSTRUCTION MANAGER", ETC. HOWEVER, NO SUCH IMPLIED MEANING WILL BE INTERPRETED TO EXTEND METRA'S CONSTRUCTION MANAGER'S RESPONSIBILITY INTO THE CONTRACTOR'S AREA OF CONSTRUCTION SUPERVISION.
16. DRAWINGS: THE APPROVED PLANS, PROFILES, TYPICAL CROSS SECTIONS, ELEVATIONS, AND DETAILS, OR ADDENDA THERETO; WHICH SHOW THE LOCATION, CHARACTER, DIMENSIONS, AND DETAILS OF THE WORK TO BE PERFORMED. THE TERM DRAWINGS IS USED INTERCHANGEABLY WITH PLANS.
17. ENGINEER/ARCHITECT: SHALL MEAN METRA'S CONSTRUCTION MANAGER AS DEFINED BELOW.
18. EQUAL: WHERE THE WORDS "EQUAL", "OR EQUAL", "APPROVED", "SATISFACTORY" AND OTHER WORDS OF LIKE IMPORTANCE ARE USED, DETERMINATION AND APPROVAL BY METRA'S CONSTRUCTION MANAGER IS INTENDED, UNLESS OTHERWISE SPECIFIED, AND IS SO UNDERSTOOD.
19. FURNISH: SHALL MEAN TO PURCHASE, SUPPLY, DELIVER, UNLOAD, UNPACK, ASSEMBLE, AND INSTALL COMPLETE.
20. GENERAL REQUIREMENTS: THE PROVISIONS OR REQUIREMENTS OF DIVISION 1 SECTIONS. GENERAL REQUIREMENTS APPLY TO THE ENTIRE WORK OF THE CONTRACT AND, WHERE SO INDICATED, TO OTHER ELEMENTS WHICH ARE INCLUDED IN THE PROJECT.
21. INCLUDE: SHALL MEAN THAT THE ITEMS SPECIFIED THEREAFTER MAY OR MAY NOT BE ALL OF THE CONSTITUENTS, COMPONENTS, OR SUBORDINATE PARTS OF THE WHOLE.
22. INSTALL: SHALL MEAN TO RECEIVE, INSPECT, HANDLE, UNLOAD, UNPACK, ASSEMBLE, ERECT, PLACE, ANCHOR, APPLY, FINISH, PROTECT, CLEAN, AND SIMILAR OPERATIONS COMPLETE AND READY FOR USE, INCLUDING CONNECTIONS, ADJUSTMENTS, AND TESTING.
23. INDICATED: THE TERM "INDICATED" IS A CROSS-REFERENCE TO GRAPHICS, NOTES OR SCHEDULES ON DRAWINGS, TO OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND TO SIMILAR MEANS OF RECORDING REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED IN LIEU OF "INDICATED", IT IS FOR THE PURPOSE OF HELPING THE READER LOCATE CROSS-REFERENCES.
24. INSTALLER: THE ENTITY (PERSON OR FIRM) ENGAGED BY THE CONTRACTOR OR ITS SUBCONTRACTOR OR SUB-SUBCONTRACTOR FOR PERFORMANCE OF A PARTICULAR UNIT OF WORK AT THE PROJECT SITE, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR REQUIRED OPERATIONS. IT IS A GENERAL REQUIREMENT THAT SUCH ENTITIES (INSTALLERS) BE AN EXPERT IN OPERATIONS THEY ARE ENGAGED TO PERFORM.
    a. THE TERM EXPERIENCED, WHEN USED WITH THE TERM INSTALLER, MEANS HAVING A MINIMUM OF FIVE (5) PREVIOUS PROJECTS SIMILAR IN SIZE AND SCOPE TO THIS PROJECT, BEING FAMILIAR WITH THE SPECIAL REQUIREMENTS INDICATED, AND HAVING COMPLIED WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
    b. TRADES: USING TERMS SUCH AS CARPENTRY DOES NOT IMPLY THAT CERTAIN CONSTRUCTION ACTIVITIES MUST BE PERFORMED BY ACCREDITED OR UNIONIZED INDIVIDUALS OF A CORRESPONDING GENERIC NAME, SUCH AS CARPENTER. IT ALSO DOES NOT IMPLY THAT THE REQUIREMENTS SPECIFIED APPLY EXCLUSIVELY TO TRADESPERSONS OF THE CORRESPONDING GENERIC NAME.
    c. ASSIGNING SPECIALISTS:
       1. CERTAIN SECTIONS OF THE SPECIFICATIONS REQUIRE THAT SPECIFIC CONSTRUCTION ACTIVITIES SHALL BE PERFORMED BY SPECIALISTS WHO ARE RECOGNIZED EXPERTS IN THOSE OPERATIONS. THE SPECIALISTS MUST BE ENGAGED FOR THOSE ACTIVITIES, AND THEIR ASSIGNMENTS ARE REQUIREMENTS OVER WHICH THE CONTRACTOR HAS NO OPTION. HOWEVER, THE ULTIMATE RESPONSIBILITY FOR FULFILLING CONTRACT REQUIREMENTS REMAINS WITH THE CONTRACTOR.
       2. THIS REQUIREMENT SHALL NOT BE INTERPRETED TO CONFLICT WITH ENFORCING BUILDING CODES AND SIMILAR REGULATIONS GOVERNING THE WORK. IT IS ALSO NOT INTENDED TO INTERFERE WITH LOCAL TRADE UNION JURISDICTIONAL SETTLEMENTS AND SIMILAR CONVENTIONS.
25. JOINT-VENTURE: SHALL MEAN A LICENSED BUSINESS CONSISTING OF TWO (2) OR MOREPERSONS, FIRMS, OR CORPORATIONS, ALL OF WHOM SHALL HAVE A VALID LICENSE TO PERFORM THE TYPE OF WORK PROPOSED BY THE JOINT VENTURE. THE CONTRACTOR'S LICENSES AND THE JOINT VENTURE LICENSE MUST BE PRE-EXISTING AT THE TIME OF ENTERING THE BID.
26. METRA: THIS TERM IS THE REGISTERED SERVICE MARK FOR THE NORTHEAST ILLINOIS REGIONAL COMMUTER RAILROAD CORPORATION.
27. METRA'S CONSTRUCTION MANAGER: ANY EMPLOYEE, AGENT, CONSULTANT, OR REPRESENTATIVE OF METRA DULY AUTHORIZED BY METRA TO REPRESENT METRA IN AN ENGINEERING CAPACITY AND/OR TO MAKE DECISIONS FOR METRA WITH RESPECT TO THE WORK IN AN ENGINEERING CAPACITY, OR ANY PARTY ACTING DIRECTLY OR THROUGH SUCH EMPLOYEE, AGENT, CONSULTANT, OR REPRESENTATIVE. THE CONTRACTOR WILL BE ADVISED BY METRA, IN WRITING, OF THE IDENTITY AND AUTHORITY OF METRA'S CONSTRUCTION MANAGER.
28. OWNER: SHALL MEAN "METRA" AS DEFINED IN THE REQUIREMENTS FOR BIDDING AND INSTRUCTIONS TO BIDDERS.
29. PRODUCT DATA: ARE ILLUSTRATIONS, STANDARD SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS AND OTHER INFORMATION FURNISHED BY THE CONTRACTOR TO ILLUSTRATE MATERIALS OR EQUIPMENT FOR SOME PORTION OF THE WORK.
30. PROVIDE OR PROVISION: SHALL MEAN FURNISH AND INSTALL, COMPLETE, AND READY FOR USE.
31. PROJECT: THE PROJECT IS THE TOTAL CONSTRUCTION OF WHICH THE WORK PERFORMED UNDER THE CONTRACT DOCUMENTS MAY BE THE WHOLE OR A PART OF. THE PROJECT MAY INCLUDE CONSTRUCTION BY METRA OR SEPARATE CONTRACTORS.
32. PROJECT SITE: THE SPACE AVAILABLE FOR PERFORMANCE OF THE WORK. THE EXTENT OF THE PROJECT SITE IS CONTAINED WITHIN THE AREA BOUNDED BY THE TEMPORARY CHAIN LINK FENCE, AND MAY NOT BE IDENTICAL WITH THE DESCRIPTION OF LAND UPON WHICH THE PROJECT IS TO BE BUILT.
33. REGULATIONS: THE TERM REGULATIONS INCLUDES LAWS, ORDINANCES, STATUTES, AND LAWFUL ORDERS ISSUED BY AUTHORITIES HAVING JURISDICTION, AS WELL AS RULES, CONVENTIONS, AND AGREEMENTS WITHIN THE CONSTRUCTION INDUSTRY THAT CONTROL THE PERFORMANCE OF THE WORK.
34. SAMPLES: ARE PHYSICAL EXAMPLES THAT ILLUSTRATE MATERIALS, EQUIPMENT OR WORKMANSHIP AND ESTABLISH STANDARDS BY WHICH THE WORK WILL BE JUDGED.
35. SHOP DRAWINGS: ARE DRAWINGS, DIAGRAMS, SCHEDULES AND OTHER DATA SPECIALLY PREPARED FOR THE WORK BY THE CONTRACTOR OR A SUBCONTRACTOR, SUB-SUBCONTRACTOR, MANUFACTURER, SUPPLIER OR DISTRIBUTOR TO ILLUSTRATE SOME PORTION OF THE WORK. THESE ARE ALSO SOMETIMES REFERRED TO AS INSTALLATION DRAWINGS.
36. SPECIFICATIONS: THE SPECIFICATIONS ARE THAT PORTION OF THE CONTRACT DOCUMENTS CONSISTING OF THE WRITTEN REQUIREMENTS FOR MATERIALS, EQUIPMENT, SYSTEMS, STANDARDS AND WORKMANSHIP FOR THE WORK, AND PERFORMANCE OF RELATED SERVICES.
37. SUB-BIDDER: A SUB-BIDDER IS A PERSON OR ENTITY WHO SUBMITS A BID TO A BIDDER FOR MATERIALS OR LABOR FOR A PORTION OF THE WORK.
38. UBCONTRACTOR: SHALL MEAN A PERSON, FIRM, OR CORPORATION WHO HAS A CONTRACT WITH THE CONTRACTOR TO PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES FOR WORK INCLUDED IN THE CONTRACT.
39. SUBSTANTIAL COMPLETION: IS THE STAGE IN THE PROGRESS OF THE WORK WHEN THE WORK OR DESIGNATED PORTION THEREOF IS SUFFICIENTLY COMPLETE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS SO THAT METRA CAN OCCUPY OR UTILIZE THE WORK FOR ITS INTENDED USE.
40. TESTING LABORATORY: AN INDEPENDENT ENTITY ENGAGED TO PERFORM SPECIFIC INSPECTIONS OR TESTS OF THE WORK, EITHER ON THE PROJECT SITE OR ELSEWHERE; AND TO REPORT AND, IF REQUIRED, INTERPRET RESULTS OF THOSE INSPECTIONS OR TESTS.
41. UNIT PRICE: A UNIT PRICE IS AN AMOUNT STATED IN THE BID AS A PRICE PER UNIT OF MEASUREMENT FOR MATERIALS OR SERVICES AS DESCRIBED IN THE BIDDING DOCUMENTS AND/OR IN THE PROPOSED CONTRACT DOCUMENTS.
42. WORKING DAY: SHALL MEAN ANY CALENDAR DAY EXCEPT SATURDAYS, SUNDAYS, OR OBSERVED HOLIDAYS IN THE STATE OF ILLINOIS.
43. ORK: SHALL MEAN ALL MATERIALS, LABOR, AND SERVICES REQUIRED TO EXECUTE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

A. SPECIFICATION FORMAT: THESE SPECIFICATIONS ARE ORGANIZED INTO DIVISIONS AND SECTIONS BASED ON THE CONSTRUCTION SPECIFICATIONS INSTITUTE'S EXPANDED 48-DIVISION FORMAT AND MASTERFORMAT SIX DIGIT NUMBERING SYSTEM.
B. SPECIFICATION CONTENT: THIS SPECIFICATION USES CERTAIN CONVENTIONS REGARDING THE STYLE OF LANGUAGE AND THE INTENDED MEANING OF CERTAIN TERMS, WORDS, AND PHRASES WHEN USED IN PARTICULAR SITUATIONS OR CIRCUMSTANCES. THESE CONVENTIONS ARE EXPLAINED AS FOLLOWS:
   1. ABBREVIATED LANGUAGE: LANGUAGE USED IN SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS IS ABBREVIATED. WORDS AND MEANINGS SHALL BE INTERPRETED AS APPROPRIATE. WORDS IMPLIED, BUT NOT STATED, SHALL BE INTERPRETED AS THE SENSE REQUIRES. SINGULAR WORDS WILL BE INTERPRETED AS PLURAL AND PLURAL WORDS INTERPRETED AS SINGULAR WHERE APPLICABLE AS THE CONTEXT OF THE CONTRACT DOCUMENTS INDICATES.
   2. IMPERATIVE AND STREAMLINED LANGUAGE IS USED GENERALLY IN THE SPECIFICATIONS. REQUIREMENTS EXPRESSED IN THE IMPERATIVE MOOD ARE TO BE PERFORMED BY THE CONTRACTOR. AT CERTAIN LOCATIONS IN THE TEXT, SUBJECTIVE LANGUAGE IS USED FOR CLARITY TO DESCRIBE RESPONSIBILITIES THAT MUST BE FULFILLED INDIRECTLY BY THE CONTRACTOR, OR BY OTHERS WHEN SO NOTED. THE WORDS "SHALL BE" ARE IMPLIED WHEREVER A COLON (:) IS USED WITHIN A SENTENCE OR PHRASE.

1.04 INDUSTRY STANDARDS

a. APPLICABILITY OF STANDARDS: EXCEPT WHERE THE CONTRACT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF BOUND OR COPIED DIRECTLY INTO THE CONTRACT DOCUMENTS TO THE EXTENT REFERENCED. SUCH STANDARDS ARE MADE A PART OF THE CONTRACT DOCUMENTS BY REFERENCE.
b. PUBLICATION DATES: COMPLY WITH THE STANDARDS IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS.
c. CONFLICTING REQUIREMENTS:
   1. WHERE COMPLIANCE WITH TWO (2) OR MORE STANDARDS IS SPECIFIED, AND WHERE THE STANDARDS MAY ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, REFERENCE REQUIREMENTS THAT ARE DIFFERENT BUT APPARENTLY EQUAL AND UNCERTAINTIES TO METRA'S CONSTRUCTION MANAGER FOR A DECISION BEFORE PROCEEDING.
   2. MINIMUM QUANTITY OR QUALITY LEVELS: THE QUANTITY OR QUALITY LEVEL SHOWN OR SPECIFIED SHALL BE THE MINIMUM PROVIDED OR PERFORMED. THE ACTUAL INSTALLATION MAY COMPLY EXACTLY WITH THE MINIMUM QUANTITY OR QUALITY SPECIFIED, OR IT MAY EXCEED THE MINIMUM WITHIN REASONABLE LIMITS. TO COMPLY WITH THESE REQUIREMENTS, INDICATED NUMERIC VALUES ARE MINIMUM OR MAXIMUM, AS APPROPRIATE, FOR THE CONTEXT OF THE REQUIREMENTS.REFER UNCERTAINTIES TO METRA'S CONSTRUCTION MANAGER FOR A DECISION BEFORE PROCEEDING.
d. COPIES OF STANDARDS: EACH ENTITY ENGAGED IN CONSTRUCTION ON THE PROJECT IS REQUIRED TO BE FAMILIAR WITH INDUSTRY STANDARDS APPLICABLE TO ITS CONSTRUCTION ACTIVITY. COPIES OF APPLICABLE STANDARDS ARE NOT BOUND WITH THE CONTRACT DOCUMENTS. WHERE COPIES OF STANDARDS ARE NEEDED TO PERFORM A REQUIRED CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL OBTAIN COPIES DIRECTLY FROM THE PUBLICATION SOURCE.
e. ABBREVIATIONS AND NAMES: TRADE ASSOCIATION NAMES AND TITLES OF GENERAL STANDARDS ARE FREQUENTLY ABBREVIATED. WHERE SUCH ACRONYMS OR ABBREVIATIONS ARE USED IN THE SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, THEY MEAN THE RECOGNIZED NAME OF THE TRADE ASSOCIATION, STANDARDS-GENERATING ORGANIZATION, AUTHORITY HAVING JURISDICTION, OR OTHER ENTITY APPLICABLE TO THE CONTEXT OF THE TEXT PROVISION. REFER TO THE "ENCYCLOPEDIA OF ASSOCIATIONS," PUBLISHED BY GALE RESEARCH CO., AVAILABLE IN MOST LIBRARIES.
f. TRADE ASSOCIATIONS AND GENERAL STANDARDS: TRADE ASSOCIATION NAMES AND TITLES OF GENERAL STANDARDS ARE FREQUENTLY ABBREVIATED. THE FOLLOWING ACRONYMS OR ABBREVIATIONS, AS REFERENCED IN THE CONTRACT DOCUMENTS, ARE DEFINED TO MEAN THE ASSOCIATED NAMES. NAMES AND ADDRESSES ARE SUBJECT TO CHANGE AND ARE BELIEVED, BUT NOT ASSURED, TO BE ACCURATE AND UP-TO-DATE AS OF THE DATE OF THE CONTRACT DOCUMENTS.
   1. ALUMINUM ASSOCIATION
      a. 900 19TH ST., NW, SUITE 300
      b. WASHINGTON, DC 20006 (202) 862-5100
   2. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOC.
      a. 1540 E. DUNDEE ROAD, SUITE 310
      b. PALATINE, IL 60067 (708) 202-1350
   3. AMERICAN CONCRETE INSTITUTE
      a. P.O. BOX 19150
      b. DETROIT, MI 48219 (313) 532-2600
   4. AMERICAN COUNCIL OF INDEPENDENT LABORATORIES
      a. 1629 K ST., NW
      b. WASHINGTON, DC 20006 (202) 887-5872
   5. ASSOCIATED GENERAL CONTRACTORS OF AMERICA
      a. 2300 WILSON BLVD., SUITE 400
      b. ARLINGTON, VA 22201 (703) 548-3118
   6. THE AMERICAN INSTITUTE OF ARCHITECTS
      a. A. 1735 NEW YORK AVE., NW
      b. B. WASHINGTON, DC 20006 (202) 626-7300
   7. A.I.A. AMERICAN INSURANCE ASSOC.
      a. 1130 CONNECTICUT AVE., NW, SUITE 1000
      b. WASHINGTON, DC 20036 (202) 828-7100
   8. AMERICAN INSTITUTE OF STEEL CONSTRUCTION
      a. ONE EAST WACKER DR., SUITE 3100
      b. CHICAGO, IL 60601 (312) 670-2400
   9. 9AMERICAN IRON AND STEEL INSTITUTE
      a. 1101 17TH ST., NW
      b. WASHINGTON, DC 20036 (202) 452-7100
   10. ASSOCIATED LABORATORIES, INC.
      a. 500 S. VERMONT ST.
      b. PALATINE, IL 60067(708) 358-7400
   11. AMERICAN LUMBER STANDARDS COMMITTEE
      a. P.O. BOX 210
      b. GERMANTOWN, MD 20875 (301) 972-1700
   12. AMERICAN NATIONAL STANDARDS INSTITUTE
      a. 11 WEST 42ND ST., 13TH FLOOR
      b. NEW YORK, NY 10036 (212) 642-4900
   13. AMERICAN PLYWOOD ASSOC.
      a. P.O. BOX 11700
      b. TACOMA, WA 98411 (206) 565-6600
   14. AMERICAN RAILWAY ENGINEERING AND
      a. MAINTENANCE-OF-WAY ASSOCIATION
      b. 8201 CORPORATE DRIVE, SUITE 1125
      c. LANDOVER, MD 20785 (301) 459-3200
   15. ASPHALT ROOFING MANUFACTURERS ASSOC.
      a. 6000 EXECUTIVE DR., SUITE 301
      b. ROCKVILLE, MD 20852 (301) 231-9050
   16. ADHESIVE AND SEALANT COUNCIL
      a. 627 K ST., NW, SUITE 1000
      b. WASHINGTON, DC 20006 (202) 452-1500
   17. AMERICAN SOCIETY FOR TESTING AND MATERIALS
      a. 1916 RACE ST.
      b. PHILADELPHIA, PA 19103 (215) 299-5400
   18. MERICAN WOOD PRESERVERS' ASSOC.
      a. P.O. BOX 286
      b. WOODSTOCK, MD 21163 (410) 465-3169
   19. AMERICAN WOOD PRESERVERS' BUREAU
      a. (THIS ORGANIZATION IS NOW DEFUNCT.)
   20. AMERICAN WELDING SOCIETY
      a. 550 LEJEUNE ROAD, NW
      b. P.O. BOX 351040
      c. MIAMI, FL 33135 (305) 443-9353
   21. COPPER DEVELOPMENT ASSOC.
      a. 260 MADISON AV., 16TH FLOOR
      b. NEW YORK, NY 10016 (212) 251-7200
   22. CONCRETE REINFORCING STEEL INSTITUTE
      a. 933 PLUM GROVE RD.
      b. SCHAUMBURG, IL 60173 (708) 517-1200
   23. CONSTRUCTION SPECIFICATIONS INSTITUTE
      a. 99 CANAL CENTER PLAZA, SUITE 300
      b. ALEXANDRIA, VA 22314 (800) 689-2900
   24. ETL TESTING LABORATORIES, INC.
      a. P.O. BOX 2040
      b. ROUTE 11, INDUSTRIAL PARK
      c. CORTLAND, NY 13045 (607) 753-6711
   25. FACTORY MUTUAL RESEARCH ORGANIZATION
      a. 1151 BOSTON-PROVIDENCE TURNPIKE
      b. P.O. BOX 9102
      c. NORWOOD, MA 02062 (617) 762-4300
   26. GYPSUM ASSOCIATION
      a. 810 FIRST ST., NE, SUITE 510
      b. WASHINGTON, DC 20002 (202) 289-5440
   27. HARDWOOD MANUFACTURERS ASSOC.
      a. 400 PENN CENTER BLVD.
      b. PITTSBURGH, PA 15235 (412) 829-0770
   28. HARDWOOD PLYWOOD AND VENEER ASSOC.
      a. 1825 MICHAEL FARRADAY DR.
      b. P.O. BOX 2789
      c. RESTON, VA 22090 (703) 435-2900
   29. ILLINOIS DEPARTMENT OF TRANSPORTATION
      a. TRANSPORTATION ADMINISTRATION BUILDING
      b. 2300 SOUTH DIRKSEN PARKWAY
      c. SPRINGFIELD, IL 62764 (217) 782-4026
   30. INDUSTRIAL RISK INSURERS
      a. 85 WOODLAND ST.
      b. HARTFORD, CT 06102 (203) 520-7300
   31. ML/SFA METAL LATH/STEEL FRAMING ASSOC.
      a. (A DIV. OF THE NATIONAL ASSN. OF ARCHITECTURAL METAL MFGS.)
      b. 600 S. FEDERAL ST., SUITE 400
      c. CHICAGO, IL 60605 (312) 922-6222
   32. NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
      a. 600 S. FEDERAL ST., SUITE 400
      b. CHICAGO, IL 60605 (312) 922-6222
   33. NORTH AMERICAN INSULATION MANUFACTURERS ASSOC.
      a. 44 CANAL CENTER PLAZA, SUITE 310
      b. ALEXANDRIA, VA 22314 (703) 684-0084
   34. NATIONAL FIRE PROTECTION ASSOC.
      a. ONE BATTERYMARCH PARK
      b. P.O. BOX 9101 (617) 770-3000
      c. QUINCY, MA 02269 (800) 344-3555
   35. N.F.P.A. NATIONAL FOREST PRODUCTS ASSOC.
      a. (SEE AFPA. NOW KNOWN AS THE
      b. AMERICAN WOOD COUNCIL OF THE
      c. AMERICAN FOREST AND PAPER ASSOC).
   36. NATIONAL HARDWOOD LUMBER ASSOC.
      a. P.O. BOX 34518
      b. MEMPHIS, TN 38184 (901) 377-1818
   37. NATIONAL LUMBER GRADES AUTHORITY
      a. 1055 W. HASTINGS ST., SUITE 260
      b. VANCOUVER, BRITISH COLUMBIA
      c. CANADA V6E 2E9 (604) 687-2171
   38. NATIONAL PARTICLEBOARD ASSOC.
      a. 18928 PREMIERE COURT
      b. GAITHERSBURG, MD 20879 (301) 670-0604
   39. NATIONAL ROOFING CONTRACTORS ASSOC.
      a. 10255 W. HIGGINS RD., SUITE 600
      b. ROSEMONT, IL 60018 (708) 299-9070
   40. NATIONAL WOODWORK MANUFACTURERS ASSOC.
      a. (NOW NWWDA)
   41. PORTLAND CEMENT ASSOC.
      a. 5420 OLD ORCHARD ROAD
      b. SKOKIE, IL 60077 (708) 966-6200
   42. REDWOOD INSPECTION SERVICE
      a. 405 ENFRENTE DR., SUITE 200
      b. NOVATO, CA 94949 (415) 382-0662
   43. RUBBER MANUFACTURERS ASSOC.
      a. 1400 K ST., NW
      b. WASHINGTON, DC 20005 (202) 682-4800
   44. STEEL DECK INSTITUTE
      a. P.O. BOX 9506
      b. CANTON, OH 44711 (216) 493-7886
   45. SOUTHERN HARDWOOD LUMBER MANUFACTURERS ASSOC.
   46. (NOW HMA)
      STEEL JOIST INSTITUTE
      a. 1205 48TH AVENUE NORTH, SUITE A
      b. MYRTLE BEACH, SC 29577 (803) 449-0487

STATE OF ILLINOIS
ZACHERY R. WIESE
001.021669
LICENSED ARCHITECT

CONTINUED ON A-042

METRA REQUIREMENTS

CONTINUED FROM A-041

47. SOUTHERN PINE INSPECTION BUREAU
    a. 4709 SCENIC HIGHWAY
    b. PENSACOLA, FL 32504 (904) 434-2611
48. SINGLE PLY ROOFING INSTITUTE
    a. 20 WALNUT ST.
    b. WELLESLEY HILLS, MA 02181 (617) 237-7879
49. STEEL STRUCTURES PAINTING COUNCIL
    a. 4400 FIFTH AVE.
    b. PITTSBURGH, PA 15213 (412) 268-3327
50. THERMAL INSULATION MANUFACTURERS ASSOC.
    a. (THIS ORGANIZATION IS NOW DEFUNCT.)
51. UNDERWRITERS LABORATORIES
    a. 333 PFINGSTEN RD.
    b. NORTHBROOK, IL 60062 (708) 272-8800
52. WEST COAST LUMBER INSPECTION BUREAU
    a. P.O. BOX 23145
    b. PORTLAND, OR 97223 (503) 639-0651
53. WIRE REINFORCEMENT INSTITUTE
    a. A. 1101 CONNECTICUT AVE. NW, SUITE 700
    b. B. WASHINGTON, DC 20036 (202) 429-5125
54. WESTERN WOOD PRODUCTS ASSOC.
    a. YEON BUILDING
    b. 522 SW 5TH AVE.
    c. PORTLAND, OR 97204 (503) 224-3930

G. FEDERAL GOVERNMENT AGENCIES: NAMES AND TITLES OF FEDERAL GOVERNMENT STANDARD- OR SPECIFICATION-PRODUCING AGENCIES ARE OFTEN ABBREVIATED. THE FOLLOWING ACRONYMS OR ABBREVIATIONS REFERENCED IN THE CONTRACT DOCUMENTS INDICATE NAMES OF STANDARD- OR SPECIFICATION-PRODUCING AGENCIES OF THE FEDERAL GOVERNMENT. NAMES AND ADDRESSES ARE SUBJECT TO CHANGE AND ARE BELIEVED, BUT ARE NOT ASSURED, TO BE ACCURATE AND UP-TO-DATE AS OF THE DATE OF THE CONTRACT DOCUMENTS.
1. CORPS OF ENGINEERS
    a. (U.S. DEPARTMENT OF THE ARMY)
    b. CHIEF OF ENGINEERS - REFERRAL
    c. WASHINGTON, DC 20314 (202) 272-0660
2. CODE OF FEDERAL REGULATIONS
    a. (AVAILABLE FROM THE GOVERNMENT PRINTING OFFICE)
    b. N. CAPITOL ST. BETWEEN G AND H ST. NW
    c. WASHINGTON, DC 20402 (202) 783-3238
    d. (MATERIAL IS USUALLY FIRST PUBLISHED IN THE "FEDERAL REGISTER")
3. CONSUMER PRODUCT SAFETY COMMISSION
    a. 5401 WESTBARD AVE.
    b. BETHESDA, MD 20207 (800) 638-2772
4. COMMERCIAL STANDARD
    a. (U.S. DEPARTMENT OF COMMERCE)
    b. GOVERNMENT PRINTING OFFICE
    c. WASHINGTON, DC 20402 (202) 783-3238
5. DEPARTMENT OF COMMERCE
    a. 14TH ST. AND CONSTITUTION AVE., NW
    b. WASHINGTON, DC 20230 (202) 482-2000
6. DEPARTMENT OF TRANSPORTATION
    a. 400 SEVENTH ST., SW
    b. BWASHINGTON, DC 20590 (202) 366-4000
7. ENVIRONMENTAL PROTECTION AGENCY
    a. 401 M ST., SW
    b. WASHINGTON, DC 20460 (202) 382-2090
8. FOOD AND DRUG ADMINISTRATION
    a. 5600 FISHERS LANE
    b. ROCKVILLE, MD 20857 (301) 443-1544
9. FEDERAL SPECIFICATION (FROM GSA)
    a. SPECIFICATIONS UNIT (WFSIS)
    b. 7TH AND D ST., SW
    c. WASHINGTON, DC 20407 (202) 708-9205
10. GENERAL SERVICES ADMINISTRATION
    a. F ST. AND 18TH ST., NW
    b. WASHINGTON, DC 20405 (202) 708-5082
11. MILITARY STANDARDIZATION DOCUMENTS
    a. (U.S. DEPARTMENT OF DEFENSE)
    b. NAVAL PUBLICATIONS AND FORMS CENTER
    c. 5801 TABOR AVE.
    d. PHILADELPHIA, PA 19120 (215) 697-2000
12. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
    a. (U.S. DEPARTMENT OF COMMERCE)
    b. GAITHERSBURG, MD 20899 (301) 975-2000
13. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
    a. (U.S. DEPARTMENT OF LABOR)
    b. 200 CONSTITUTION AVE., NW
    c. WASHINGTON, DC 20210 (202) 219-6091
14. PRODUCT STANDARD OF NBS
    a. (U.S. DEPARTMENT OF COMMERCE)
    b. GOVERNMENT PRINTING OFFICE
    c. WASHINGTON, DC 20402 (202) 783-3238
15. U.S. POSTAL SERVICE
    a. 475 L'ENFANT PLAZA, SW
    b. WASHINGTON, DC 20260 (202) 268-2000

H. THE ABSENCE OF A TRADE ASSOCIATION, STANDARDS GENERATING ORGANIZATION, GOVERNING AUTHORITY OR OTHER ENTITY FROM THE SCHEDULE OF REFERENCES IN NO WAY RELIEVES THE CONTRACTOR FROM CONFORMING TO THE SPECIFIED REQUIREMENTS.

1.05 GOVERNING REGULATIONS/AUTHORITIES

A. THE PROCEDURE FOLLOWED BY THE CONSULTANT HAS BEEN TO CONTACT GOVERNING AUTHORITIES WHERE NECESSARY TO OBTAIN INFORMATION NEEDED FOR THE PURPOSE OF PREPARING THE CONTRACT DOCUMENTS, RECOGNIZING THAT SUCH INFORMATION MAY OR MAY NOT BE OF SIGNIFICANCE IN RELATION TO THE CONTRACTOR'S RESPONSIBILITIES FOR PERFORMING THE WORK. THE CONTRACTOR SHALL CONTACT GOVERNING AUTHORITIES DIRECTLY FOR NECESSARY INFORMATION AND DECISIONS HAVING A BEARING ON PERFORMANCE OF THE WORK.

1.06 SUBMITTAL

A. PERMITS, LICENSES AND CERTIFICATES: FOR METRA'S RECORDS, SUBMIT COPIES OF PERMITS, LICENSES, CERTIFICATIONS, INSPECTION REPORTS, RELEASES, JURISDICTIONAL SETTLEMENTS, NOTICES, RECEIPTS FOR FEE PAYMENTS, JUDGMENTS, AND SIMILAR DOCUMENTS, AS WELL AS CORRESPONDENCE AND RECORDS ESTABLISHED IN CONJUNCTION WITH STANDARDS AND REGULATIONS COMPLIANCE.

METRA TRAFFIC CONTROL

1.01 DESCRIPTION

A. THIS SECTION SPECIFIES THE REQUIREMENTS FOR TRAFFIC CONTROL. THE WORK UNDER THIS SECTION SHALL INCLUDE FURNISHING ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION, MAINTENANCE, RELOCATION, AND REMOVAL OF ALL SIGNS, SIGNALS, TRAFFIC CONES, BARRICADES, TEMPORARY BARRIERS, WARNING LIGHTS, TRAFFIC FLAGMEN, AND OTHER TRAFFIC CONTROL DEVICES WHICH ARE USED FOR THE PURPOSE OF REGULATING, WARNING, OR DIRECTING TRAFFIC DURING CONSTRUCTION.

1.02 PERMITTING

A. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE REGULATING AGENCIES PRIOR TO THE CLOSURE OF ANY ROADWAY. THE COST OF OBTAINING ALL PERMITS IS INCLUDED IN THE PROJECT LUMP SUM COST. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

1.03 RELATED WORK

A. RELATED WORK SPECIFIED ELSEWHERE INCLUDES:
1. EXCEPT AS MODIFIED HEREIN, THE WORK SHALL BE IN ACCORDANCE WITH THEAPPLICABLE PORTIONS OF IDOT'S STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL DEVICES.
2. SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS.

2.01 NOT USED

3.01 TRAFFIC CONTROL DEVICES, SIGNAGE, ETC.

A. TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, PROVIDED, INSTALLED, AND MAINTAINED WHEN NECESSARY, IN THE OPINION OF METRA'S CONSTRUCTION MANAGER.

B. THE INTENT OF THE EXECUTION AND STAGING OF THE WORK FOR THIS PROJECT IS TO PROVIDE THE SAFEST POSSIBLE TRAVEL CONDITIONS THROUGH THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC STAGING PLAN TO BE APPROVED BY METRA'S CONSTRUCTION MANAGER, WHICH MINIMIZES LANE CLOSURES THROUGHOUT CONSTRUCTION DURING EACH OF THE STAGES

C. ALL TRAFFIC CONTROL DEVICES USED ON THIS PROJECT SHALL CONFORM TO THE PLANS, SPECIAL PROVISIONS, TRAFFIC CONTROL STANDARDS, "IDOT STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL DEVICES" AND THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND APPLICABLE LOCAL REGULATIONS. NO MODIFICATION OF THESE REQUIREMENTS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF METRA'S CONSTRUCTION MANAGER.

D. TRAFFIC CONTROL DEVICES INCLUDE: SIGNS AND THEIR SUPPORTS, SIGNALS, PAVEMENT MARKINGS, BARRICADES WITH SAND BAGS, CHANNELIZING DEVICES, WARNING LIGHTS, ARROW-BOARDS, FLAGGERS, TEMPORARY CONCRETE BARRIERS, TEMPORARY CONCRETE BARRIER TERMINAL SECTIONS, OR ANY OTHER DEVICE USED FOR THE PURPOSE OF REGULATING, WARNING, OR GUIDING TRAFFIC THROUGH THE CONSTRUCTION ZONE.

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION, INSTALLATION, AND ARRANGEMENT OF ALL TRAFFIC CONTROL DEVICES. SPECIAL ATTENTION SHALL BE GIVEN TO ADVANCE WARNING SIGNS DURING CONSTRUCTION OPERATIONS IN ORDER TO KEEP LANE ASSIGNMENTS CONSISTENT WITH BARRICADE PLACEMENT AT ALL TIMES.

F. CONSTRUCTION SIGNS REFERRING TO TEMPORARY LANE CLOSURES DURING WORKING HOURS SHALL BE REMOVED OR COVERED DURING NON-WORKING HOURS.

G. THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC MAINTENANCE WORK ON THIS PROJECT WITH ADJOINING OR OVERLAPPING PROJECTS, INCLUDING ALL BARRICADE PLACEMENTS NECESSARY TO PROVIDE A UNIFORM TRAFFIC DETOUR PATTERN. WHEN DIRECTED BY METRA'S CONSTRUCTION MANAGER, THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES WHICH WERE FURNISHED, INSTALLED AND MAINTAINED BY THEM UNDER THIS CONTRACT, AND SUCH DEVICES SHALL REMAIN THE PROPERTY OF THE CONTRACTOR. ALL TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL SPECIFIC AUTHORIZATION FOR RELOCATION OR REMOVAL IS RECEIVED FROM METRA'S CONSTRUCTION MANAGER.

H. THE CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES INSTALLED BY IT ARE OPERATIONAL 24 HOURS A DAY, INCLUDING SUNDAYS AND HOLIDAYS.

I. THE CONTRACTOR SHALL PROVIDE A MANNED TELEPHONE ON A CONTINUOUS 24-HOUR-A-DAY BASIS TO RECEIVE NOTIFICATION OF ANY DEFICIENCIES REGARDING TRAFFIC CONTROL AND PROTECTION AND SHALL DISPATCH MEN, MATERIALS, AND EQUIPMENT TO CORRECT ANY SUCH DEFICIENCIES. THE CONTRACTOR SHALL RESPOND TO ANY CALL FROM METRA'S CONSTRUCTION MANAGER CONCERNING A REQUEST FOR IMPROVING OR CORRECTING THE TRAFFIC CONTROL DEVICES AND BEGIN MAKING THE REQUESTED REPAIRS WITHIN TWO (2) HOURS FROM THE TIME OF NOTIFICATION.

J. WHEN TRAVELING IN LANES THAT ARE OPEN TO PUBLIC TRAFFIC, THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH AND NOT AGAINST OR ACROSS THE FLOW OF TRAFFIC. THESE VEHICLES SHALL ENTER OR LEAVE WORK AREAS IN A MANNER, WHICH WILL NOT BE HAZARDOUS TO, OR INTERFERE WITH, TRAFFIC AND SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS. PERSONAL VEHICLES SHALL NOT PARK WITHIN THE RIGHT-OF-WAYEXCEPT IN SPECIFIC AREAS APPROVED BY METRA'S CONSTRUCTION MANAGER.

K. PLACEMENT OF ALL SIGNS AND BARRICADES SHALL PROCEED IN THE DIRECTION OF THE FLOW OF TRAFFIC. REMOVAL OF ALL SIGNS AND BARRICADES SHALL START AT THE END OF THE CONSTRUCTION AREA AND PROCEED TOWARD ONCOMING TRAFFIC UNLESS OTHERWISE APPROVED BY METRA'S CONSTRUCTION MANAGER.

L. DELAYS TO THE CONTRACTOR, CAUSED BY COMPLYING WITH THESE REQUIREMENTS, WILL BE CONSIDERED INCIDENTAL TO THE ITEM FOR TRAFFIC CONTROL, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

M. REVISIONS OR MODIFICATIONS TO ANY TRAFFIC CONTROL SHOWN OR IMPLIED IN THE CONTRACT SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY METRA'S CONSTRUCTION MANAGER.

METRA TEMPORARY FENCING

1.01 SECTION INCLUDES

A. SECTION INCLUDES: ERECTION, MAINTENANCE, AND DISMANTLING OF TEMPORARY ENCING AROUND CONSTRUCTION SITE AND MATERIALS STORAGE AREA.

B. REFER TO DRAWINGS FOR TEMPORARY FENCE LOCATION, LAYOUT AND LOCATION OF GATES. FINAL LOCATION AND LAYOUT TO BE COORDINATED WITH METRA'S CONSTRUCTION MANAGER.

1.02 NOT USED

1.03 SUBMITTALS

A. SHOP DRAWING INDICATING LAYOUT OF TEMPORARY FENCING, LOCATION AND SIZE OF GATES, EXISTING PAVEMENT AND ROADS, ACCESS TO FIRE HYDRANTS AND HOSE CONNECTIONS, AND OTHER SITE SPECIFIC CONDITIONS. PREPARE DRAWING AFTER SITE OBSERVATION AND VERIFICATION OF EXISTING CONDITIONS.

2.01 TEMPORARY CHAIN LINK FENCING

A. UNLESS OTHERWISE INDICATED, TYPE OF TEMPORARY CHAIN LINK FENCING SHALL BE CONTRACTOR'S OPTION. THE FOLLOWING TYPES ARE ACCEPTABLE:
1. NEW MATERIALS OR PREVIOUSLY USED SALVAGED CHAIN LINK FENCING IN GOOD CONDITION.
2. POSTS: GALVANIZED STEEL PIPE OF DIAMETER TO PROVIDE RIGIDITY. POST SHALL BE SUITABLE FOR SETTING IN CONCRETE FOOTINGS, DRIVING INTO GROUND, ANCHORING WITH BASE PLATES, OR INSERTING IN PRECAST BLOCKS. IN AREAS OF PAVEMENT WHERE GROUND MOUNTING IS UTILIZED, PAVEMENT SHALL BE REPAIRED TO MATCH EXISTING ADJACENT SURFACES AFTER REMOVAL OF CONCRETE FOOTINGS.
3. FABRIC: WOVEN GALVANIZED STEEL WIRE MESH. PROVIDE IN CONTINUOUS LENGTHS TO BE WIRE TIED TO FENCE POSTS OR PREFABRICATED INTO MODULAR PIPE-FRAMED FENCE PANELS.

B. GATES: PROVIDE PERSONNEL AND VEHICLE GATES OF THE QUANTITY AND SIZE INDICATED ON THE DRAWINGS OR AS REQUIRED FOR FUNCTIONAL ACCESS TO THE SITE.
1. FABRICATE OF SAME MATERIAL USED FOR FENCING.
2. VEHICLE GATES:
    a. MINIMUM WIDTH: 20 FEET TO ALLOW ACCESS FOR EMERGENCY VEHICLES.
    b. CAPABLE OF MANUAL OPERATION BY ONE PERSON.
    c. COORDINATE ALL LOCATIONS WITH METRA'S CONSTRUCTION MANAGER.

2.02 PLASTIC MESH FENCING

A. AWHERE INDICATED ON DRAWINGS OR AS REQUIRED TO PROVIDE VISUAL WARNING AND CONTROL, PROVIDE PLASTIC MESH FENCING SUPPORTED BY STEEL POSTS DRIVEN INTO THE GROUND OR SET IN PRECAST CONCRETE BLOCKS.

B. HEIGHT: 36 INCHES MINIMUM.

C. COLOR: SAFETY ORANGE.

D. COORDINATE ALL LOCATIONS WITH METRA'S CONSTRUCTION MANAGER.

3.01 LAYOUT

A. INSTALLATION OF TEMPORARY FENCING SHALL NOT DETER OR HINDER ACCESS TO EXISTING AND NEW HOSE CONNECTIONS AND FIRE HYDRANTS.
1. MAINTAIN 3 FEET DIAMETER CLEAR SPACE AROUND FIRE HYDRANTS.
2. WHERE FIRE HYDRANT OR HOSE CONNECTION IS BLOCKED BY FENCING, PROVIDE ACCESS GATE.

B. ACCESS: PROVIDE GATES FOR PERSONNEL, DELIVERY OF MATERIALS, AND ACCESS BY EMERGENCY VEHICLES.

C. CORDINATE LAYOUT WITH METRA'S CONSTRUCTION MANAGER.

3.02 INSTALLATION

A. CHAIN LINK POSTS:
1. SPACE AT 10 FEET MAXIMUM.
2. DRIVE POSTS, SET IN HOLES AND BACKFILL, ANCHOR IN PRECAST BLOCKS, OR IN GALVANIZED BASE PLATES.
3. FOR SOFT AND UNSTABLE GROUND CONDITIONS, CAST CONCRETE PLUG AROUND POST.
4. POSTS OVER PAVEMENT: USE STEEL POST PLATES OR PRECAST CONCRETE BLOCKS.
5. GATE POSTS: USE BRACING OR CONCRETE FOOTINGS TO PROVIDE RIGIDITY TO ACCOMMODATE SIZE OF GATE.

B. FABRIC: SECURELY ATTACH TO POSTS.

C. GATES: INSTALL WITH HARDWARE SUITABLE FOR LOCKING.

D. PLASTIC MESH FENCING: SPACE STEEL SUPPORT POSTS TO ENSURE MESH REMAINS VERTICAL AND AT PROPER HEIGHT. SECURELY TIE TO POSTS

3.03 PROTECTION AND CLEANING

A. MAINTAIN FENCING IN GOOD CONDITION. IF DAMAGED, IMMEDIATELY REPAIR.

B. REMOVE TEMPORARY FENCING UPON COMPLETION OF WORK OR WHEN NO LONGER REQUIRED FOR SECURITY OR CONTROL. BACKFILL ANY HOLES AND COMPACT. HOLES IN PAVEMENT SHALL BE SURFACED TO MATCH EXISTING PAVING. REPAIR DAMAGE CAUSED BY INSTALLATION OF TEMPORARY FENCING.

METRA FIELD ENGINEERING

1.01 DESCRIPTION OF WORK

A. THIS SECTION SPECIFIES ADMINISTRATIVE AND PROCEDURAL REQUIREMENTS FOR FIELD ENGINEERING SERVICES, INCLUDING BUT NOT NECESSARILY LIMITED TO LAND SURVEY WORK, CIVIL ENGINEERING SERVICES, STRUCTURAL ENGINEERING SERVICES, AND ELECTRICAL ENGINEERING SERVICES. THE WORK UNDER THIS SECTION SHALL INCLUDE FURNISHING ALL LABOR, MATERIALS, AND EQUIPMENT FOR MAINTAINING EXISTING SURVEY CONTROL POINTS; LOCATE, ESTABLISH AND LAY OUT LINES, LEVELS AND GRADES REQUIRED FOR THE PROPER INSTALLATION OF WORK; SURVEY AND PREPARE AS-BUILT PLANS; AND OTHER APPURTENANT SERVICES REQUIRED FOR THE PROPER INSTALLATION OF THE WORK.

1.02 NOT USED

1.03 QUALITY CONTROL

A. EMPLOY A LAND SURVEYOR LICENSED IN THE STATE OF ILLINOIS AND ACCEPTABLE TO METRA'S CONSTRUCTION MANAGER. ULTIMATE RESPONSIBILITY FOR ALL LAYOUTS RESTS WITH THE CONTRACTOR.

B. ENGAGE AN ENGINEER OF THE DISCIPLINE REQUIRED, LICENSED IN THE STATE OF ILLINOIS, TO PERFORM THE REQUIRED ENGINEERING SERVICES.

1.04 SUBMITTALS

A. SUBMIT THE NAME, ADDRESS, AND TELEPHONE NUMBER FOR THE SURVEYOR BEFORE STARTING SURVEY WORK.

B. UPON REQUEST, SUBMIT DOCUMENTATION VERIFYING THE ACCURACY OF THE SURVEY WORK.

C. SUBMIT A CERTIFICATE SIGNED BY THE LAND SURVEYOR THAT THE ELEVATIONS AND LOCATIONS OF THE WORK ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

1.05 PROJECT RECORD DOCUMENTS

A. MAINTAIN A COMPLETE AND ACCURATE LOG OF CONTROL AND SURVEY WORK AS IT PROGRESSES.

B. SUBMIT RECORD DOCUMENTS AS DESCRIBED IN THE PROVISIONS OF SECTION 01 78 10 - PROJECT RECORD DOCUMENTS.

1.06 EXAMINATION

A. VERIFY THE LOCATIONS OF SURVEY CONTROL POINTS PRIOR TO STARTING WORK.

B. PROMPTLY NOTIFY METRA'S CONSTRUCTION MANAGER OF ANY DISCREPANCIES DISCOVERED.

1.07 SURVEY REFERENCE POINTS

A. THE CONTRACTOR IS TO LOCATE AND PROTECT SURVEY CONTROL AND REFERENCE POINTS.

B. THE CONTROL DATUM FOR THE SURVEY IS THAT INDICATED ON THE DRAWINGS.

C. PROTECT SURVEY CONTROL POINTS PRIOR TO STARTING SITE WORK AND PRESERVE PERMANENT REFERENCE POINTS (BENCH MARKS) DURING CONSTRUCTION.

D. PROMPTLY REPORT TO METRA'S CONSTRUCTION MANAGER THE LOSS OR DESTRUCTION OF ANY REFERENCE POINT OR RELOCATION REQUIRED BECAUSE OF CHANGES IN GRADES OR OTHER REASONS.

E. REPLACE DISLOCATED SURVEY CONTROL POINTS BASED ON ORIGINAL SURVEY CONTROL. MAKE NO CHANGES WITHOUT A PRIOR WRITTEN NOTICE TO METRA'S CONSTRUCTION MANAGER.

1.08 SURVEY REQUIREMENTS

A. PROVIDE FIELD ENGINEERING SERVICES. UTILIZE RECOGNIZED ENGINEERING SURVEY PRACTICES.

B. ESTABLISH ELEVATIONS, LINES AND LEVELS. LOCATE AND LAY OUT BY INSTRUMENTATION AND SIMILAR APPROPRIATE MEANS:
1. SITE IMPROVEMENTS INCLUDING PAVEMENT, CURBING AND SIDEWALKS; TOP OF GRADE AND INVERT ELEVATIONS; TOP OF BALLAST AND BRIDGE FILL MATERIAL.
2. STRUCTURAL IMPROVEMENTS INCLUDE ALL BRIDGES AND RETAINING WALLS.

C. PERIODICALLY VERIFY LAYOUTS BY THE SAME MEANS.

METRA SAFETY AND LOSS PREVENTION

1.01 DESCRIPTION

A. THIS SECTION SPECIFIES REQUIREMENTS FOR THE DEVELOPMENT AND EXECUTION OF SAFETY AND LOSS PREVENTION PROCEDURES BY THE CONTRACTOR AS APPLICABLE TO THE EXECUTION OF THE WORK.

1.02 NOT USED

1.03 REQUIREMENTS OF REGULATORY AGENCIES

A. CODES AND STANDARDS: THE CONTRACTOR MUST COMPLY WITH THE REQUIREMENTS OF ALL LAWS AND THE REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK.

B. PUBLIC LAW 91-596; 91ST CONGRESS 5.2193; DECEMBER 29, 1970.
1. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA), AS AMENDED.

C. PUBLIC LAW 100-342; 100TH CONGRESS, 102.624; JUNE 22, 1988.
1. RAIL SAFETY IMPROVEMENT ACT OF 1988 (FRSA), AS AMENDED.

D. FRA REGULATIONS, 49CFR213 - TRACK SAFETY STANDARDS AND 49CFR214, SUBPART C - RAILROAD WORKPLACE SAFETY.

1.04 PROTECTIVE MEASURES

A. THE CONTRACTOR MUST TAKE THOROUGH PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS AND PROPERTY, AND WILL BE LIABLE FOR ALL DAMAGES TO PERSONS OR PROPERTY, EITHER ON OR OFF OF THE SITE, WHICH OCCUR AS A RESULT OF ITS EXECUTION OF THE WORK.

1.05 PERMITS

A. THE CONTRACTOR MUST OBTAIN PERMITS FOR, INSTALL, AND MAINTAIN BARRICADES, WALKWAYS, FENCES, RAILINGS, AND WHATEVER OTHER SAFEGUARDS THAT MAY BE NECESSARY TO PROTECT PERSONS AND PROPERTY FROM DAMAGE AS A RESULT OF THE CONSTRUCTION UNDER THIS CONTRACT.

1.06 SAFETY AND LOSS PREVENTION PROGRAM

A. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING A SAFETY AND LOSS PREVENTION PROGRAM COVERING ALL WORK PERFORMED BY IT AND ITS SUBCONTRACTORS. THE CONTRACTOR MUST DESIGNATE A RESPONSIBLE MEMBER OF ITS ORGANIZATION WHOSE DUTIES WILL INCLUDE LOSS AND ACCIDENT PREVENTION, AND WHO WILL HAVE THE RESPONSIBILITY AND FULL AUTHORITY TO ENFORCE THE PROGRAM. THE PERSON MUST HOLD MEETINGS WITH THE REPRESENTATIVES OF THE VARIOUS TRADES EMPLOYED TO ENSURE THAT ALL EMPLOYEES UNDERSTAND AND COMPLY WITH THE PROGRAM. THE CONTRACTOR MUST FURNISH A COPY OF THE SAFETY AND LOSS PREVENTION PROGRAM TO METRA FOR REVIEW.

B. THE CONTRACTOR MUST COOPERATE FULLY WITH METRA, ALL INSURANCE CARRIERS AND LOSS PREVENTION ENGINEERS ON LOSS AND ACCIDENT PREVENTION.

C. ALL CONTRACTORS, SUBCONTRACTORS, AND MATERIAL SUPPLIERS MUST COOPERATE FULLY WITH ALL INTERESTED PARTIES ON ACCIDENT PREVENTION AND CLAIM HANDLING PROCEDURES.

D. THE CONTRACTOR MUST PROMPTLY REPORT IN WRITING TO METRA, ALL ACCIDENTS WHATSOEVER ARISING OUT OF, OR IN CONNECTION WITH, THE PERFORMANCE OF THE WORK, WHETHER ON OR OFF OF THE SITE, WHICH CAUSE DEATH, PERSONAL INJURY OR PROPERTY DAMAGE, GIVING FULL DETAILS AND STATEMENTS OF WITNESSES. IN ADDITION, IF DEATH, SERIOUS INJURIES OR SERIOUS DAMAGES ARE CAUSED, THE ACCIDENT MUST BE REPORTED IMMEDIATELY BY TELEPHONE OR MESSENGER. IF ANY CLAIM IS MADE BY ANYONE AGAINST THE CONTRACTOR OR ANY SUBCONTRACTOR ON ACCOUNT OF ANY ACCIDENT, THE CONTRACTOR MUST PROMPTLY REPORT THE FACTS, IN WRITING, TO METRA, GIVING FULL DETAILS OF THE CLAIM.

E. THE CONTRACTOR MUST SUBMIT THE CONTRACTOR'S AND SUBCONTRACTOR'S SAFETY PLANS TO METRA FOR REVIEW.

1.07 OBSERVATION

A. DURING PERIODIC VISITS TO THE JOB SITE, METRA'S CONSTRUCTION MANAGER IS TO OBSERVE THE SITE FOR SAFETY ON AN INFORMATIONAL BASIS ONLY, NOT AS AN OFFICIAL AGENCY. IF METRA'S CONSTRUCTION MANAGER OBSERVES A CONDITION CONSIDERED TO BE UNSAFE, THE CONTRACTOR'S SUPERINTENDENT IS TO BE ADVISED VERBALLY OF THE OBSERVED CONDITION, AND THE CONDITION IS TO BE RECORDED IN THE ENGINEER'S LOG REPORT.

B. IF THE CONDITION REPRESENTS AN IMMINENT DANGER IN THE OPINION OF METRA'S CONSTRUCTION MANAGER TO PERSONS OR PROPERTY, AND THE CONTRACTOR, AFTER BEING VERBALLY NOTIFIED, DOES NOT IMMEDIATELY CORRECT THE CONDITION, THE OBSERVER IS TO CONTACT METRA: PROJECT MANAGER, 547 WEST JACKSON BOULEVARD, CHICAGO, ILLINOIS 60661. AT 312-322-6726. A VERBAL CALL MUST BE SUPPLEMENTED BY A WRITTEN AND SIGNED STATEMENT.

1.08 OBSERVANCE OF GENERAL CODE OF OPERATION RULES

A. THE CONTRACTOR MUST COMPLY WITH ALL RULES AND REGULATIONS CONTAINED IN THE GENERAL CODE OF OPERATION RULES, ADOPTED BY METRA WITH A PARTICULAR EMPHASIS ON RULE G WHICH PROHIBITS THE USE OF ALCOHOLIC BEVERAGES, DRUGS, ETC. ON METRA PROPERTY. ANY VIOLATION WILL RESULT IN PERMANENT REMOVAL FROM THE PROJECT. ALSO, WORKERS MUST WEAR HARD HATS, EYE PROTECTION, AND SAFETY BOOTS WHEN WORKING ON METRA PROPERTY, AND THE CONTRACTOR SHALL FURNISH HARD HATS FOR VISITORS TO THE SITE.

1.09 WORKER SAFETY

A. THE CONTRACTOR MUST FOLLOW ALL OF THE REGULATIONS ISSUED UNDER THE FEDERAL RAILWAY ADMINISTRATION (SEE 1.03, D ABOVE) REGARDING RAILROAD WORKPLACE SAFETY AND ROADWAY WORKER SAFETY STANDARDS. NO EMPLOYEE WILL BE ALLOWED TO BEGIN WORK ON RAILROAD PROPERTY EACH DAY UNTIL THE DAILY JOB BRIEFING IS HELD WITH THE RAILROAD'S EMPLOYEE IN CHARGE.

1.10 PENALTIES FOR NON-COMPLIANCE

A. COMPLIANCE WITH THESE SAFETY AND LOSS PREVENTION CONDITIONS IS CONSIDERED BY METRA TO BE OF PRIMARY IMPORTANCE. THEREFORE, METRA'S CONSTRUCTION MANAGER WILL TAKE THE FOLLOWING STEPS IN THE EVENT THAT THE CONTRACTOR FAILS TO COMPLY WITH THESE SAFETY AND LOSS PREVENTION CONDITIONS:
1. MINOR INFRACTIONS OF THE SAFETY AND LOSS PREVENTION CONDITIONS:
2. MINOR INFRACTIONS OF THE SAFETY AND LOSS PREVENTION CONDITIONS MUST BE VERBALLY BROUGHT TO THE ATTENTION OF THE CONTRACTOR'S SUPERINTENDENT BY METRA'S CONSTRUCTION MANAGER. IT IS EXPECTED THAT THE SUPERINTENDENT WILL PROMPTLY TAKE THE NECESSARY STEPS TO CORRECT THE INFRACTIONS.
3. REPEATED MINOR INFRACTIONS OF THE SAFETY AND LOSS PREVENTION CONDITIONS OR FAILURE OF THE SUPERINTENDENT TO PROMPTLY CORRECT MINOR INFRACTIONS POINTED OUT BY METRA'S CONSTRUCTION MANAGER:
4. REPEATED MINOR INFRACTIONS OR INFRACTIONS THAT ARE NOT PROMPTLY CORRECTED BY THE SUPERINTENDENT WILL RESULT IN THE CONTRACTOR BEING ADVISED IN WRITING BY METRA'S CONSTRUCTION MANAGER OF SUCH VIOLATIONS AND WILL REQUIRE THE CONTRACTOR TO RESPOND IN WRITING AS TO WHAT STEPS ARE TO BE TAKEN TO CORRECT THE INFRACTIONS AND TO TAKE IMMEDIATE CORRECTIVE ACTION. IT IS REQUIRED THAT ALL CORRECTIVE ACTIONS WILL BE COMPLETED AS DESCRIBED AND DETAILED IN WRITING. ADDITIONALLY, THESE INFRACTIONS WILL BE DISCUSSED AND DOCUMENTED AT THE WEEKLY PROGRESS MEETINGS.
5. SERIOUS VIOLATIONS OF THE SAFETY AND LOSS PREVENTION CONDITIONS OR FAILURE BY THE CONTRACTOR TO TAKE THE CORRECTIVE ACTIONS OUTLINED IN PARAGRAPH 2 OF THE PENALTIES FOR NON-COMPLIANCE ABOVE:
6. IF THE CONTRACTOR FAILS TO SATISFACTORILY RESPOND TO THE STEPS OUTLINED IN PARAGRAPH 2, THE CHIEF ENGINEERING OFFICER OF METRA WILL ISSUE THE SUPERINTENDENT A WRITTEN "STOP WORK ORDER" THAT WILL REQUIRE THE CONTRACTOR AND ALL SUBCONTRACTORS TO IMMEDIATELY CEASE ALL WORK ACTIVITY ON THE PROJECT AND FOR ALL NON-SUPERVISORY PERSONNEL OF THE CONTRACTOR AND ALL OF ITS SUBCONTRACTORS TO IMMEDIATELY VACATE METRA'S PREMISES.
7. ADDITIONALLY, IF ANY EMPLOYEES OF THE CONTRACTOR OR ANY SUBCONTRACTOR SERIOUSLY VIOLATE THE REQUIREMENTS OF THE SAFETY AND LOSS PREVENTION CONDITIONS, A WRITTEN "STOP WORK ORDER" WILL BE ISSUED BY METRA'S CHIEF ENGINEERING OFFICER WITH THE SAME REQUIREMENTS AND CONDITIONS DETAILED IN THE PRECEDING PARAGRAPH. SUCH SERIOUS VIOLATIONS MUST INCLUDE, BUT WILL NOT BE LIMITED TO, THE FOLLOWING:
    a. FAILURE BY THE CONTRACTOR OR ANY SUBCONTRACTOR PERSONNEL TO COMPLY WITH FRA OR METRA REQUIREMENTS FOR FALL PROTECTION WHILE WORKING ON BRIDGES.
    b. FAILURE BY THE CONTRACTOR OR ANY SUBCONTRACTOR PERSONNEL TO COMPLY WITH FRA OR METRA REQUIREMENTS FOR ON TRACK SAFETY AND/OR ROADWAY WORKER PROTECTION.
    c. REFUSAL BY THE CONTRACTOR OR ANY SUBCONTRACTOR PERSONNEL TO OBEY THE SIGNALS AND DIRECTIONS GIVEN TO THEM BY THE METRA FLAGMAN.
    d. PERSONNEL OF THE CONTRACTOR OR ANY SUBCONTRACTOR PERFORMING WORK AT TRACK LEVEL OR WITHIN 25' OF ANY TRACK OUTSIDE THE HOURS SPECIFIED IN THE DETAILED SPECIFICATIONS.
    e. PERSONNEL OF THE CONTRACTOR OR ANY SUBCONTRACTOR PERFORMING WORK AT TRACK LEVEL OR WITHIN 25' OF ANY TRACK AT ANY TIME WITHOUT A METRA FLAGMAN BEING PRESENT.
    f. PERSONNEL OF THE CONTRACTOR OR ANY SUBCONTRACTOR PERFORMING WORK ON METRA PROPERTY AFTER ISSUANCE OF A "STOP WORK ORDER".
    g. FAILURE BY THE CONTRACTOR OR ANY SUBCONTRACTOR PERSONNEL TO MAINTAIN THE PREMISES OF METRA IN A SECURE CONDITION WHICH COULD POTENTIALLY RESULT IN AN ACCIDENT OR DAMAGE TO RAILROAD PROPERTY OR EQUIPMENT.
    h. HASSAULT ON AN EMPLOYEE OF METRA BY AN EMPLOYEE OF THE CONTRACTOR OR ANY SUBCONTRACTOR.
    i. ANY ACTIVITY OF THE CONTRACTOR OR ANY SUBCONTRACTOR THAT CAUSES OR DIRECTLY CONTRIBUTES TO AN FRA REPORTABLE INJURY TO ANY ON-DUTY EMPLOYEE OF METRA.
    j. INTENTIONAL RETURN OF AN INDIVIDUAL EMPLOYED BY THE CONTRACTOR OR ANY SUBCONTRACTOR TO THE PROJECT AND/OR PREMISES OF METRA BARRED UNDER THE CONDITIONS DESCRIBED IN SECTION 1.08, A AND SECTION 1.10, 3.
    k. ANY ACTIVITY OF THE CONTRACTOR OR ANY SUBCONTRACTOR THAT CAUSES OR DIRECTLY CONTRIBUTES TO A DERAILMENT OR ANY OTHER TRAIN ACCIDENT.
    l. AFTER ISSUANCE OF A "STOP WORK ORDER", METRA'S CHIEF ENGINEERING OFFICER WILL IMMEDIATELY MEET WITH METRA'S CONSTRUCTION MANAGER AND THE SUPERINTENDENT ON-SITETO DISCUSS WHAT STEPS WILL BE TAKEN TO RESUME CONSTRUCTION ACTIVITY ON THE PROJECT. THE SUPERINTENDENT WILL BE ISSUED A WRITTEN SET OF INSTRUCTIONS BY METRA'S CHIEF ENGINEERING OFFICER DETAILING WHAT WORK MUST BE DONE TO BRING THE PROJECT BACK INTO COMPLIANCE WITH THE SAFETY AND LOSS PREVENTION CONDITIONS. ANY WORK ACTIVITY BY THE CONTRACTOR OR ANY SUBCONTRACTOR AT THIS TIME WILL BE LIMITED TO THE CORRECTIVE ACTION REQUIRED TO BRING THE PROJECT BACK INTO COMPLIANCE WITH THESE CONDITIONS.
    m. AT THIS TIME, METRA'S CHIEF ENGINEERING OFFICER MAY REQUIRE THAT ONE OR MORE EMPLOYEES OF THE CONTRACTOR OR ANY SUBCONTRACTOR BE PROHIBITED FROM WORKING ON THE PROJECT OR OCCUPYING METRA'S PROPERTY. THE SUPERINTENDENT WILL THEN BE REQUIRED TO FURNISH METRA'S CHIEF ENGINEERING OFFICER WITH THE NAME OF THOSE INDIVIDUALS.
    n. WHEN CORRECTIVE ACTION HAS BEEN COMPLETED, AND THE PROJECT HAS BEEN BROUGHT BACK INTO COMPLIANCE WITH THE SAFETY AND LOSS PREVENTION CONDITIONS, METRA'S CHIEF ENGINEERING OFFICER WILL ISSUE A WRITTEN "RESUME WORK ORDER" TO THE SUPERINTENDENT.
        1. NOTE: ANY TIME LOST BY THE CONTRACTOR RESULTING FROM THE ENFORCEMENT BY METRA OF "PENALTIES FOR NON-COMPLIANCE" WILL COUNT AS CONTRACT DAYS. ANY REQUESTS BY THE CONTRACTOR FOR A CONTRACT EXTENSION WILL BE DENIED.

8. ANY ADDITIONAL SERIOUS VIOLATIONS OF THE SAFETY AND LOSS PREVENTION CONDITIONS
    a. IN THE EVENT THAT THE CONTRACTOR OR ANY SUBCONTRACTOR SERIOUSLY VIOLATES THE SAFETY AND LOSS PREVENTION CONDITIONS AGAIN, A WRITTEN "STOP WORK ORDER" WILL BE ISSUED TO THE SUPERINTENDENT BY METRA. ALL WORK ON THE PROJECT WILL IMMEDIATELY CEASE AND ALL EMPLOYEES OF THE CONTRACTOR AND ALL OF ITS SUBCONTRACTORS WILL IMMEDIATELY VACATE THE PREMISES OF METRA.
    b. AFTER ISSUANCE OF A SECOND AND SUBSEQUENT "STOP WORK ORDER(S)", THE PRESIDENT, CHIEF EXECUTIVE OFFICER, OR EQUIVALENT OF THE CONTRACTOR MUST CONTACT THE DEPUTY EXECUTIVE DIRECTOR, OPERATIONS OF METRA, IN WRITING, TO REQUEST THAT A HEARING BE HELD TO DISCUSS WHAT STEPS MUST BE TAKEN BY THE CONTRACTOR TO RESUME WORK ON THE PROJECT. A HEARING WILL BE SCHEDULED AT THE EARLIEST OPPORTUNITY BY THE DEPUTY EXECUTIVE DIRECTOR, OPERATIONS OF METRA AT 547 WEST JACKSON BOULEVARD IN CHICAGO, ILLINOIS.
    c. AT THE HEARING, IT WILL BE THE RESPONSIBILITY OF THE PRESIDENT, CHIEF EXECUTIVE OFFICER, OR EQUIVALENT OF THE CONTRACTOR TO MAKE A PRESENTATION TO METRA DETAILING WHAT STEPS WILL BE TAKEN BY THE CONTRACTOR TO BRING THE PROJECT BACK INTO COMPLIANCE WITH THE SAFETY AND LOSS PREVENTION CONDITIONS OF THE CONTRACT AND WHAT STEPS WILL BE TAKEN BY THE CONTRACTOR TO INSURE THAT NO ADDITIONAL VIOLATIONS OF THE CONDITIONS OF THIS SECTION WILL OCCUR. ACCEPTANCE OR DENIAL OF THE PRESENTATION WILL BE AT THE DISCRETION OF THE DEPUTY EXECUTIVE DIRECTOR, OPERATIONS OF METRA.
    d. WHEN THE DEPUTY EXECUTIVE DIRECTOR, OPERATIONS OF METRA HAS BEEN SATISFIED THAT THE PROPER CORRECTIVE MEASURES WILL BE TAKEN BY THE CONTRACTOR, THE CONTRACTOR WILL BE ISSUED WRITTEN INSTRUCTIONS REGARDING WHAT STEPS MUST BE TAKEN PRIOR TO RECEIVING A WRITTEN "RESUME WORK ORDER". ALL ACTIVITY BY THE CONTRACTOR AND ANY SUBCONTRACTOR ON
    THE PREMISES OF METRA DURING THIS TIME WILL BE LIMITED TO THE CORRECTIVE MEASURES THAT WILL BRING THE PROJECT BACK INTO COMPLIANCE WITH THE SAFETY AND LOSS PREVENTION CONDITIONS.
    e. WHEN ALL CORRECTIVE WORK HAS BEEN COMPLETED, THE CONTRACTOR WILL BE ISSUED A WRITTEN "RESUME WORK ORDER" BY METRA.
        1. NOTE: AS STATED PREVIOUSLY, ANY TIME LOST BY THE CONTRACTOR RESULTING FROM THE ENFORCEMENT BY METRA OF "PENALTIES FOR NON-COMPLIANCE" WILL COUNT AS CONTRACT DAYS. ANY REQUESTS BY THE CONTRACTOR FOR A CONTRACT EXTENSION WILL BE DENIED.
        2. ANY ADDITIONAL SERIOUS VIOLATIONS WILL BE HANDLED IN THE SAME MANNER AS DETAILED IN PARAGRAPH 4 ABOVE.

METRA DAMAGE TO UTILITIES

1.01 DESCRIPTION

A. THIS SECTION SPECIFIES REQUIREMENTS FOR DAMAGES TO UTILITIES. THE WORK UNDER THIS SECTION SHALL INCLUDE FURNISHING ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT REQUIRED TO REPAIR ANY DAMAGES CAUSED BY THE CONTRACTOR AT THEIR OWN EXPENSE.

2.01 NOT USED

3.01 EXECUTION REQUIREMENTS

A. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITIES WHENEVER ANY WORK THAT IS REQUIRED UNDER ANY UTILITY AGREEMENTS MUST BE PERFORMED IN CONJUNCTION WITH THE CONSTRUCTION THAT IS REQUIRED UNDER THE CONTRACT. IT IS SUGGESTED THAT THE CONTRACTOR FIRST CONTACT J.U.L.I.E. (1-800-892-0123) TO EXPEDITE UTILITY NOTIFICATION. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY THAT ARE NOT MEMBERS OF THE J.U.L.I.E. SYSTEM, WHICH MAY BE AFFECTED BY THE WORK TO DETERMINE WHETHER OTHER INTERFERENCES EXIST AND FOR ANY OTHER REQUIREMENTS RELATING TO WORK INVOLVING ANY UTILITY FACILITIES PRIOR TO SUBMITTING ITS BID PROPOSAL.

B. THE CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES AND FEES, AND GIVE ALLNOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK, INCLUDING SUCH PERMITS AND LICENSES AS MAY BE REQUIRED IN CONNECTION WITH THE TRANSPORTATION OF MATERIALS OR EQUIPMENT OVER ROADS, STREETS, HIGHWAYS, OR RAILROADS.

C. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR HAS TAKEN INTO ACCOUNT IN ITS PROPOSAL ALL UTILITY FACILITIES IN THEIR PRESENT AND RELOCATED POSITIONS, AND ALL UTILITY ADJUSTMENT AND RELOCATION WORK WHICH WILL AFFECT ITS PROGRESS AND PERFORMANCE OF THE WORK. NO DAMAGES OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY DELAYS OR INCONVENIENCE SUSTAINED BY
THE CONTRACTOR DUE TO INTERFERENCE FROM UTILITY FACILITIES OR UTILITY ADJUSTMENT OR RELOCATION WORK.

D. THE CONTRACTOR SHALL NOT INTERFERE WITH OR CAUSE DAMAGE TO OR INTERRUPTION OF ANY FACILITIES OF ANY UTILITY, WHETHER OR NOT THEY ARE THE SUBJECT OF ANY UTILITY AGREEMENT. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE AFFECTED UTILITY AND GIVE WRITTEN NOTICE TO METRA WHENEVER THE CONTRACTOR HAS INTERFERED WITH OR CAUSED DAMAGE TO OR INTERRUPTION OF ANY FACILITIES OF ANY UTILITY. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY IN THE PROMPT REPAIR AND RESTORATION OF SUCH UTILITY FACILITY AND SHALL BE RESPONSIBLE TO THE UTILITY FOR THE COST OF SUCH REPAIR AND RESTORATION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MAINTAINING ITS PERFORMANCE OF THE CONTRACT AND COMPLETING THE WORK BY THE COMPLETION DATE DESPITE THE CONTRACTOR'S INTERFERENCE WITH OR INTERRUPTION OF ANY FACILITIES OF ANY UTILITY.

E. ANY POSTS THAT ARE TO BE LOCATED NEAR OR OVER ANY BURIED CABLE SHALL BE INSTALLED BY FIRST DIGGING A HOLE BY HAND, AND THEN INSTALLING THE POST AND BACK-FILLING THE HOLE. NO POSTS SHALL BE DRIVEN UNDER SUCH CONDITIONS. CARE SHALL BE TAKEN WHILE DIGGING BY HAND SO AS NOT TO DAMAGE THE CABLE.

F. ALL EFFORTS ON METRA'S PART TO ADVISE THE CONTRACTOR AS TO THE LOCATIONS OF UNDERGROUND CABLES NOTWITHSTANDING, IT SHALL BE UNDERSTOOD THAT SUCH EFFORTS BY METRA SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY FOR RESTORING DAMAGE RESULTING FROM THE ACTIVITIES OF ANY EMPLOYEE, SUBCONTRACTOR, AGENT, OR REPRESENTATIVE OF THE CONTRACTOR.

G. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR NOTIFYING OWNERS OF OTHER CABLES AND UNDERGROUND FACILITIES WHICH MAY BE JEOPARDIZED BY THE CONTRACTOR'S OPERATIONS IN THE SAME MANNER AS REQUIRED FOR NOTICE TO METRA.

STATE OF ILLINOIS
ZACHERY R. WIESE
001.021669
LICENSED ARCHITECT

GENERAL

GE.01 BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, THE CONTRACTOR SHALL VISIT THE PREMISES AND ACQUAINT HIMSELF/ HERSELF FULLY WITH THE EXISTING CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPES OF EQUIPMENT REQUIRED, ETC. HIS/HER BID SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK WITHIN THE EXISTING CONDITIONS. DISRUPTION OF NORMAL ACTIVITIES IN THE WORK AREA MUST BE KEPT TO A MINIMUM.

GE.02 THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION, DIMENSIONS, MEMBER SIZES, AND ELEVATIONS FOR CONFORMANCE WITH THE DRAWINGS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.

GE.03 UNLESS NOTED OTHERWISE, DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR CONDITIONS.

GE.04 DIMENSIONS ON STRUCTURAL DRAWINGS ARE TO BE CHECKED AGAINST THE DRAWINGS OF OTHER DISCIPLINES, AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.

GE.05 COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR LINTELS, METAL WALL FRAMING, SHELF ANGLES, SIZE AND LOCATION OF SLOPES, DEPRESSED AREAS, FINISH FILLS, CHAMFERS, GROOVES, SLEEVES, INSERTS, ETC.

GE.06 COORDINATE WITH MECHANICAL/ELECTRICAL/PLUMBING DRAWINGS FOR DUCTWORK, PIPE SLEEVES, FLOOR DRAINS, INSERTS, HANGERS, TRENCHES, PITS, PADS, WALL AND SLAB OPENINGS, CONDUIT RUNS IN WALLS AND SLABS, SIZE AND LOCATION OF MACHINE OR EQUIPMENT SUPPORTS, BASES, ANCHOR BOLTS, ETC

GE.07 ELEVATIONS SHOWN REFER TO PROJECT DATUM 100'-0" = 728.32'

GE.08 SHOP DRAWINGS PREPARED BY THE CONTRACTOR AND/OR HIS SUPPLIERS SHALL BE REVIEWED BY THE ARCHITECT ONLY FOR CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

GE.09 SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER

GE.10 DESIGN LOADS, ALLOWABLE STRESSES AND STRUCTURAL CAPACITIES ARE BASED ON THE IBC 2015, WITH LOCAL AMENDMENTS.

DESIGN WIND LOADS	
MAIN WIND RESISTING SYSTEM	20PSF
COMPONENTS & CLADDING	30PSF
DESIGN FLOOR AND ROOF LIVE LOADS	
GREEN ROOF	25 PSF
ROOF SNOW	25 PSF

GE.11 SHOP DRAWING SUBMITTALS TO ARCHITECT/ENGINEER ARE REQUIRED FOR ALL PRE-FABRICATED ITEMS.

EXCAVATION AND BACKFILL

EB.01 BEFORE ANY OTHER BUILDINGS OPERATIONS ARE STARTED, REMOVE ALL BITUMINOUS PAVEMENT, LOOSE GRAVEL, ABANDONED FOUNDATIONS, BLACK LOAM, ORGANIC MATERIAL, AND FILL ENCOUNTERED WITHIN THE AREA TO BE OCCUPIED BY NEW CONSTRUCTION. NONE OF THIS MATERIAL OR OTHER EXCAVATED ON-SITE SOILS, WHICH ARE FOUND TO BE UNSUITABLE, SHALL BE USED FOR FILL WITHIN OR ADJACENT TO THE BUILDING. STORE GRAVEL ON SITE FOR POTENTIAL REUSE.

EB.02 GENERAL MACHINE EXCAVATION FOR FOOTINGS SHALL STOP NOT LESS THAN 6" ABOVE SCHEDULED ELEVATIONS OF BOTTOMS OF FOOTINGS. FINAL EXCAVATION TO UNDISTURBED SOIL AT REQUIRED FOOTING ELEVATION SHALL BE DONE BY HAND NOT MORE THAN 48 HOURS BEFORE THE FOOTING IS PLACED.

EB.03 ALL NECESSARY CHANGES IN ELEVATION OF WALL FOOTINGS SHALL BE MADE IN STEPS OF NOT MORE THAN 2'-0" HIGH AND A MINIMUM OF 4'-0" APART, EXCEPT AS OTHERWISE DETAILED.

EB.04 AFTER EXCAVATING FOR ALL EARTH-SUPPORTED SLABS AND PRIOR TO PLACING FILL, THE EXPOSED NATURAL SOIL SHALL BE COMPACTED TO 95% OF ASTM D-1557 (MODIFIED PROCTOR) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

EB.05 SEE GEOTECHNICAL REPORT FOR FOUNDATION BACKFILL AND FILL REQUIRED TO ESTABLISH FINAL SUB-GRADES. ALL EARTH-SUPPORTED SLABS SHALL HAVE AT LEAST 6" OF CA6 DIRECTLY BELOW THE SLAB COMPACTED TO 95% OF ASTM D-1557 (MODIFIED PROCTOR) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

EB.06 BACKFILL PLACED DIRECTLY ADJACENT TO BASEMENT AND RETAINING WALLS SHALL BE CA6 COMPACTED TO 95% OF ASTM D-1557 (MODIFIED PROCTOR) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. AT TOP OF BACKFILL, PROVIDE 1'-6" OF CA6 COMPACTED TO 95% OF ASTM D-1557 (MODIFIED PROCTOR) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

EB.07 ALL SOIL SUPPORTED FOUNDATIONS SHALL BE FOUNDED UPON UNDISTURBED, NATURAL SUBGRADE WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 3,000 PSF, AS INDICATED IN THE GEOTECHNICAL REPORT REFERENCED IN NOTE EB.14 AND AS FIELD VERIFIED AND APPROVED BY THE OWNER'S SOIL TESTING LABORATORY. THE FOOTING ELEVATIONS AND SOIL BEARING CAPACITIES AS SHOWN ON THE DRAWINGS ARE ESTIMATED FROM THE SOIL BORING DATA. FINAL, EXACT ELEVATIONS AND SOIL BEARING CAPACITIES SHALL BE FIELD DETERMINED AND VERIFIED BY THE OWNER'S SOIL TESTING LABORATORY AND REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO PLACEMENT OF CONCRETE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN THE EVENT THAT THE SOIL CONDITIONS ENCOUNTERED VARY FROM THOSE ASSUMED IN THE DESIGN.

EB.08 DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL GROUND FLOOR AND LOWER LEVEL SLABS HAVE BEEN PLACED AND THE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH.

EB.09 BACKFILL AGAINST SIDES OF FOUNDATION WALLS SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES TO THE TOP OF THE WALL.

EB.10 NO MUD SLABS, FOOTINGS, OR SLABS SHALL BE PLACED ONTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.

EB.11 THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTINGS OR SLAB SUBGRADE BEFORE AND AFTER PLACEMENT OF CONCRETE UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.

EB.12 THE CONCRETE FOR EACH ISOLATED FOOTING SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT.

EB.13 ALL PERIMETER WALL AND COLUMN FOOTINGS SHALL BEAR A MINIMUM OF 3'-6" BELOW FINISHED GRADE.

EB.14 FOR ADDITIONAL SITE CONDITIONS, FOUNDATION CONSTRUCTION CONSIDERATIONS, AND RECOMMENDATIONS, REFER TO THE GEOTECHNICAL REPORT. AGI PROJECT NO. 18-258 DATED NOV. 6, 2018 PREPARED BY APPLIED GEOSCIENCE, INC. SEE AVAILABLE REPORTS IN SPECIAL PROVISION.

SHORING AND BRACING

SB.01 INDIVIDUAL STRUCTURAL COMPONENTS ARE DESIGNED TO SUPPORT LOADS IN THEIR FINAL ERECTED POSITION AS PART OF THE TOTAL COMPLETED STRUCTURE. PROVIDE TEMPORARY SHORING, GUYING AND BRACING AS REQUIRED UNTIL ALL CONSTRUCTION AFFECTING LOAD CARRYING MEMBERS AND LATERAL STABILITY IS COMPLETED.

SB.02 CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR STABILITY OF STRUCTURE, ITS PARTS, AND JOB SITE SAFETY BY USE OF GUYING, BRACING, SHORING, BARRICADES, SAFETY RAILINGS AND DEVICES DURING THE ENTIRE PERIOD OF CONSTRUCTION.

SB.03 CONTRACTOR IS FULLY RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING AND BRACING OF EXISTING ELEMENTS DURING CONSTRUCTION. ALL SHORING SHALL BE ADEQUATE TO SUPPORT ALL LOADINGS DURING MODIFICATION OF THE EXISTING BUILDING AND ERECTION OF THE NEW STRUCTURAL SUPPORT SYSTEM. TEMPORARY SHORING MUST REMAIN IN PLACE UNTIL ALL NEW STRUCTURAL MEMBERS SUPPORTING SHORED ELEMENTS ARE IN PLACE AND ALL NEW CONNECTIONS COMPLETED.

CONCRETE AND FORMWORK

CO.01 ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING AMERICAN CONCRETE INSTITUTE PUBLICATIONS:

ACI 301	ACI 304	ACI 311
ACI 315	ACI 318	ACI 347

CO.02 THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION AND PLACEMENT OF INSERTS, EMBEDDED PLATES, MASONRY ANCHORS, REGLETS, SLEEVES, DUCT WORK, PADS, AND ANCHOR BOLTS. THE INSERTS, EMBEDDED PLATES, ETC. SHALL NOT INTERFERE WITH CONCRETE REINFORCEMENT LOCATIONS. THE GENERAL CONTRACTOR SHALL VERIFY ALL OPENINGS THROUGH WALLS WITH SHOP DRAWINGS, SHOWING OPENINGS IN THE SLABS INCLUDING, BUT NOT LIMITED TO, SLEEVE SIZES AND LOCATIONS, DUCT SIZES AND LOCATIONS, ETC.

CO.03 SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL ARCHITECTURAL FINISHES, FLOOR FINISHES, FLOOR DEPRESSIONS, AND CURBS AND FOR ALL WATERPROOFING AND/OR DAMPPROOFING DETAILS. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL WALL AND/OR SLAB OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

CO.04 THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS SHOWING THE LOCATIONS OF ALL CONSTRUCTION JOINTS, CURBS, AND SLAB DEPRESSIONS, IF ANY, AND DESCRIBE THE CONCRETE PLACEMENT SEQUENCE. ALL CURBS SHALL BE REINFORCED WITH AT LEAST 1-#4 CONTINUOUS AND #3 AT 16" C/C DOWELS TO THE STRUCTURE BELOW, UNLESS NOTED OTHERWISE.

CO.05 CONCRETE SHALL DEVELOP MINIMUM 28-DAY STRENGTH AS FOLLOWS:

FOOTINGS, PIERS, AND FOUNDATIONS	NMWT	(145 PCF)	f'c=	4,000 PSI
SLABS ON GRADE	NMWT	(145 PCF)	f'c=	3,500 PSI

CO.06 ALL CONCRETE EXPOSED TO THE EXTERIOR SHALL BE AIR- ENTRAINED. WATER REDUCING PLASTICIZING ADMIXTURES MAY BE USED, PENDING APPROVAL OF THE ARCHITECT.

CO.07 NO CALCIUM CHLORIDE OR CHLORIDE-ION PRODUCING ADMIXTURE SHALL BE USED IN ANY CONCRETE. SEE ARCHITECTURE FOR COLOR PIGMENT ADMIXTURE

CO.08 FORMWORK FOR ALL CONCRETE WHICH WILL BE EXPOSED IN THE COMPLETED BUILDING OR CIP BENCHES SHALL BE CONSTRUCTION FROM A SUITABLE PLASTIC SURFACED PLYWOOD WHICH WILL PRODUCE AN ACCEPTABLY SMOOTH SURFACE. SEE ARCHITECTURAL DRAWINGS FOR FORMWORK FOR ALL EXTERIOR CONCRETE INDICATED AS 'BOARD-FORMED'. ALSO SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS TO BE REPRESENTED IN MOCK-UPS.

CO.09 VERTICAL WALL CONSTRUCTION JOINTS SHALL BE FORMED WITH VERTICAL BULKHEADS AND KEYWAYS. WALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE JOINT OR SHALL BE DOWELED WITH AN EQUIVALENT AREA OF REINFORCEMENT.

CO.10 ALL CONSTRUCTION JOINTS SHALL BE WIRE-BRUSHED AND CLEANED IMMEDIATELY PRIOR TO PLACING NEW CONCRETE. ALSO SEE THE SPECIFICATIONS AND REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS TO BE REPRESENTED IN MOCK-UPS. ALLOW 24 HOURS MINIMUM TO ELAPSE BETWEEN PLACEMENTS.

CO.11 PROVIDE CONTINUOUS WATERSTOPS IN VERTICAL CONSTRUCTION JOINTS, IN BASEMENT AND ELEVATOR PIT WALLS, AND IN ALL OTHER WALLS ADJACENT TO BELOW GRADE SLABS.

CO.12 EXPOSED EXTERNAL CONCRETE CORNERS SHALL BE CHAMFERED AND NON-CHAMFERED PER ARCH DETAILS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS TO BE REPRESENTED IN MOCK-UPS.

CO.13 INTERIOR SLABS ON GRADE THICKNESSES AND REINFORCEMENT SHALL BE AS SHOWN AND NOTED ON THE PLANS, THICKENED OR DEPRESSED AS REQUIRED FOR THE DETAILS. DEPRESSED SLABS SHALL MAINTAIN FULL THICKNESS UNLESS NOTED OTHERWISE. SEE NOTE RS.09 FOR THE PLACEMENT OF WELDED WIRE FABRIC. A VAPOR RETARDER SHALL BE PROVIDED UNDER ALL INTERIOR SLABS ON GRADE PER THE PROJECT SPECIFICATIONS.

CO.14 SLABS ON GRADE SHALL BE PLACED IN ALTERNATE STRIPS WITH A MAXIMUM WIDTH OF 15'-0" OR AS SHOWN ON PLAN. CONTROL JOINTS SHALL BE CUT WITHIN A 8-12 HOURS AFTER THE CONCRETE HAS SET. CONTROL JOINTS SHALL NOT EXCEED 15'-0" INTERVALS IN EACH DIRECTION, AND SHALL BE LOCATED TO CONFORM WITH BAY SPACING WHEREVER POSSIBLE (I.E. AT COLUMN CENTERLINES, HALF-BAYS, THIRD-BAYS) REFER TO ARCHITECTURAL DRAWINGS FOR JOINT LOCATIONS.

CO.15 SLOPE CONCRETE SLABS, WHERE REQUIRED, TO FLOOR DRAINS SHOWN ON THE ARCHITECTURAL AND PLUMBING DRAWINGS. MAINTAIN MINIMUM SLAB THICKNESSES AS SHOWN ON THE STRUCTURAL DRAWINGS.

CO.16 NO SLAB SHALL HAVE COLD JOINTS IN A HORIZONTAL PLANE. CONSTRUCTION JOINTS IN ELEVATED CONCRETE ON METAL DECK SHALL BE MADE AT THE THIRD POINT OF THE SPAN.

CO.17 VOID.

CO.18 NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT AND ENGINEER.

REINFORCEMENT STEEL

RS.01 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS, AND SECURED IN PLACE IN ACCORDANCE WITH PROCEDURES AND REQUIREMENTS OUTLINES IN THE LATEST EDITIONS OF THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318) AND THE "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315). AT EPOXY COATED BARS, USE DIELECTRIC MATERIAL FOR BAR SUPPORTS AND NYLON COATED TIE WIRE.

RS.02 CHECKED SHOP DRAWINGS SHOWING REINFORCEMENT DETAILS, INCLUDING STEEL SIZES, SPACING, AND PLACEMENT SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

RS.03 ALL REINFORCEMENT STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE LATEST EDITION OF ASTM A 615. GRADE 60.

RS.04 ALL WELDED WIRE FABRIC SHALL CONFORM TO THE LATEST EDITION OF ASTM A 185

RS.05 THE FOLLOW CLEAR COVER SHALL BE PROVIDED FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE, UNLESS NOTED OTHERWISE:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH #18 BARS	2"
#5 BARS, 5/8" DIA. WIRE AND SMALLER	1 1/2"
NOT EXPOSED TO WEATHER IN CONTACT WITH GROUND:	
SLABS & WALLS	3/4"
PIERS, COLUMNS, AND BEAMS:	
PRIMARY REINFORCEMENT, TIES, AND STIRRUPS	1 1/2"

RS.06 PROVIDE ADEQUATE BOLSTERS, HIGH CHAIRS, SUPPORT BARS, ETC. TO MAINTAIN SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCEMENT BARS. PROVIDE CONTINUOUS #4 SPACER BARS IN WALLS AND SLABS TO SUPPORT DOWELS, AS REQUIRED. WELDED WIRE FABRIC SHALL BE SUPPORTED IN PROPER POSITION ON CHAIRS AND CARRIER BARS.

RS.07 ALL EMBEDMENT LENGTHS SHALL CONFORM TO THE LATEST EDITION OF ACI 318.

RS.08 ALL REINFORCEMENT SPLICES SHALL BE LAP SPLICED AND WIRED TOGETHER IN CONTACT. SPLICE LENGTHS SHALL CONFORM TO THE LATEST ACI CRITERIA FOR SIZE AND TYPE OF REINFORCEMENT STEEL AND CONCRETE COMPRESSIVE STRENGTHS SPECIFIED. UNLESS NOTED OTHERWISE, MINIMUM LAP SHALL BE 40 BAR DIAMETERS.

RS.09 ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS AT SIDE AND END LAPS AND TIED SECURELY. PROVIDE ADDITIONAL REINFORCEMENT WHERE SHOWN ON THE DRAWINGS. PLACE MESH 1" FROM THE TOP OF SLABS. NO ELECTRICAL CONDUIT SHALL BE PLACED ABOVE WELDED WIRE FABRIC SLABS.

RS.10 NO REINFORCEMENT STEEL SHALL BE WELDED IN ANYWAY UNLESS PRIOR WRITTEN APPROVAL IS GIVEN BY THE ARCHITECT.

RS.11 CORNER BARS SHALL BE PROVIDED AT WALL CORNERS EQUAL TO THE HORIZONTAL WALL REINFORCEMENT.

RS.12 ALL CONCRETE FORMED SLAB OR WALL OPENINGS SHALL BE REINFORCED WITH 2-#5 BARS PLACED ONE IN EACH FACE AT 45 DEGREES TO OPENING CORNERS.

RS.13 UNLESS NOTED OTHERWISE, ALL CONCRETE WORK SHALL CONTAIN AT LEAST MINIMUM REINFORCEMENT AS REQUIRED BY ACI 318.

RS.14 PROVIDE EPOXY COATED REINFORCEMENT AT ALL EXTERIOR CONCRETE INCLUDING WALLS.

RS.15 AT ALL SLEEVES OPENINGS IN CONCRETE WALLS, PROVIDE ADD'L HORIZONTAL AND VERTICAL REINFORCEMENT ON EACH SIDE OF THE OPENING EQUAL TO THE WALL REINFORCEMENT. FOR SLEEVE OPENING SMALLER THAN 10", PLACE A MINIMUM 2 #3 DIAGONAL BARS ON ALL (4) SIDES OF OPENING. FOR SLEEVE OPENING LARGER THAN 10", PLACE A MINIMUM 2 #4 DIAGONAL BARS ON ALL (4) SIDES OF OPENING. ALL VERTICAL AND HORIZONTAL ADD'L REINFORCEMENT SHALL EXTEND A MINIMUM 2'-0" BEYOND EDGE OF OPENING AND DIAGONALS SHALL EXTEND A MINIMUM 1'-0" BEYOND EDGE OF OPENING. SLEEVE MATERIAL SHALL MEET OR EXCEED THE FOLLOWING:

A. SLEEVE DIA OF 4" OR LESS - NO RESTRICTION, EXCEPT THE MATERIAL MUST BE COMPATIBLE WITH CONCRETE.
B. SLEEVE DIA. MORE THAN 4" BUT LESS THAN 10" - STANDARD PIPE CONFORMING ASTM A53.
C. SLEEVE DIA 10" OR GREATER - STEEL PIPE WITH 3/8" MIN WALL THICKNESS CONFORMING TO ASTM A53 OR A283 GRADE C.

ALL SLEEVES OR OPENINGS THRU WALL SHALL BE COORDINATED BY CONTRACTOR AND SHALL BE APPROVED BY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

STRUCTURAL STEEL

SS.01 ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS- ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," LATEST EDITIONS

SS.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIAL (ESPECIALLY WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO CONCRETE WALLS, BEAMS, OR COLUMNS) AND TEMPORARY STRUCTURAL STABILITY.

SS.03 ERECT AND MAINTAIN TEMPORARY BRACING TO INSURE THE ALIGNMENT AND STABILITY OF THE STRUCTURE DURING ERECTION UNTIL PERMANENT CONNECTIONS HAVE BEEN COMPLETED.

SS.04 REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL STRUCTURAL AND MISCELLANEOUS STEEL REQUIREMENTS. ALL EXTERIOR EDGE ANGLES, LINTELS, AND SHELF ANGLES SHALL BE GALVANIZED AFTER FABRICATION.

SS.05 THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ARCHITECT, FOR INFORMATION ONLY, CONNECTION CALCULATIONS AND, FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS, AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL.

SS.06 THE CONTRACTOR'S STEEL TESTING LABORATORY SHALL PERFORM ALL TESTING OF WELDED AND BOLTED CONNECTIONS IN ACCORDANCE WITH ALL AISC AND AWS REQUIREMENTS AND THE INTERNATIONAL BUILDING CODE. WRITTEN REPORTS, SIGNED AND SEALED BY THE INSPECTING DESIGN PROFESSIONAL AND INCLUDING THE LICENSE EXPIRATION DATE, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. SEE ALSO THE PROJECT SPECIFICATIONS.

SS.07 ALL STRUCTURAL MEMBERS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

WIDE FLANGE SECTIONS	ASTM A 992 (Fy= 50KSI)
OTHER SHAPES & PLATES	ASTM A 36 (Fy= 36 KSI)
STEEL TUBES	ASTM A 500, GRADE B (Fy= 46 KSI)
STEEL PIPES	ASTM A 53 TYPE E, GRADE B (Fy= 35 KSI)

SS.08 STEEL SHALL BE CLEAN OF RUST, LOOSE MILL SCALE, AND OTHER FOREIGN MATERIALS FOR PROPER FABRICATION, FIT-UP, AND WELDING.

SS.09 ALL BOLTED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR ASTM A 490 BOLTS."

SS.10 ALL BOLTS SHALL CONFORM TO THE LATEST EDITION OF ASTM A 325. BOLTS SHALL BE 3/4" DIAMETER MINIMUM. AT CONNECTIONS WITH LONG-SLOTTED HOLES IN OUTER PLYS, 5/16" PLATE WASHERS SUFFICIENT IN SIZE TO COMPLETELY COVER THE SLOT SHALL BE PROVIDED.

SS.11 ALL NUTS SHALL CONFORM TO THE LATEST EDITION OF ASTM A 563.

SS.12 ALL WASHERS SHALL CONFORM TO THE LATEST EDITION OF ASTM F 436.

SS.13 WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO THE AWS D1.1 "STRUCTURE WELDING CODE," LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX.

SS.14 FIELD CONNECTIONS, EXCEPT WHERE SHOWN TO BE WELDED, SHALL BE BOLTED. SHOP CONNECTIONS MAY BE WELDED UNLESS NOTED OTHERWISE. MINIMUM WELDS NOT SHOWN ON THE DRAWINGS SHALL BE 1/4" FILLET WELDS.

SS.15 UNLESS NOTED OTHERWISE, ALL SIMPLE BEAM SHEAR CONNECTIONS SHALL BE WELDED OR BEARING TYPE N BOLTED DOUBLE ANGLE FRAMED CONNECTIONS SIZE TO SUPPORT 60% (FOR NON-COMPOSITE BEAMS) OR 75% (FOR COMPOSITE BEAMS) OF THE TOTAL CAPACITY GIVEN IN THE AISC ALLOWABLE UNIFORM LOAD TABLES. BEAM END REACTIONS NOTED THUS 100K SHALL BE DESIGNED FOR THE LOAD SO INDICATED. IN NO CASE SHALL ANY CONNECTION BE LESS THAN ONE-HALF THE DEPTH OF THE SUPPORTED BEAM, AND THE QUANTITY OF VERTICAL ROWS OF BOLTS SHALL NOT BE LESS THAN:

W8:	2 ROWS	W21:	6 ROWS
W10:	2 ROWS	W24:	6 ROWS
W12:	3 ROWS	W27:	7 ROWS
W14:	3 ROWS	W30:	8 ROWS
W16:	4 ROWS	W33:	9 ROWS
W18:	5 ROWS	W36:	10 ROWS

SEE SPECIFICATION FOR CONNECTION DESIGN RESPONSIBILITIES

SS.17 BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP.

SS.18 ALL STRUCTURAL STEEL EXPOSED TO VIEW SHALL CONFORM TO THE ARCHITECTURAL EXPOSED STRUCTURAL STEEL (AESS) CRITERIA OF THE "AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

SS.19 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT.

SS.20 PRIME PAINT ALL STEEL EXCEPT THOSE THAT ARE TO RECEIVE SPRAY-ON FIREPROOFING OR ARE TO BE ENCASED IN CONCRETE.

SS.21 ALL ANCHOR RODS SHALL MEET ASTM F1554 GRADE 105KSI STEEL, UNO. ALLTHREADED ANCHOR RODS SHALL HAVE 3/8"X4"DIA. PLATES AT EMBEDMENT DEPTH. AMERICAN MADE STEEL ONLY

STEEL DECK

SD.01 ALL DESIGN, DETAILING, FABRICATION AND ERECTION OF DECK UNITS SHALL. CONFORM TO THE LATEST EDITIONS OF THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR STEEL FLOOR DECK AND FOR STEEL ROOF DECK. DECK SECTION PROPERTIES SHALL. BE COMPUTED IN ACCORDANCE WITH AISI "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" AND HAVE MINIMUM DECK PROPERTIES AS FOLLOWS:

TYPE	Ip	In	Sp	Sn
3.5" EPICORE ER3.5 A 205R(20 Ga)	1.72	1.54	0.68	0.76

SD.02 ROOF DECK SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A1008 WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI. COMPOSITE AND NON-COMPOSITE FLOOR DECK SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A653, STRUCTURAL QUALITY GRADE 33.

SD.03 ROOF DECK SHALL BE SHOP PAINTED WITH PHOSPHATE PAINT. COMPATIBLE WITH HIGH PERFORMANCE COATING SYSTEM.

SD.04 THE DEPTH AND GAGE OF ALL DECK TYPES SHALL BE AS INDICATED ON THE DRAWINGS.

SD.06 ROOF DECK SHALL BE WELDED AT EACH SUPPORT. PROVIDE SCREWED OR WELDED SIDE LAPS. SIDE LAP WELDS SHALL BE EITHER A 5/8" PUDDLE WELD OR A 1/16" X 1 1/2" ARC SEAM WELD. SCREWS SHALL BE TEK SCREWS. SCREWS SHALL BE TEK SCREWS. SCREWS SHALL BE LOCATED IN UPPER FLUTES ONLY TO BE CONCEALED FROM VIEW BELOW DECK.

SD.07 PRIOR TO THE START OF ERECTION, A WELDING PROCEDURE SHALL BE ESTABLISHED FOR THE PLUG WELDING OF THE STEEL DECKING TO THE STRUCTURAL STEEL FOR THE PARTICULAR GAGE OF DECK USED. ALL WELDERS SHALL BE AWS CERTIFIED USING THIS PROCEDURE.

SD.08 ALL ROOF DECK SHALL BE FORMED WITH TELESCOPED ENDS TO LAP ENDS OF SHEETS A MINIMUM OF 2".

SD.09 PROVIDE CONTINUOUS RIDGE AND VALLEY PLATES, COLUMN CLOSURES, CANT STRIPS, SUMP PLATES AT PIPING PENETRATIONS AND RECESSED SUMP PANS AT ALL ROOF DRAINS AND ROOF VENTS, AS REQUIRED. PROVIDE SUPPLEMENTAL FRAMING AT OPENINGS AS SHOWN FOR THE SUPPORT OF THE METAL DECK. ALL OPENINGS SHALL BE COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.

SD.10 STEEL DECKING SHOULD BE STORED OFF THE GROUND WITH ONE END ELEVATED TO PROVIDE DRAINAGE AND SHOULD BE PROTECTED FROM THE ELEMENTS WITH A WATERPROOF COVERING VENTILATED TO AVOID CONDENSATION.

SD.11 STEEL DECKS SHALL BE WELDED AND FASTENED AT THE FOLLOWING PATTERNS:

TYPE	FASTENER LAYOUT	# OF SIDELAP FASTENERS	MIN SHEAR CAPACITY
3.5" EPICORE ER3.5A	24/6	2" WELDED @ 36"O.C.	230 PLF

SD.12 SCREWS SHALL BE TEK SCREWS. SCREWS SHALL BE LOCATED IN UPPER FLUTES ONLY TO BE CONCEALED FROM VIEW BELOW DECK.

POST-INSTALLED ANCHORS

PA-1 ADHESIVE ANCHOR SYSTEMS USED FOR DESIGN:

ADHESIVE (CONCRETE):	HILTI	HIT-HY 200, OR APPROVED EQUIVALENT
ADHESIVE (MASONRY):	HILTI	HIT-HY 270, OR APPROVED EQUIVALENT
THREADED ROD:	HILTI	HAS-E THREADED ROD, OR APPROVED EQUIVALENT

OVERHEAD AND/OR CONSTANT TENSION ADHESIVE ANCHOR INSTALLATIONS NOT SHOWN ON THE DRAWINGS SHALL NOT BE PERMITTED UNLESS EACH CONDITION IS REVIEWED AND APPROVED IN WRITING BY THE SER.

PA-2 PROOF TESTING OF ADHESIVE ANCHORS SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. UNLESS NOTED OTHERWISE, ADHESIVE ANCHOR PROOF TENSION LOADS SHALL BE PER THE ADHESIVE ANCHOR PROOF TENSION SCHEDULES.

PA-3 FIELD DRILLED EXPANSION ANCHOR SYSTEMS USED FOR DESIGN. KWIK BOLT 3, OR APPROVED EQUIVALENT.

PA-4 PROOF TESTING OF EXPANSION ANCHORS SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. UNLESS NOTED OTHERWISE, EXPANSION ANCHOR PROOF TORQUE LOADS SHALL BE PER THE EXPANSION ANCHOR PROOF TORQUE SCHEDULES.

PA-5 FIELD DRILLED THREADED SCREW ANCHOR SYSTEMS USED FOR DESIGN: HUS-EZ, OR APPROVED EQUIVALENT

PA-6 ALTERNATIVE SYSTEM EQUIVALENT TO OR EXCEEDING THE PROPERTIES OF THE SYSTEMS ABOVE WILL BE CONSIDERED AS A SUBSTITUTION REQUEST. SEE PROJECT SPECIFICATIONS.

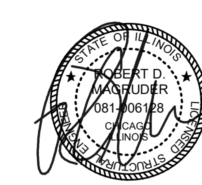
PA-7 ANCHORS ARE TO BE MINIMUM 3/4' DIAMETER WITH A MINIMUM EMBEDMENT OF 6", UON.

PA-8 INSTALL ANCHORS TO MEET THE REQUIREMENTS INDICATED IN THE CONTRACT DOCUMENTS AND THE CURRENT MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII).

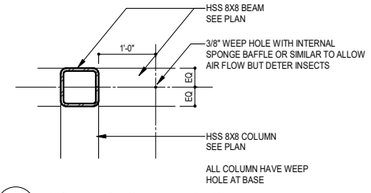
PA-9 LOCATE, BY NON-DESTRUCTIVE MEANS AND AVOID ALL EXISTING REINFORCEMENT PRIOR TO INSTALLATION OF ANCHORS. IF EXISTING REINFORCING PROHIBITS THE INSTALLATION OF ANCHORS AS INDICATED IN THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN PROFESSIONALS.

PA-10 INSTALL MASONRY ANCHORS IN SOLID MASONRY OR IN HOLLOW MASONRY THAT HAS BEEN GROUTED SOLID AT LEAST ONE COURSE ABOVE ANCHOR ONE COURSE BELOW THE ANCHOR, UON.

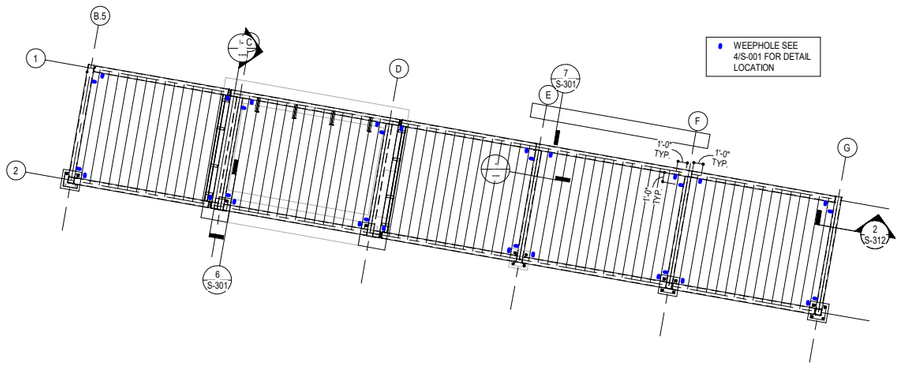
PA-11 SEE PROJECT SPECIFICATIONS FOR POST-INSTALLED ANCHOR INSPECTION REQUIREMENTS.



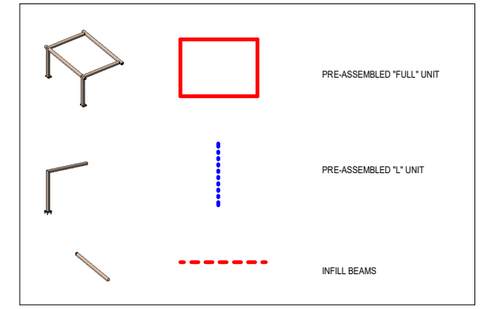
EXP 11/30/2020

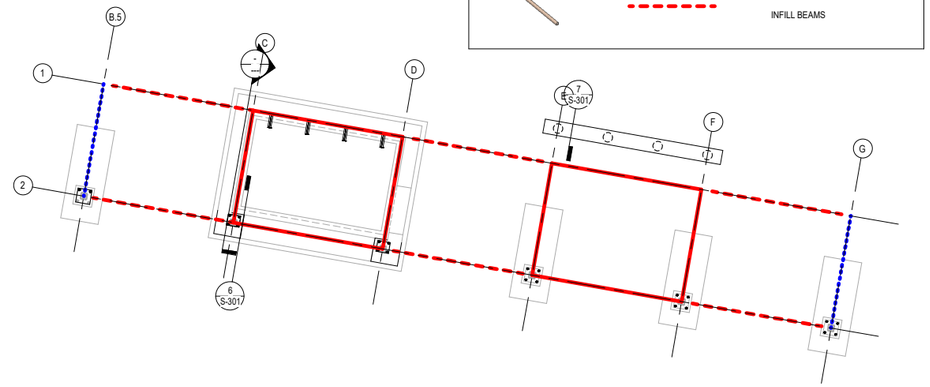


4 TYP. WEEP HOLE ELEVATION
3/4" = 1'-0"

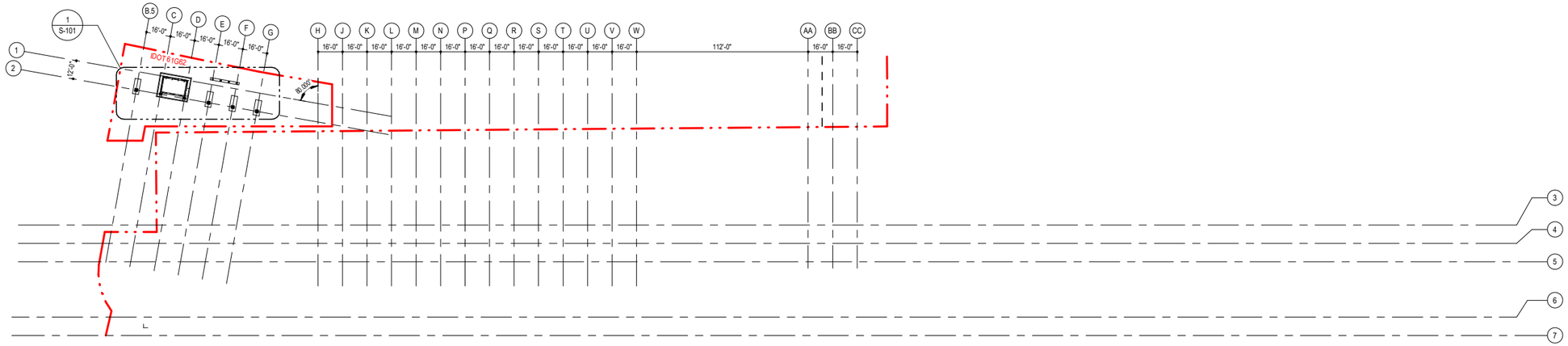


3 WEEP HOLE LOCATION PLAN
1/8" = 1'-0"





2 STREETSCAPE UNIT DIAGRAM
1/8" = 1'-0"



1 STREETSCAPE OVERALL FRAMING PLAN
1" = 40'-0"

GENERAL NOTE

LIMITED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) PROVISIONS
- NO SHOP STAMPS
- GRIND WELD: ONLY AT SELECTED LOCATIONS NOTED THUS (**)

THERMAL BREAK CONNECTION
- INSTALL THERMAL BREAK CONNECTION PAD WHERE STEEL BEAM PENETRATE TO ENLOSED CONDITIONED SPACE.

STATE OF ILLINOIS
ROBERT D.
MASTUDER
081.006128
CHICAGO
ILLINOIS
PROFESSIONAL ENGINEER

EXP 11/30/2020

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	RDM	REVISED
		DRAWN BY	SU	REVISED
PLOT SCALE	As indicated	CHECKED BY	RDM	REVISED
PLOT DATE	5.15.2020	DATE OF ISSUE	5.15.2020	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION

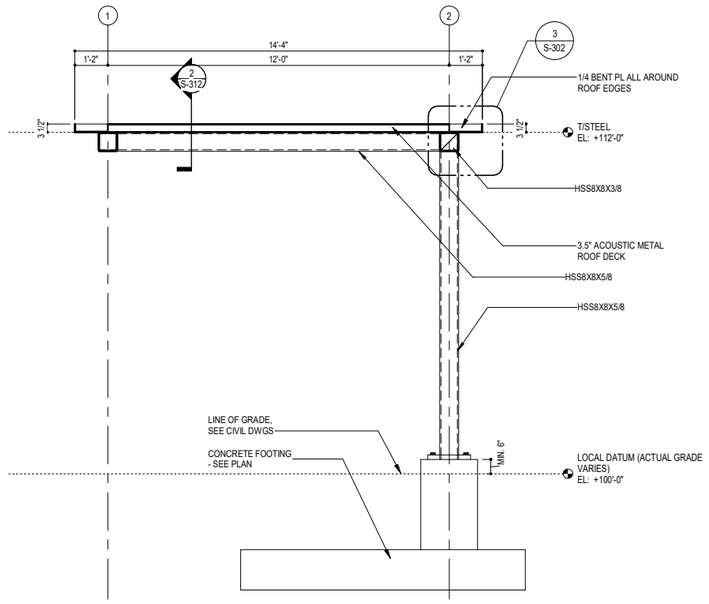
SCALE: As indicated | SHEET | OF

BUILDING

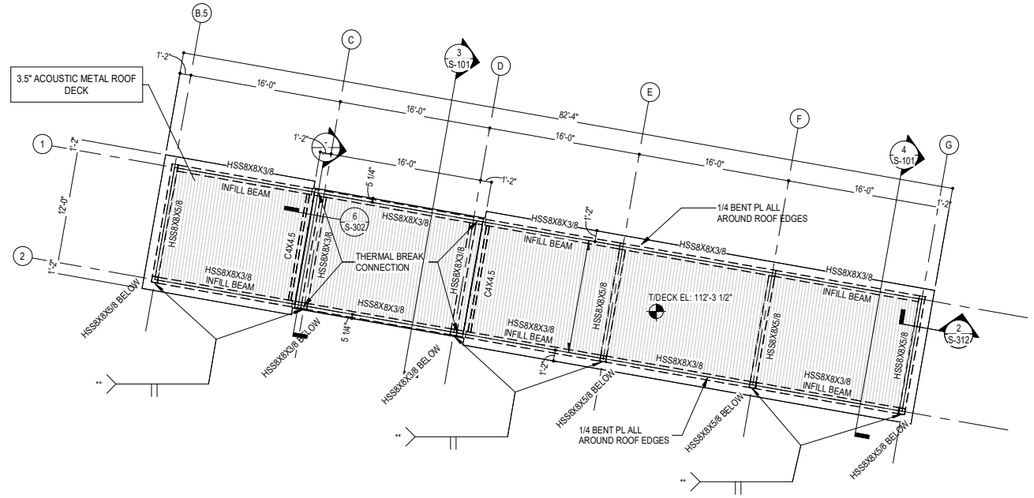
S-001 OVERALL PLAN, DIAGRAM, & WEEP HOLE PLAN

STA. TO STA.

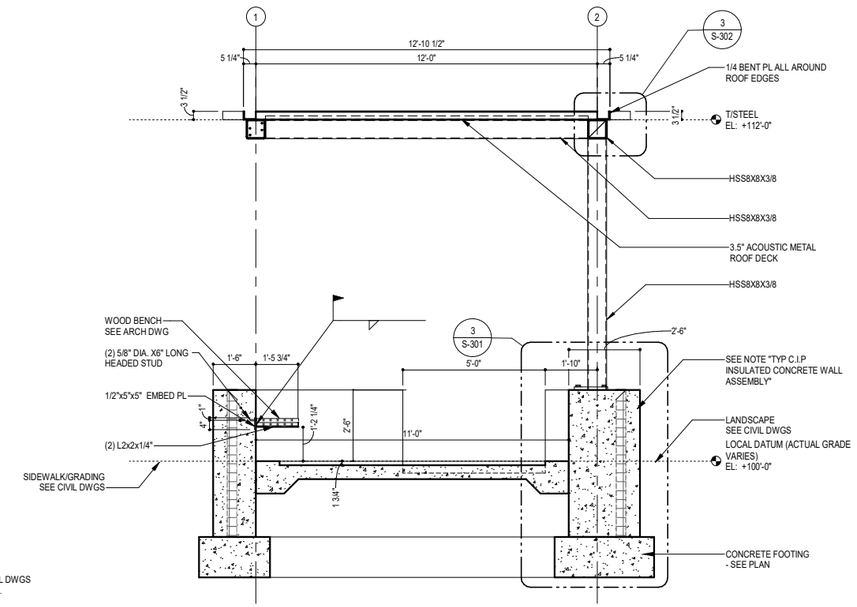
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	39
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



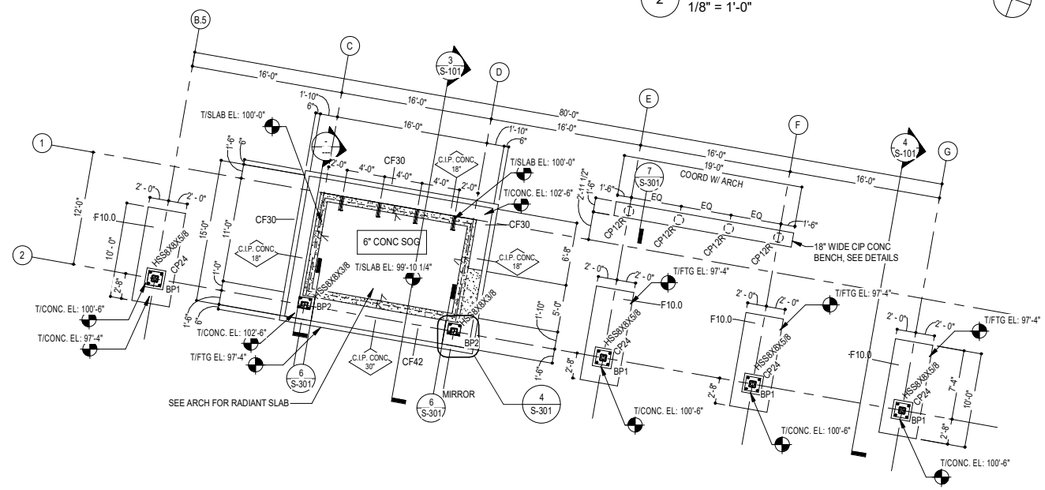
4 OUTBOUND SHELTER WALL SECTION.
3/8" = 1'-0"



2 OUTBOUND SHELTER ROOF FRAMING PLAN
1/8" = 1'-0"



3 OUTBOUND SHELTER WALL SECTION
3/8" = 1'-0"



1 OUTBOUND SHELTER FOUNDATION PLAN
1/8" = 1'-0"

PLAN NOTES

1. ELEVATIONS INDICATED ARE RELATIVE TO LOCAL DATUM 100'-0" = 725.76' SEE CIVIL DWGS
2. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS AND INFORMATION.
3. TYPICAL SOG: PROVIDE 6"SOG REINF WITH WWF 6x6 W1.4/W1.4
4. ALL 3.5" ACOUSTIC ROOF DECK IS 3.5" EPICORE ER3.5 A 20SR (20GA), OR APPROVED EQUIV.
5. GRIND WELD: ONLY AT SELECTED LOCATIONS NOTED THUS (**)

TYP C.I.P INSULATED CONCRETE WALL ASSEMBLY
- 6" CONCRETE RANDAM BOARD FORMED SURFACE
- 4" RIGID INSULATION W/ FIBER COMPOSITE CONNECTOR
- 8" OR AS NEEDED AT COLUMN
- PROVIDE #4 U-BARS @ 12" AT ALL EXPOSED END RETURNS AT OPENING HEAD, JAMB.

STATE OF ILLINOIS
ROBERT D. HASBUDER
081.006128
CHICAGO, ILLINOIS
PROFESSIONAL ENGINEER
EXP 11/30/2020

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	RDM	REVISED
		DRAWN BY	SU	REVISED
PLOT SCALE	As indicated	CHECKED BY	RDM	REVISED
PLOT DATE	5.15.2020	DATE OF ISSUE	5.15.2020	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET OF

BUILDING
S-101 SHELTER CANOPY
STA. TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	40
		CONTRACT NO.	61G62	
		ILLINOIS	FED. AID PROJECT	

CONCRETE PIER SCHEDULE

MARK	WIDTH/ DIAMETER	LENGTH	REINFORCEMENT	
			VERTICAL	TIES
CP12R	1'-0" DIA	--	4 #6	TOP 12" #3@3"OC REMAINING 3@12"OC
CP24	2'-0"	2'-0"	12 #6	TOP 12" #3@3"OC REMAINING 3@12"OC

SPREAD FOOTING SCHEDULE

FOOTING MARK	FOOTING SIZE			REINFORCING		NOTES
	WIDTH	LENGTH	DEPTH	LONG BARS	SHORT BARS	
F10.0	4'-0"	10'-0"	17"	(7) # 6 T&B	(12) # 5	

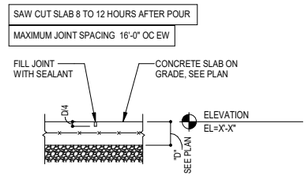
FOOTING SCHEDULE NOTES

1. FOOTINGS DESIGNED FOR NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF TO BE VERIFIED BY GEOTECHNIC CONSULTANT. PROVIDE IN-SITU COMPACTION TESTS AT BOTTOM OF ALL NEW FOOTING TO VERIFY THIS VALUE PRIOR TO FOOTING

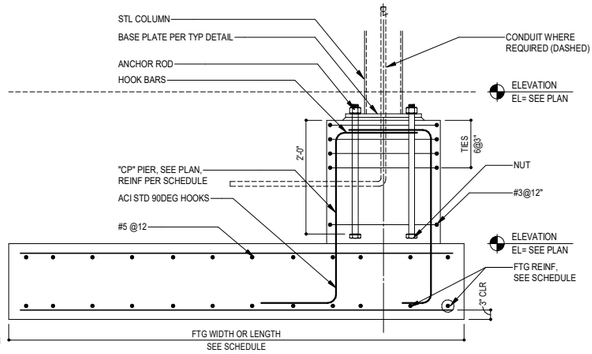
CONT WALL FOOTING SCHEDULE

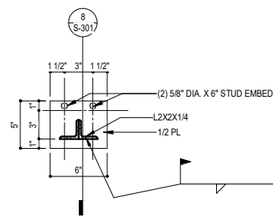
MARK	FTG WIDTH	FTG DEPTH	BOTTOM BARS		NOTES
			LONG	TRANSVERSE	
CF30	2'-6"	1'-0"	3 #5	#5 @18	-
CF42	3'-6"	1'-2"	5 #5	#5 @18	-

NOTE: FOOTINGS ARE DESIGNED FOR NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF TO BE VERIFIED BY GEOTECHNIC CONSULTANT. PROVIDE IN-SITU COMPACTION TESTS AT BOTTOM OF ALL NEW FOOTING TO VERIFY THIS VALUE PRIOR TO FOOTING.

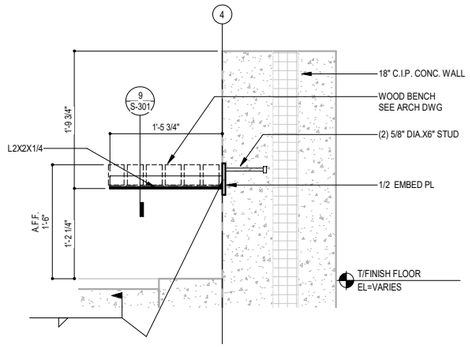


5 TYP SLAB CONTROL JOINT
1/2" = 1'-0"

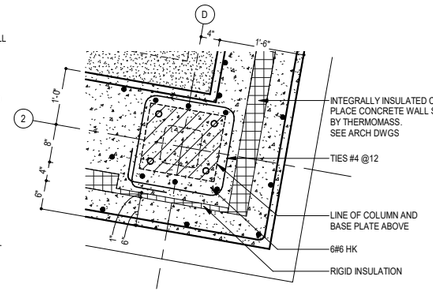




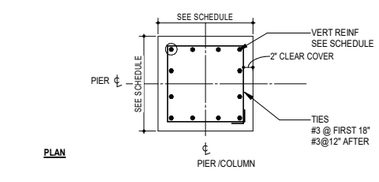
9 TYP WD BENCH SUPPORT ANGLE
1 1/2" = 1'-0"



8 TYP WD BENCH SECTION
1" = 1'-0"

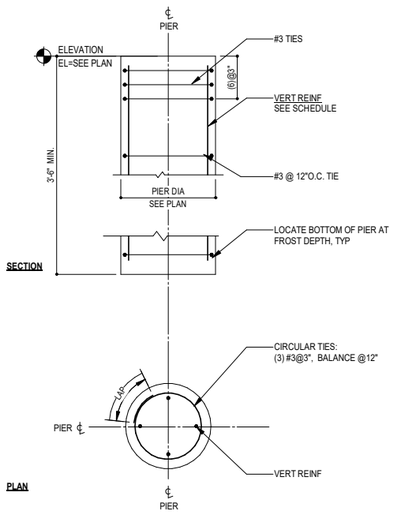


4 C.I.P. FOUNDATION PLAN DETAIL CORNER
3/4" = 1'-0"

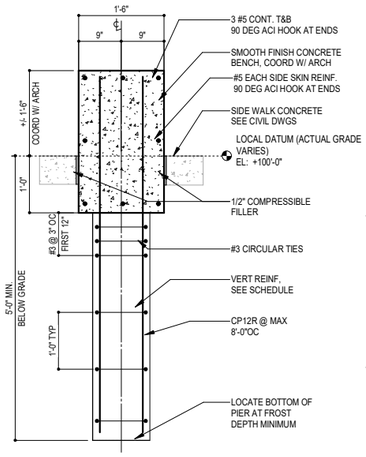


PLAN

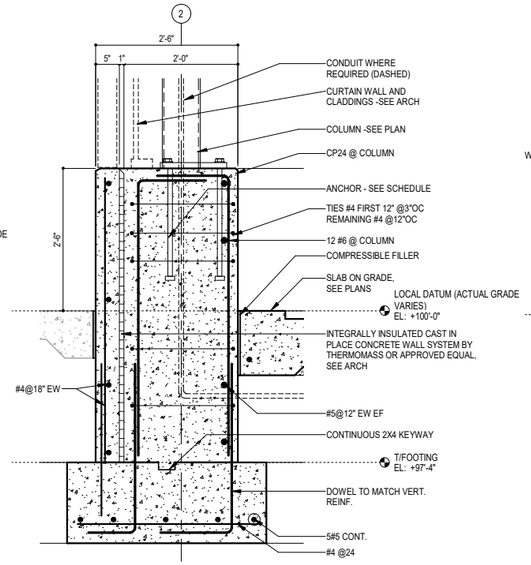
2 24X24 PIER PLAN AND SECTION
3/4" = 1'-0"



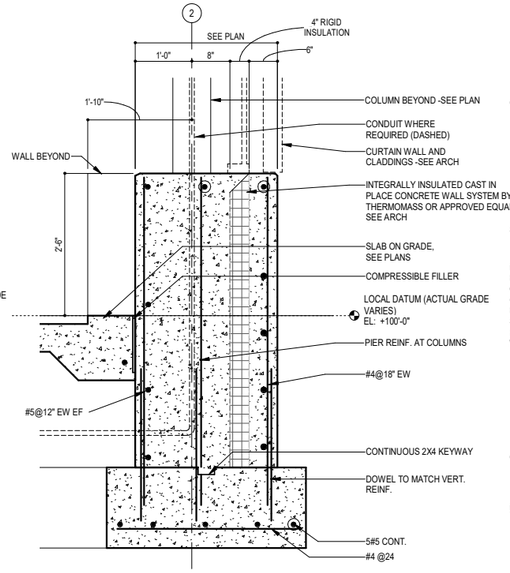
10 TYP CIRCULAR PIER CONC
3/4" = 1'-0"



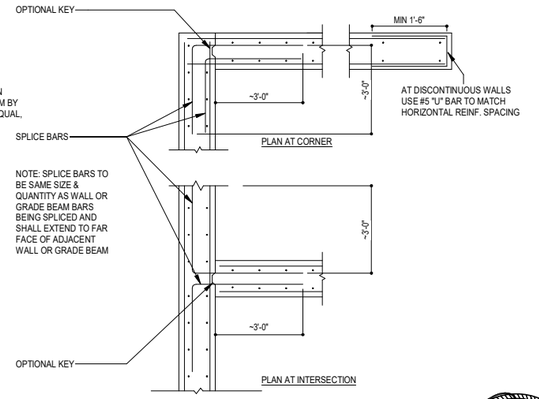
7 STREETSCAPE BENCH SECTION TYP TS
3/4" = 1'-0"



6 C.I.P. FOUNDATION DETAIL @ COLUMN TYP
3/4" = 1'-0"

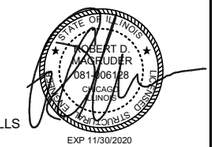


3 C.I.P. FOUNDATION DETAIL
3/4" = 1'-0"



NOTE: SPLICE BARS TO BE SAME SIZE & QUANTITY AS WALL BEING SPLICED AND SHALL EXTEND TO FAR FACE OF ADJACENT WALL

1 TYP CORNER BARS @ FND & FROST WALLS
3/4" = 1'-0"



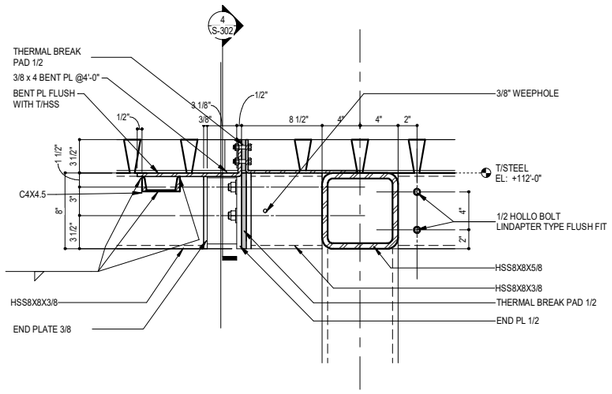
LEGAT ARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY RDM	REVISED	
			DRAWN BY SU	REVISED	
	PLOT SCALE	As indicated	CHECKED BY RDM	REVISED	
	PLOT DATE	5.15.2020	DATE OF ISSUE 5.15.2020	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

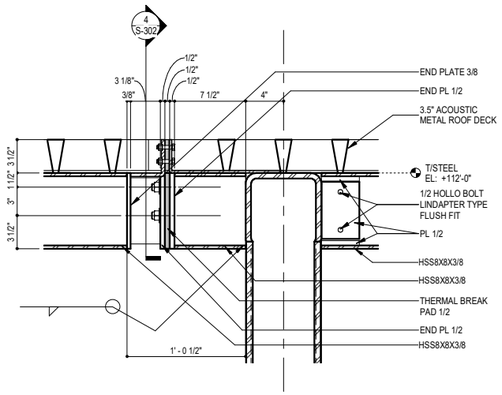
CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET OF

BUILDING
S-301 CONCRETE DETAILS
STA. TO STA.

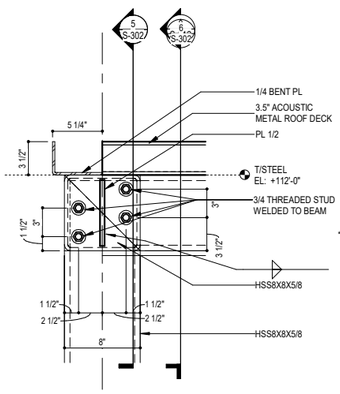
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	41
		CONTRACT NO.	61G62	
		ILLINOIS	FED. AID PROJECT	



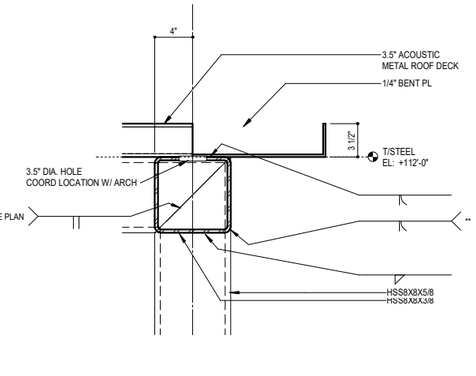
6 THERMAL BREAK ELEVATION
1 1/2" = 1'-0"



5 THERMAL BREAK DETAIL
1 1/2" = 1'-0"

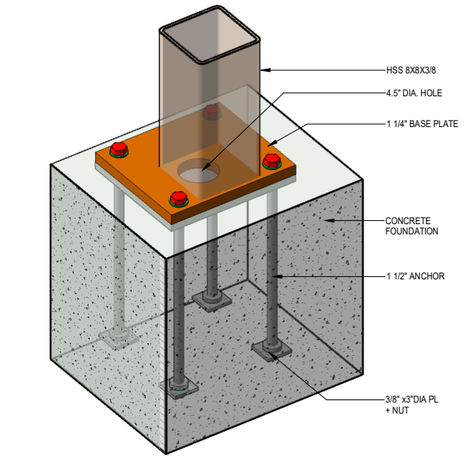


4 THERMAL BREAK CONNECTION DETAIL
1 1/2" = 1'-0"

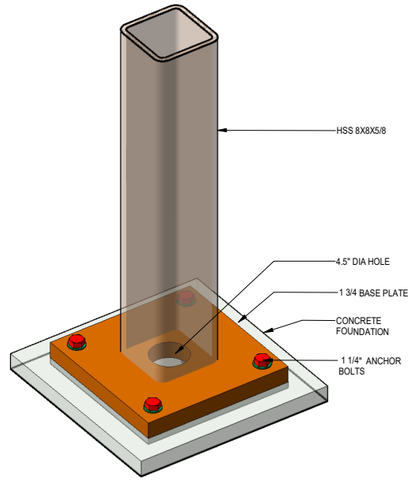


3 ROOF DETAIL @ CANOPY EDGE SS TYP
1 1/2" = 1'-0"

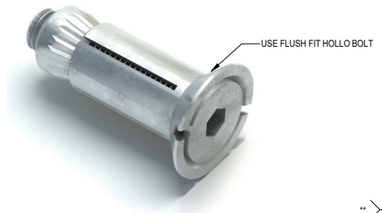
BASE PLATE SCHEDULE			
MARK	PLATE SIZE (THK x L x W)	ANCHOR BOLTS	COMMENTS
BP1	1 3/4" x 18"x18"	(4) 1 1/4" ANCHORS W/24" EMBED	W/3/8" X3" DIA. WASHER
BP2	1 1/4" x 16"x16"	(4) 1 1/2" ANCHORS W/24" EMBED	W/3/8" X3" DIA. WASHER



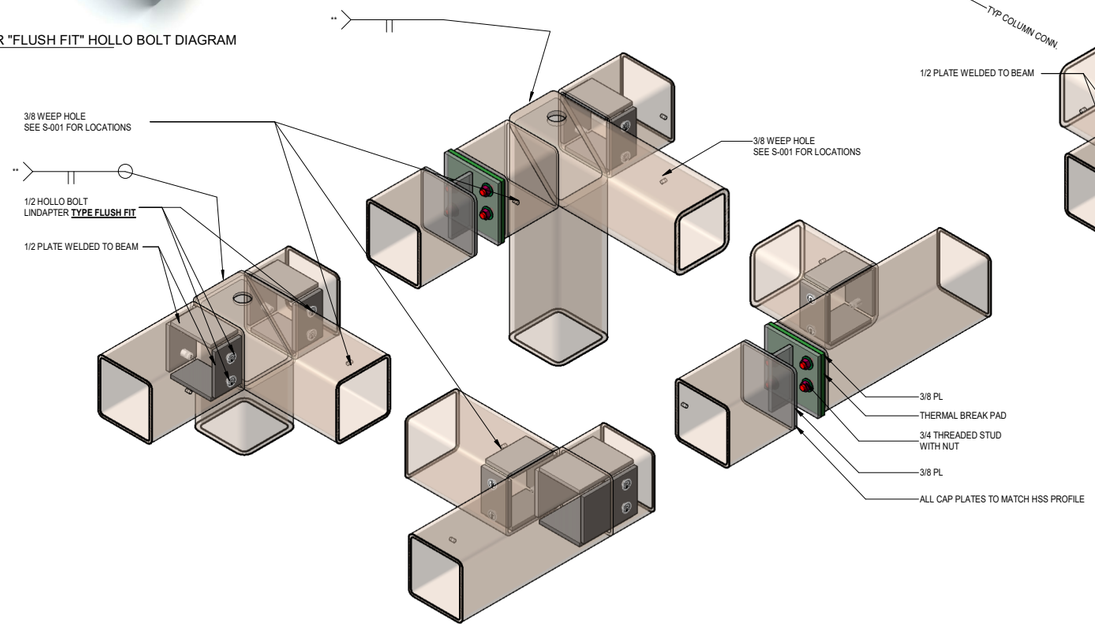
8 ROOF DETAIL @ CANOPY EDGE E-W TYP
1 1/2" = 1'-0"

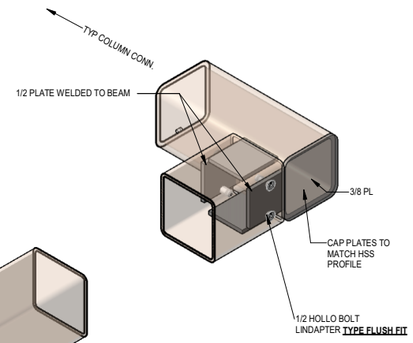


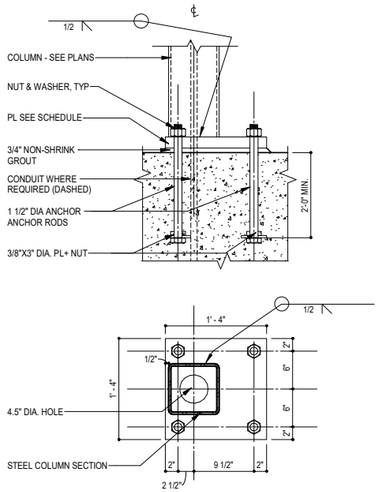
SEE MANUFACTURER FOR INSTALLATION INFORMATION



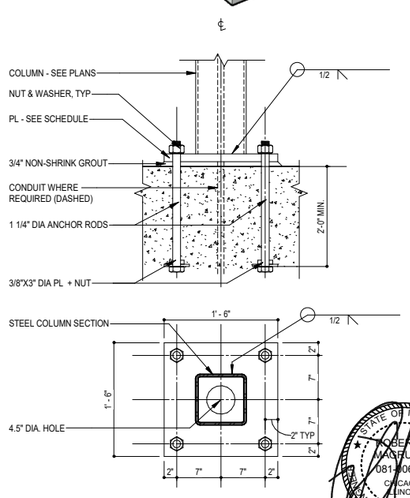
7 LINDAPTER "FLUSH FIT" HOLLO BOLT DIAGRAM
3/4" = 1'-0"







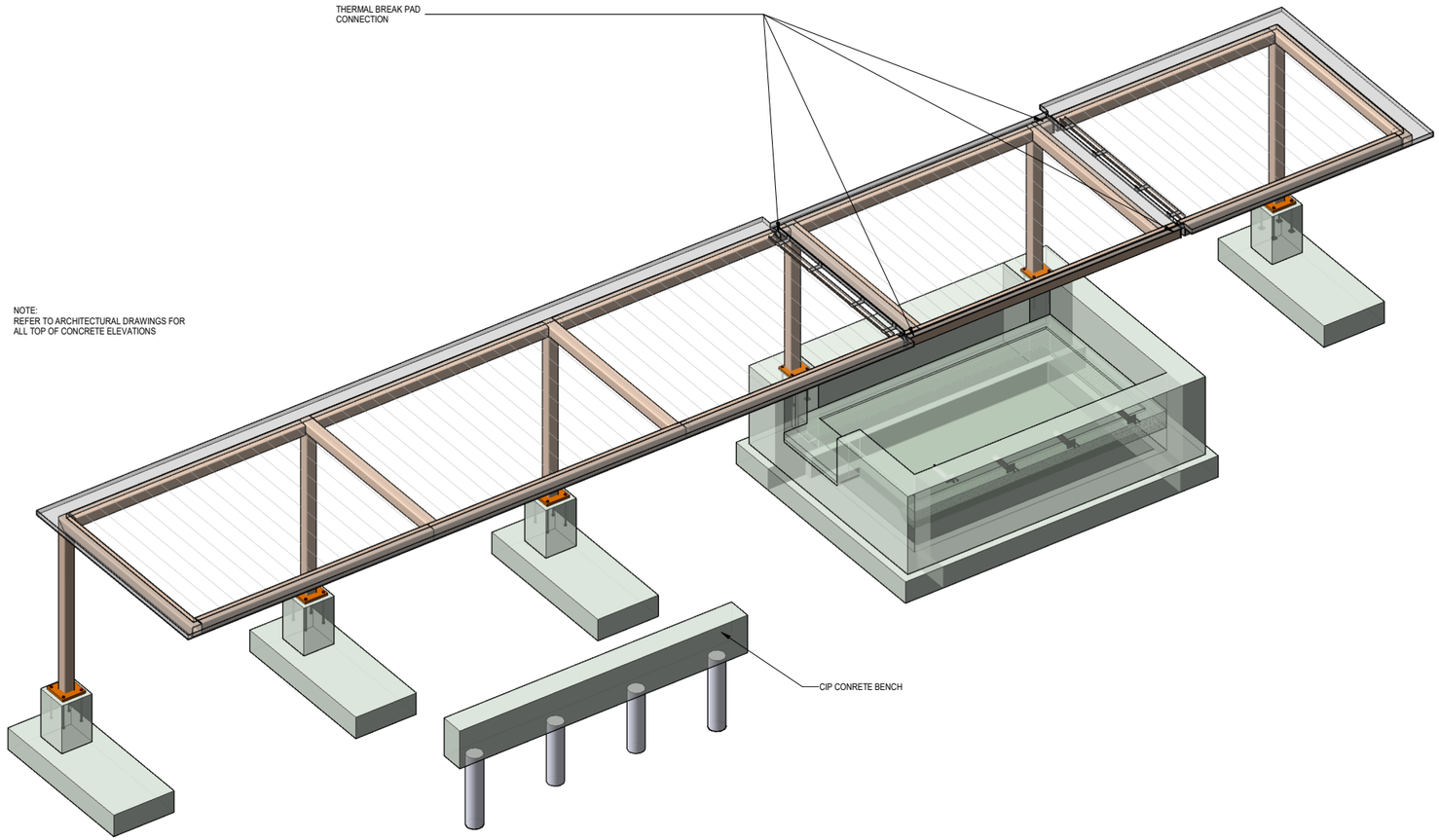
2 TYP BASE PLATE DETAIL BP2
1" = 1'-0"



1 TYP BASE PLATE DETAIL BP1
1" = 1'-0"

EXP 11/30/2020

LEGAT ARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	RDM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLARENDON HILLS DOWNTOWN REVITILIZATION	BUILDING S-302 STEEL DETAILS	MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			DRAWN BY	SU	REVISED				1003	16-00045-01-MS	DUPAGE	79	42
	PLOT SCALE	As indicated	CHECKED BY	RDM	REVISED		SCALE: As indicated SHEET OF	STA. TO STA.			CONTRACT NO.	61G62	
	PLOT DATE	5.15.2020	DATE OF ISSUE	5.15.2020	REVISED					ILLINOIS	FED. AID PROJECT		



NOTE:
REFER TO ARCHITECTURAL DRAWINGS FOR ALL TOP OF CONCRETE ELEVATIONS

1 OUTBOUND CANOPY

STATE OF ILLINOIS
ROBERT D. HAGEUDER
081-006128
CHICAGO, ILLINOIS
PROFESSIONAL ENGINEER
EXP 11/30/2020

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	RDM	REVISED	
		DRAWN BY	SU	REVISED	
PLOT SCALE		CHECKED BY	RDM	REVISED	
PLOT DATE	5.15.2020	DATE OF ISSUE	5.15.2020	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION

SCALE: SHEET OF

BUILDING
S-901 3D

STA. TO STA.

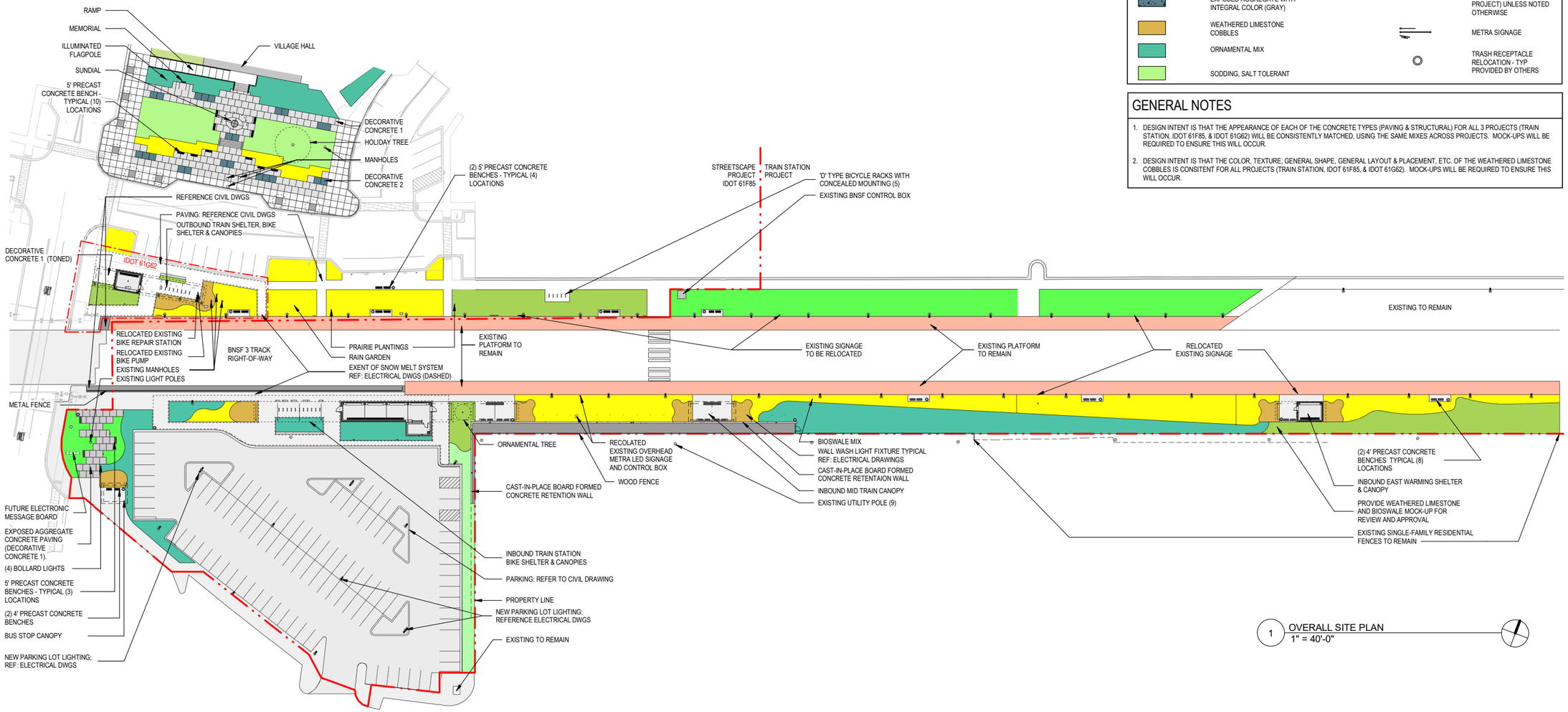
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	43
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

SITE LEGEND

- WETLAND MIX
- PRAIRIE MIX
- RIP RAP
- EXISTING PLATFORM TO REMAIN
- BASE BID - AREA TO REMAIN
  ALTERNATE BID - PRAIRIE PLANTINGS
- CONCRETE
- DECORATIVE CONCRETE 1
  EXPOSED AGGREGATE
- DECORATIVE CONCRETE 2
  EXPOSED AGGREGATE WITH
  INTEGRAL COLOR (GRAY)
- WEATHERED LIMESTONE
  COBBLES
- ORNAMENTAL MIX
- SODDING, SALT TOLERANT
- PROPERTY LINE
- OVERHEAD POWER LINE - EXISTING POLE TO REMAIN
- ORNAMENTAL TREE
- BICYCLE RACK
- LIGHT FIXTURE & POLE - PLATFORM LIGHTING BY OTHERS (TRAIN STATION PROJECT) UNLESS NOTED OTHERWISE
- ILLUMINATED BOLLARD PROVIDED BY OTHERS (TRAIN STATION PROJECT) UNLESS NOTED OTHERWISE
- METRA SIGNAGE
- TRASH RECEPTACLE RELOCATION - TYP PROVIDED BY OTHERS

GENERAL NOTES

1. DESIGN INTENT IS THAT THE APPEARANCE OF EACH OF THE CONCRETE TYPES (PAVING & STRUCTURAL) FOR ALL 3 PROJECTS (TRAIN STATION, IDOT 61F85, & IDOT 61G62) WILL BE CONSISTENTLY MATCHED, USING THE SAME MIXES ACROSS PROJECTS. MOCK-UPS WILL BE REQUIRED TO ENSURE THIS WILL OCCUR.
2. DESIGN INTENT IS THAT THE COLOR, TEXTURE, GENERAL SHAPE, GENERAL LAYOUT & PLACEMENT, ETC. OF THE WEATHERED LIMESTONE COBBLES IS CONSITENT FOR ALL PROJECTS (TRAIN STATION, IDOT 61F85, & IDOT 61G62). MOCK-UPS WILL BE REQUIRED TO ENSURE THIS WILL OCCUR.



1 OVERALL SITE PLAN
1" = 40'-0"

STATE OF ILLINOIS
ZACHERY R. WEES
001.021669
LICENSED ARCHITECT

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED	
		DRAWN BY	TZ	REVISED	
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED	
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION

SCALE: As indicated | SHEET | OF

BUILDING

AS001 OVERALL SITE PLAN

STA. | TO STA.

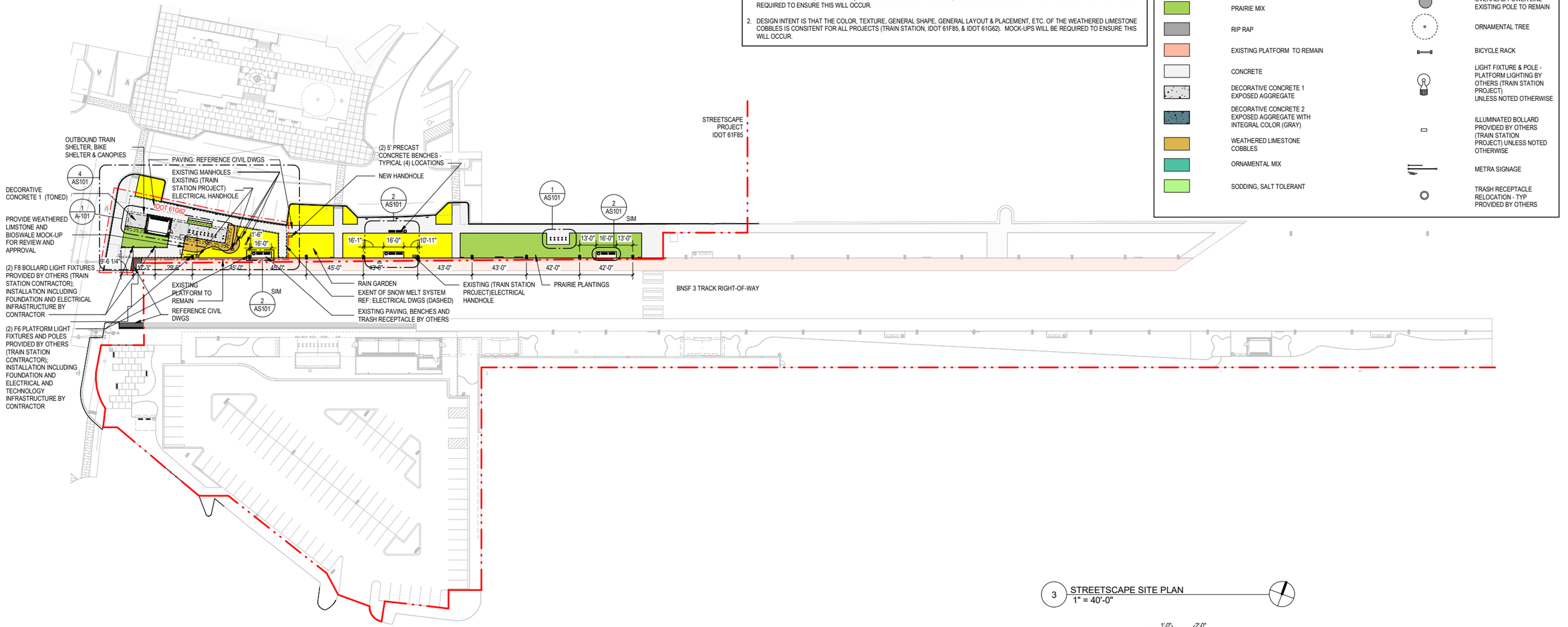
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	44
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

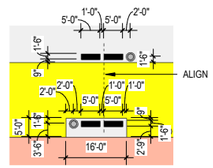
1. DESIGN INTENT IS THAT THE APPEARANCE OF EACH OF THE CONCRETE TYPES (PAVING & STRUCTURAL) FOR ALL 3 PROJECTS (TRAIN STATION, IDOT 61F85, & IDOT 61G62) WILL BE CONSISTENTLY MATCHED, USING THE SAME MIXES ACROSS PROJECTS. MOCK-UPS WILL BE REQUIRED TO ENSURE THIS WILL OCCUR.
2. DESIGN INTENT IS THAT THE COLOR, TEXTURE, GENERAL SHAPE, GENERAL LAYOUT & PLACEMENT, ETC. OF THE WEATHERED LIMESTONE COBBLES IS CONSITENT FOR ALL PROJECTS (TRAIN STATION, IDOT 61F85, & IDOT 61G62). MOCK-UPS WILL BE REQUIRED TO ENSURE THIS WILL OCCUR.

SITE LEGEND

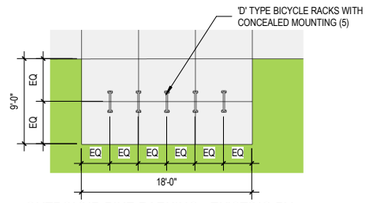
- WETLAND MIX
- PRAIRIE MIX
- RIP RAP
- EXISTING PLATFORM TO REMAIN
- CONCRETE
- DECORATIVE CONCRETE 1 EXPOSED AGGREGATE
- DECORATIVE CONCRETE 2 EXPOSED AGGREGATE WITH INTEGRAL COLOR (GRAY)
- WEATHERED LIMESTONE COBBLES
- ORNAMENTAL MIX
- SODDING, SALT TOLERANT
- PROPERTY LINE
- OVERHEAD POWER LINE - EXISTING POLE TO REMAIN
- ORNAMENTAL TREE
- BICYCLE RACK
- LIGHT FIXTURE & POLE - PLATFORM LIGHTING BY OTHERS (TRAIN STATION PROJECT) UNLESS NOTED OTHERWISE
- ILLUMINATED BOLLARD PROVIDED BY OTHERS (TRAIN STATION PROJECT) UNLESS NOTED OTHERWISE
- METRA SIGNAGE
- TRASH RECEPTACLE RELOCATION - TYP PROVIDED BY OTHERS



3 STREETSCAPE SITE PLAN
1" = 40'-0"



2 OUTBOUND RESTING PLACE FLOOR PLAN - TYPICAL - EXISTING BY OTHERS
1" = 20'-0" AS101



1 OUTBOUND BIKE PARKING - EXISTING BY OTHERS
1/8" = 1'-0" AS101

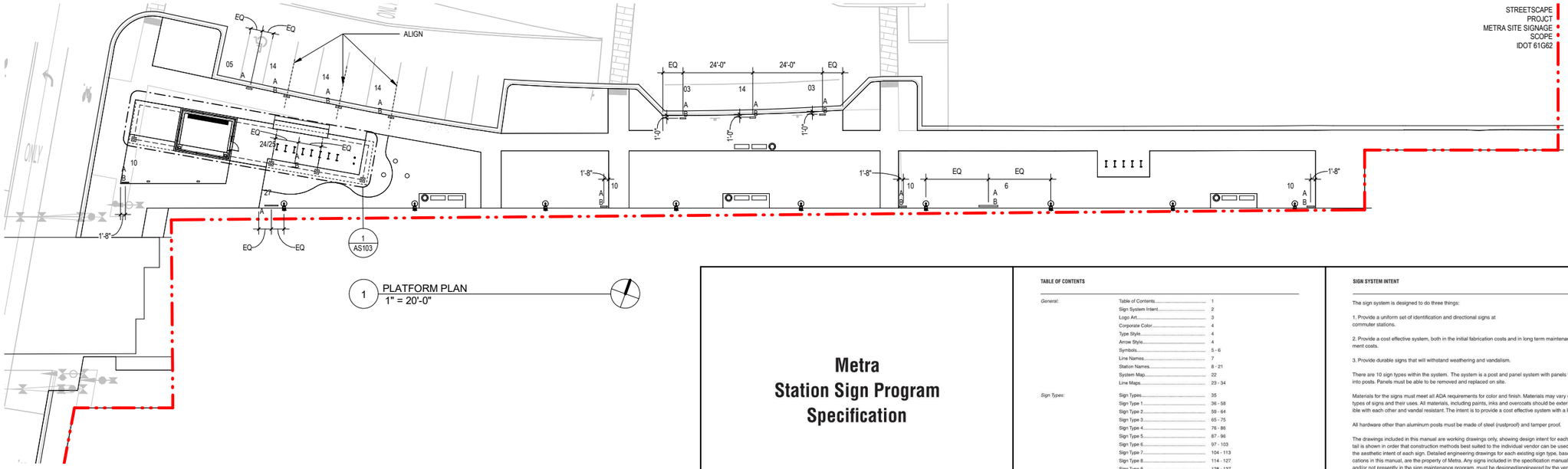
STATE OF ILLINOIS ZACHERY R. TZ 001.021669 LICENSED ARCHITECT

LEGAT ARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME	DESIGNED BY EM/TZ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN BY TZ	REVISED	
	PLOT SCALE As indicated	CHECKED BY EM	REVISED	
	PLOT DATE 05.15.20	DATE OF ISSUE 05.15.20	REVISED	

CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: As indicated SHEET OF

BUILDING
AS101 STREETSCAPE SITE PLAN
STA. TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	45
		CONTRACT NO. 61G62		
	ILLINOIS	FED. AID PROJECT		



1 PLATFORM PLAN
1" = 20'-0"

STREETSCAPE SIGN SCHEDULE									
KEY	SIGN TYPE	SIDE A	SIDE B (IF APPLICABLE)	SIGN SIZE	QUANTITY	# OF SIDES	MOUNTING TYPE	MOUNTING HEIGHT	REMARK
3	7.5	NO PARKING	NO PARKING	18" H X 12" W	2	2	POST	METRA STANDARD ELEVATION FROM GRADE TO BOTTOM OF SIGN	SEE 4 - AS104 FOR DETAILS
5	P-7A	RESERVED PARKING $300 FINE		18" H X 12" W	1	1	POST	METRA STANDARD ELEVATION FROM GRADE TO BOTTOM OF SIGN	SEE 4 - AS104 FOR DETAILS
6	2A	CLARENDON HILLS PLATFORM 2 FROM CHICAGO	CLARENDON HILLS PLATFORM 2 FROM CHICAGO	12" H X 72" W	1	2	POST	72" FROM GRADE TO TOP OF SIGN	SEE 4 - AS104 FOR DETAILS
10	5.5	FROM CHICAGO	FROM CHICAGO	18" H X 24" W	4	2	PROJECT	96" FROM GRADE TO BOTTOM OF SIGN	SEE 3 - AS104 FOR DETAILS
14	7.3B	Kiss 'N Ride	Kiss 'N Ride	18" H X 12" W	4	2	POST	54" FROM GRADE TO BOTTOM OF SIGN	SEE 4 - AS104 FOR DETAILS
18	1Da	CLARENDON HILLS STATION		4.5"H X 9" W	1	1	FLUSH	60" FROM GRADE TO UNDERSIDE OF FIRST LINE OF COPY	GRADE 2 BRAILLE.
19	M-5	STATION HOURS 4:30 AM - 8:00 PM MON-FRI 8:00 AM - 8:00 PM SAT 12:00 PM - 8:00 PM SUN		4.5"H X 9" W	1	1	FLUSH	60" FROM GRADE TO UNDERSIDE OF FIRST LINE OF COPY	
20	8E	NO SMOKING INDOOR WITHIN IN 15FT OF ENTRANCE		7" H X 5" W	1	1	GLASS MOUNTED		
22	6.5	NO SMOKING		12" H X 9" W	1	1	FLUSH	60" FROM GRADE TO UNDERSIDE OF FIRST LINE OF COPY	
23	6.10	NO LOITERING		12" H X 9" W	1	1	FLUSH	60" FROM GRADE TO UNDERSIDE OF FIRST LINE OF COPY	
24	V1	THERE IS HELP CALL US. 1-800-273-8255 NATIONAL SUICIDE PREVENTION HOTLINE	THERE IS HELP CALL US. 1-800-273-8255 NATIONAL SUICIDE PREVENTION HOTLINE	18" H X 12	1	2	POST	54" FROM GRADE TO BOTTOM OF SIGN	SEE 4 - AS104 FOR DETAILS
25	V2	THERE IS HELP CALL US.		12" H X 18" W	1	1	POST	42" FROM GRADE TO BOTTOM OF SIGN	SEE 4 - AS104 FOR DETAILS
27	3B	LARGE INFORMATION DISPLAY BOARD		48"H X 51" W	1	1	FLUSH	84" FROM GRADE TO TOP OF SIGN	

GENERAL NOTES:

A. ALL ROADWAY SIGNS TO BE MUTCD COMPLIANT.
B. ALL RAILROAD RELATED, PASSENGER WAYFINDING, AND OTHER METRA-SPECIFIC SIGNS TO FOLLOW METRA SIGNAGE STANDARDS.
C. VILLAGE SIGNAGE RELATED TO BICYCLE PARKING TO FOLLOW METRA SIGNAGE STANDARDS.
D. ALL SIGNAGE GRAPHICS TO COMPLY WITH APPLICABLE ACCESSIBILITY STANDARDS.

Metra
Station Sign Program Specification

March 1st 2017

Metra — 547 W. Jackson Blvd. Chicago, Illinois 60661

TABLE OF CONTENTS

Metra — METRA SIGN PROGRAM 1

SIGN SYSTEM INTENT

The sign system is designed to do three things:

1. Provide a uniform set of identification and directional signs at commuter stations.

2. Provide a cost effective system, both in the initial fabrication costs and in long term maintenance and replacement costs.

3. Provide durable signs that will withstand weathering and vandalism.

There are 10 sign types within the system. The system is a post and panel system with panels that slide and lock into posts. Panels must be able to be removed and replaced on site.

Materials for the signs must meet all ADA requirements for color and finish. Materials may vary depending on the types of signs and their uses. All materials, including paints, inks and overcoats should be exterior grade, compatible with each other and vandal resistant. The intent is to provide a cost effective system with a long life.

All hardware other than aluminum posts must be made of steel (rustproof) and tamper proof.

The drawings included in this manual are working drawings only, showing design intent for each sign. Minimal detail is shown in order that construction methods best suited to the individual vendor can be used while still meeting the aesthetic intent of each sign. Detailed engineering drawings for each existing sign type, based on the specifications in this manual, are the property of Metra. Any signs included in the specification manual not in existence and/or not presently in the sign maintenance program, must be designed/engineered by the vendor. The vendor is also responsible for detailed engineering drawings for these signs. All drawings must be approved by Metra prior to fabrication.

Additionally, before the sign fabrication process is started, the following must be submitted by the vendor:

1. Manufacturer's Technical Data Sheet for all paint materials used.

2. Manufacturer's Safety Data Sheet (MSDS) for all paint material used.

3. Sign prototype: typical sign panel and post section.

Lastly, the vendor must provide a Quality Assurance Program including inspection of work, preparation work control and spot check control.

All artwork, shop drawings, silkscreens and dies for signs shall be produced by the vendor and become the property of Metra.

PLEASE NOTE: Any new signs developed must be able to fit into existing posts.

Metra — METRA SIGN PROGRAM 2

LOGO ART

Metra

For Design Intent Only

Metra — METRA SIGN PROGRAM 3

COLOR, TYPE & ARROW STYLE

Corporate Colors: Pantone 301C; White

Corporate Type Style:

Helvetica Bold Condensed

ABCDEFGHIJKLM NOPQRSTU VWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890$(&.,:;!?'–)

Helvetica Medium

ABCDEFGHIJKLMNOPQRSTU
VWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890$(&.,:;!?'–)

Arrow Style:

Metra — METRA SIGN PROGRAM 4

GENERAL NOTES

1. SIGNAGE TO FOLLOW METRA STATION SIGN PROGRAM SPECIFICATION DATED MARCH 1, 2017 UNLESS INDICATED OTHERWISE.
2. ENTIRE DOCUMENT IS INCLUDED IN PROJECT SPECIAL PROVISIONS DOCUMENT.
3. IF MOUNTING HEIGHTS AND DETAILS ARE IN CONFLICT BETWEEN IDOT AND METRA STANDARDS NOTIFY ENGINEER IMMEDIATELY.
4. THE CONTRACTOR IS TO RESTORE ALL DISTURBED SITE AREAS TO THEIR FINISHED CONDITION PRIOR TO STARTING ANY NEW WORK.
5. COORDINATE INSTALLATION OF METRA-REQUIRED SIGNAGE WITH CONTRACTORS FOR ADJACENT STREETSCAPE PROJECT IDOT 61F85 AND THE TRAIN STATION PROJECT.

METRA SIGNAGE REQUIREMENTS

STATE OF ILLINOIS — ZACHERY R. WEISS — 001.021669 — LICENSED ARCHITECT

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED	
		DRAWN BY	TZ	REVISED	
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED	
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED	

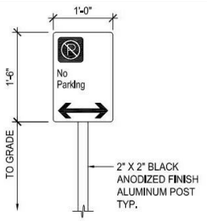
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF

BUILDING
AS102 METRA SIGNAGE AND WAYFINDING
STA. | TO STA.

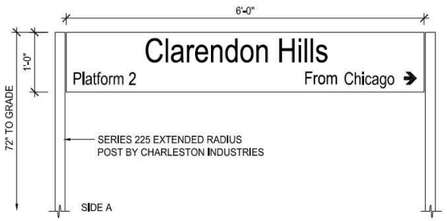
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	46
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

METRA STANDARD SIGNAGE DETAILS



03 / 7.5

05 / P-7A



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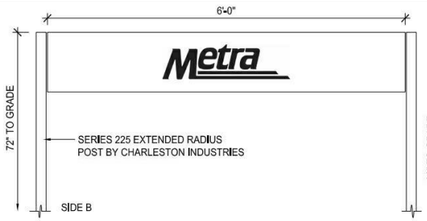

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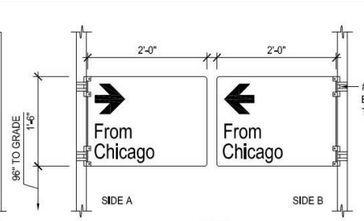
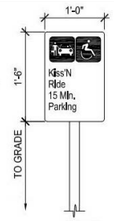
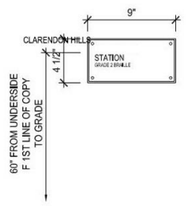


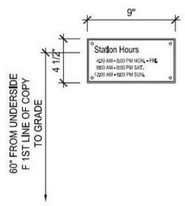
10 / 5.5



14 / 7.3B

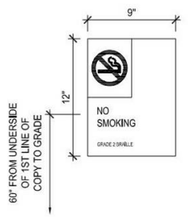


18 / 1Da - FLUSH MOUNTED
SCALE: 1 1/2" = 1'-0"

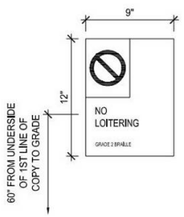


19/ M-5 - FLUSH MOUNTED
SCALE: 1 1/2" = 1'-0"

20 / 8E - FLUSH MOUNTED
SCALE: 3" = 1'-0"



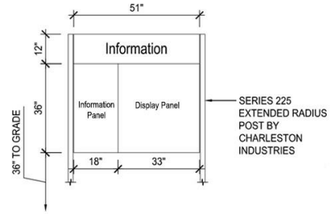
22 / 6.5 - FLUSH MOUNTED



23 / 6.10 - FLUSH MOUNTED

24 / V 1

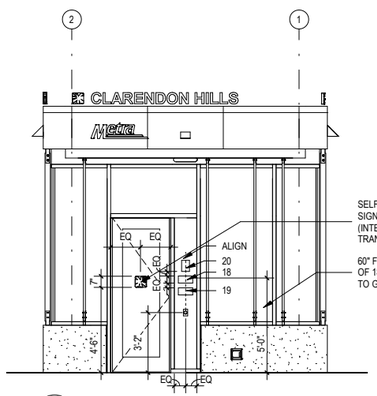
25 / V 2



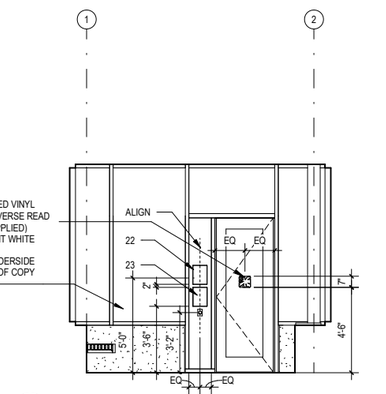
27/ 3B
SCALE: 3/8" = 1'-0"

GENERAL NOTES:

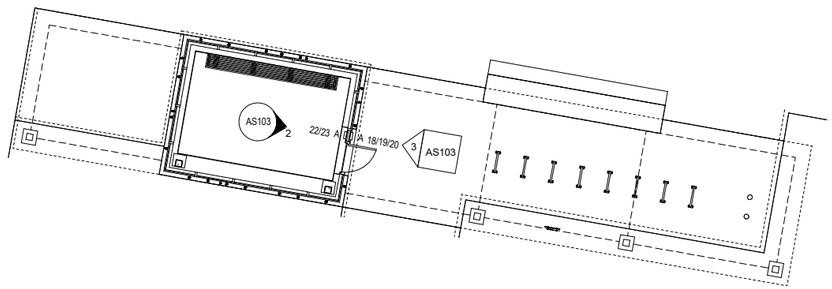
A. ALL ROADWAY SIGNS TO BE MUTCD COMPLIANT.
B. ALL RAILROAD RELATED, PASSENGER WAYFINDING, AND OTHER METRA-SPECIFIC SIGNS TO FOLLOW METRA SIGNAGE STANDARDS.
C. VILLAGE SIGNAGE RELATED TO BICYCLE PARKING TO FOLLOW METRA SIGNAGE STANDARDS.
D. ALL SIGNAGE GRAPHICS TO COMPLY WITH APPLICABLE ACCESSIBILITY STANDARDS.



3 WARMING SHELTER ELEVATION_EAST
1/4" = 1'-0"



2 WARMING SHELTER INTERIOR ELEVATION_EAST
1/4" = 1'-0"



GENERAL NOTES:
1. NOT ALL SIGNS ARE APPLICABLE TO THIS PROJECT.
2. REFER TO BUILDING ELEVATIONS FOR APPLICABLE BUILDING SIGNAGE

1 WARMING SHELTER
1/8" = 1'-0"
AS102

STATE OF ILLINOIS
ZACHERY R. WEESE
001.021669
LICENSED ARCHITECT

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED
		DRAWN BY	TZ	REVISED
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

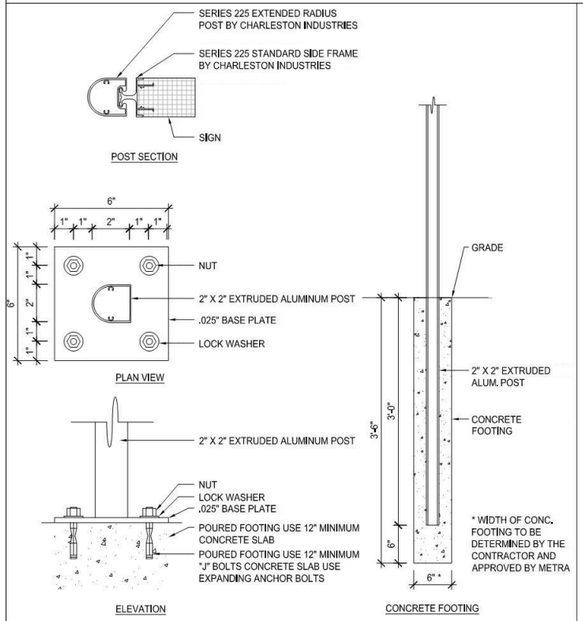
CLARENDON HILLS DOWNTOWN REVITILIZATION

SCALE: As indicated | SHEET | OF | STA. | TO STA.

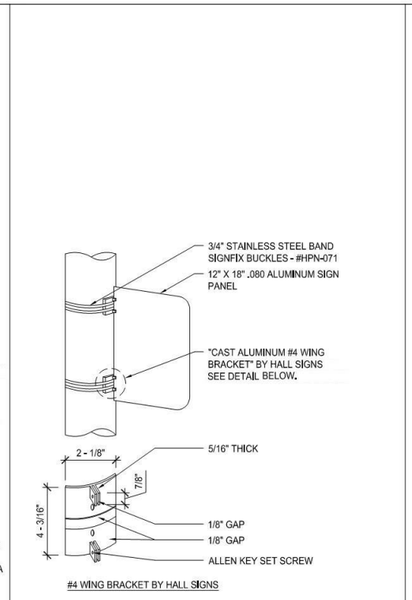
BUILDING
AS103 METRA SIGNAGE AND WAYFINDING

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	47
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

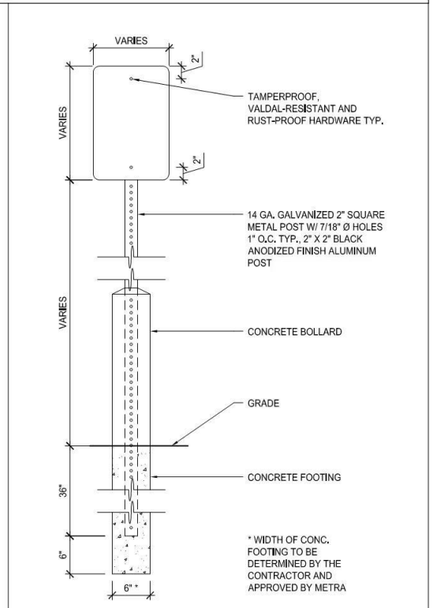
METRA STANDARD SIGNAGE DETAILS



2 TYP. POST MOUNT DETAIL
SCALE: NTS



3 TYP. PROJECT MOUNT DETAIL
SCALE: 1" = 1'-0"



4 POST MOUNT DETAIL FOR PARKING SIGNAGES
SCALE: 1" = 1'-0"

GENERAL NOTES:

A. ALL ROADWAY SIGNS TO BE MUTCD COMPLIANT.
B. ALL RAILROAD RELATED, PASSENGER WAYFINDING, AND OTHER METRA-SPECIFIC SIGNS TO FOLLOW METRA SIGNAGE STANDARDS.
C. VILLAGE SIGNAGE RELATED TO BICYCLE PARKING TO FOLLOW METRA SIGNAGE STANDARDS.
D. ALL SIGNAGE GRAPHICS TO COMPLY WITH APPLICABLE ACCESSIBILITY STANDARDS.

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	METRA	REVISED
		DRAWN BY	METRA	REVISED
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF

BUILDING
AS104 METRA SIGNAGE AND WAYFINDING
STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	48
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

STRUCTURAL COORDINATION NOTE:

COORDINATE SHELTER FOUNDATIONS WITH EXISTING UNDERGROUND FIBER OPTIC CONDUIT BANKS AND OTHER UNDERGROUND UTILITIES. CONCRETE FOOTINGS AND FOUNDATION TO BE STEPPED AS REQUIRED MAINTAINING FROST DEPTH AND UTILITY REQUIRED CLEARANCES.

GENERAL NOTES:

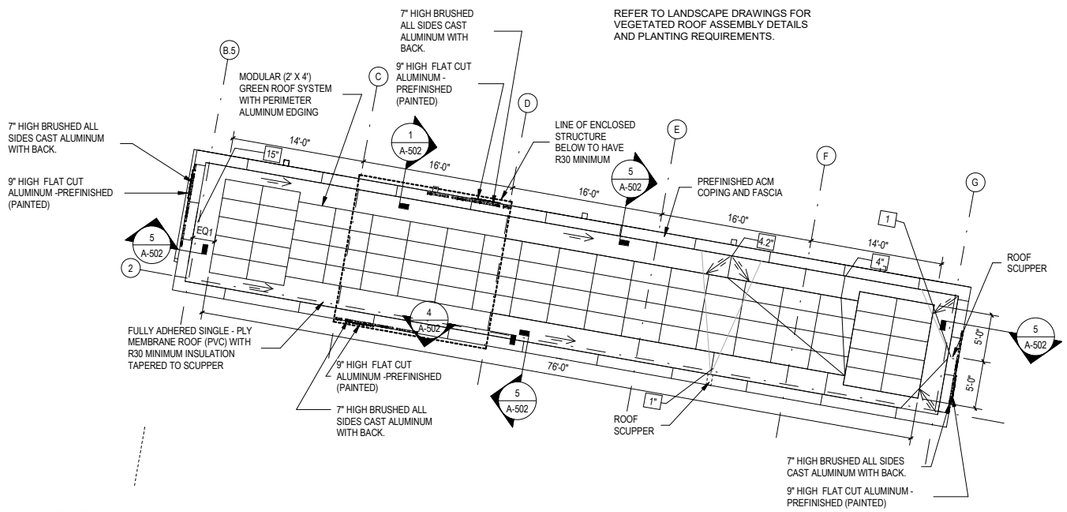
1. ENTIRE STEEL STRUCTURAL SYSTEM AND ROOF DECK, INCLUDING ALL CONNECTIONS TO BE PROTECTED BY HIGH PERFORMANCE COATING SYSTEM.

ELECTRICAL COORDINATION NOTES:

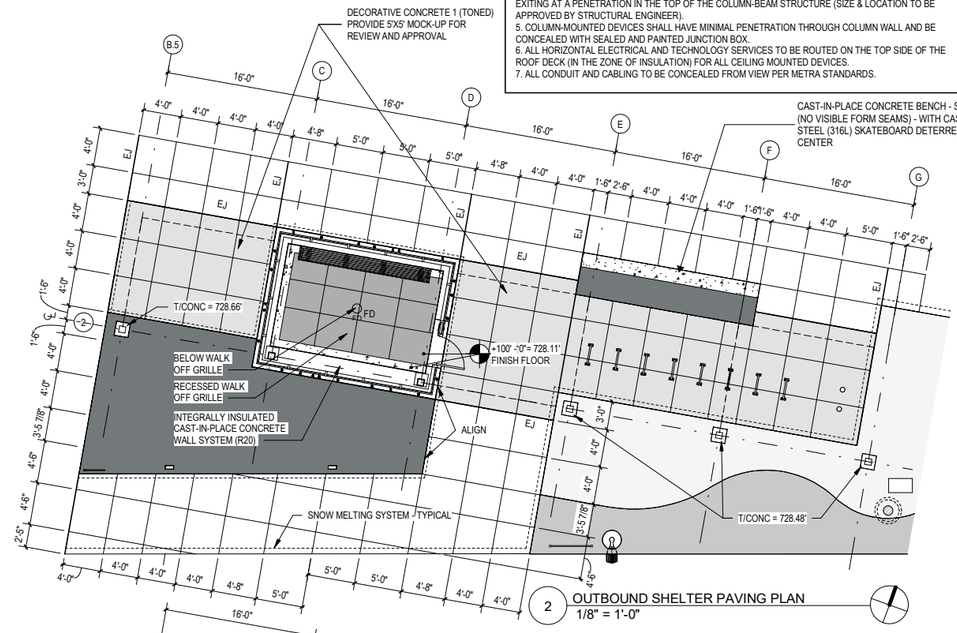
1. ALL ELECTRICAL AND TECHNOLOGY SERVICES TO ENTER THE OUTBOUND TRAIN SHELTER STRUCTURE IN CONDUIT FROM BELOW GRADE.
2. ENTRY POINTS SHALL BE EITHER THROUGH THE INTEGRALLY INSULATED CAST-IN-PLACE CONCRETE WALL SYSTEM, OR THROUGH THE COLUMN FOUNDATION.
3. AVOID EXPOSED PULL BOX. ALL LOCATIONS NEED TO BE REIVEWED AND APPROVED BY ENGINEER, ARCHITECT, VILLAGE, AND METRA PRIOR TO PROCEEDING.
4. ALL VERTICAL ELECTRICAL AND TECHNOLOGY SERVICES TO BE ROUTED THROUGH THE INDIE OF THE HOLLOW TUBE SECTION COLUMNS STARTING AT A PENETRATION THROUGH THE COLUMN BASEPLATE AND EXITING AT A PENETRATION IN THE TOP OF THE COLUMN-BEAM STRUCTURE (SIZE & LOCATION TO BE APPROVED BY STRUCTURAL ENGINEER).
5. COLUMN-MOUNTED DEVICES SHALL HAVE MINIMAL PENETRATION THROUGH COLUMN WALL AND BE CONCEALED WITH SEALED AND PAINTED JUNCTION BOX.
6. ALL HORIZONTAL ELECTRICAL AND TECHNOLOGY SERVICES TO BE ROUTED ON THE TOP SIDE OF THE ROOF DECK (IN THE ZONE OF INSULATION) FOR ALL CEILING MOUNTED DEVICES.
7. ALL CONDUIT AND CABLING TO BE CONCEALED FROM VIEW PER METRA STANDARDS.

ROOF PLAN LEGEND

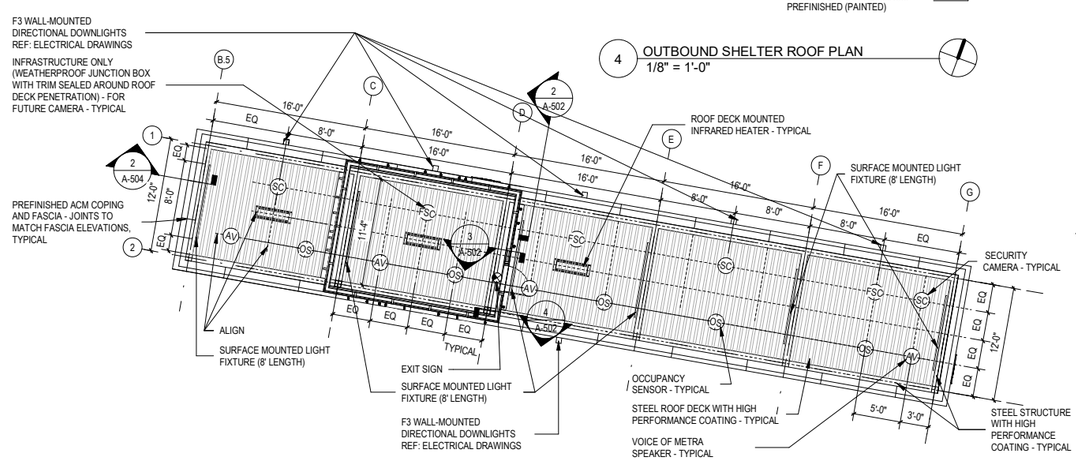
- AREA OF 1/4" PER FOOT TAPERED INSULATION
- AREA OF 1/2" PER FOOT TAPERED INSULATION
- ROOF SCUPPER
- TOTAL HEIGHT OF INSULATION IN INCHES NOT INCLUDING COVER BOARD
- GREEN ROOF TRAY
- METAL COPING AND JOINT



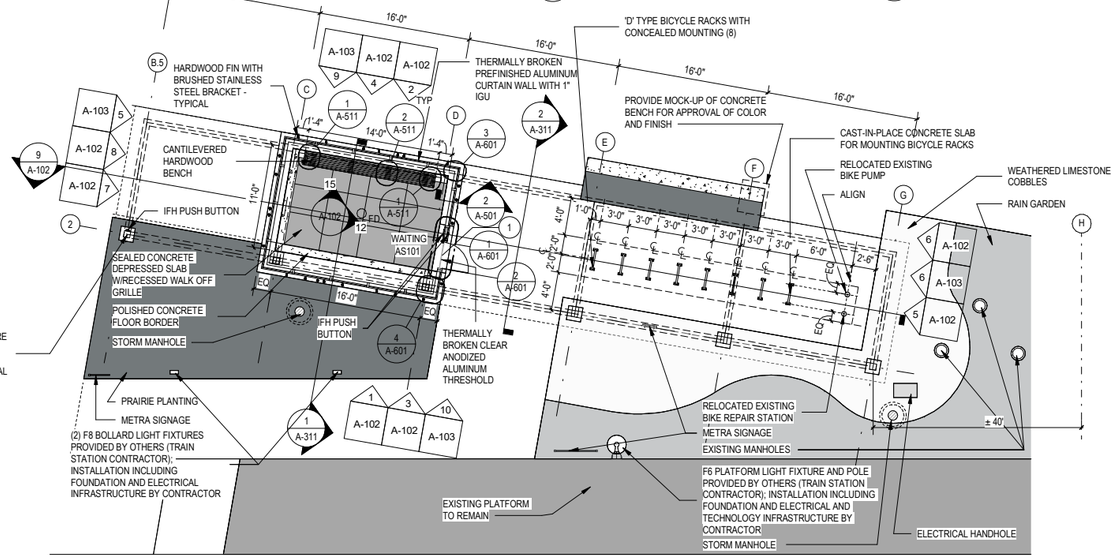
4 OUTBOUND SHELTER ROOF PLAN
1/8" = 1'-0"



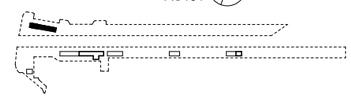
2 OUTBOUND SHELTER PAVING PLAN
1/8" = 1'-0"



3 OUTBOUND SHELTER RCP
1/8" = 1'-0"
A-322



1 OUTBOUND SHELTER PLAN
1/8" = 1'-0"
AS101



LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME	DESIGNED BY EM/TZ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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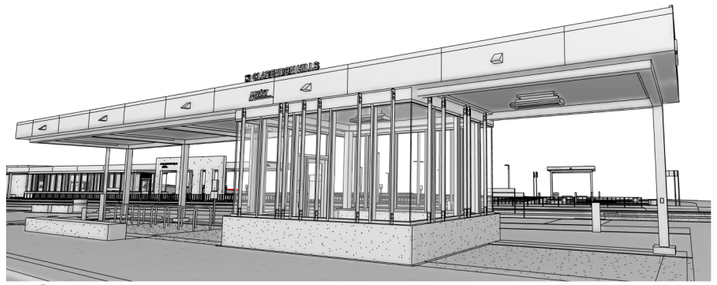
	PLOT DATE 05.15.20	DATE OF ISSUE 05.15.20	REVISED	

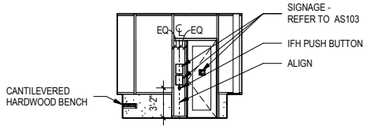
CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: As indicated SHEET OF

BUILDING
A-101 SHELTER PLANS
STA. TO STA.

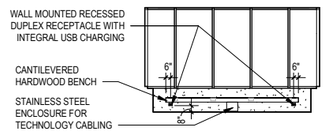
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	49
		CONTRACT NO.	61G62	
		ILLINOIS	FED. AID PROJECT	



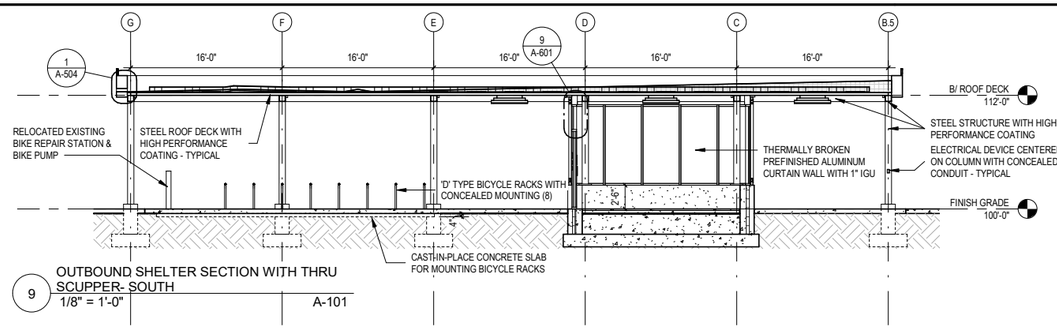
14 VIEW FROM NORTHWEST



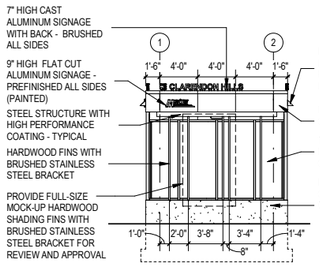
12 OUTBOUND SHELTER INTERIOR ELEVATION - EAST
1/8" = 1'-0" A-101



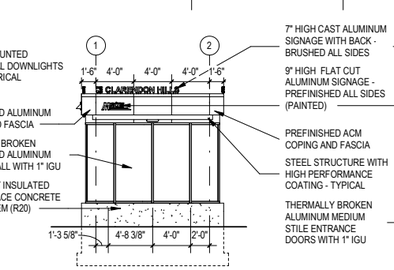
15 OUTBOUND SHELTER INTERIOR ELEVATION - NORTH
1/8" = 1'-0" A-101



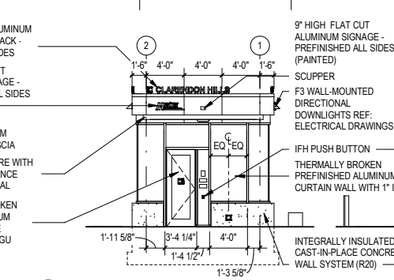
9 OUTBOUND SHELTER SECTION WITH THRU SCUPPER- SOUTH
1/8" = 1'-0" A-101



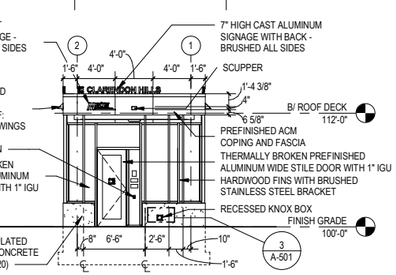
8 OUTBOUND SHELTER ELEVATION - WEST
1/8" = 1'-0" A-101



7 WEST ELEVATION WITHOUT SHADING
1/8" = 1'-0" A-101

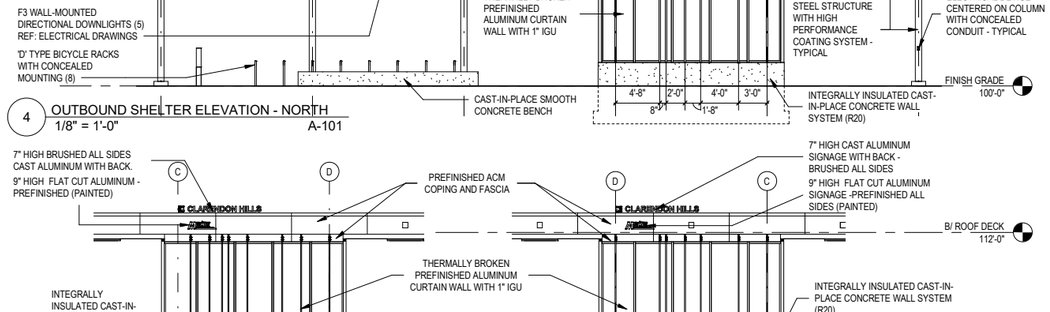


6 EAST ELEVATION WITHOUT SHADING
1/8" = 1'-0" A-101



5 OUTBOUND SHELTER ELEVATION - EAST
1/8" = 1'-0" A-101

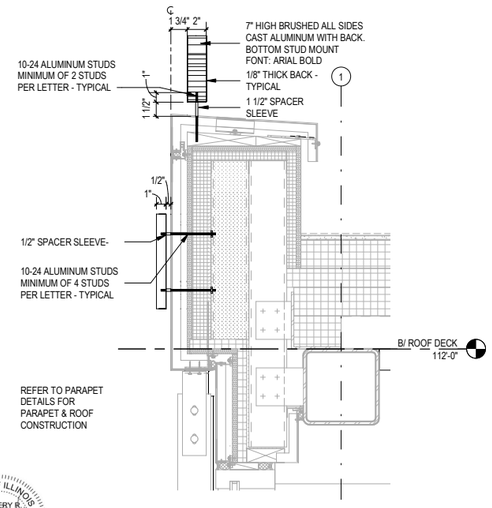
11 DAISY GRAPHIC
6" = 1'-0"



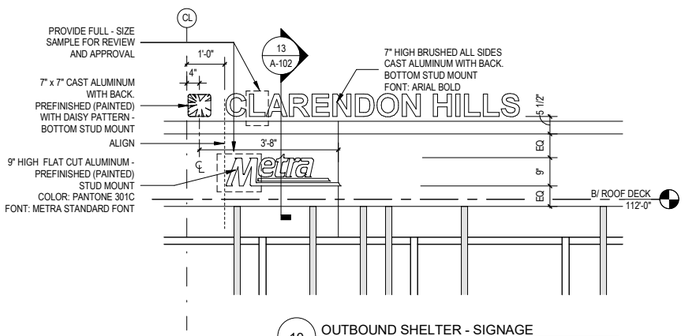
4 OUTBOUND SHELTER ELEVATION - NORTH
1/8" = 1'-0" A-101

3 SOUTH ELEVATION WITHOUT SHADING
1/8" = 1'-0" A-101

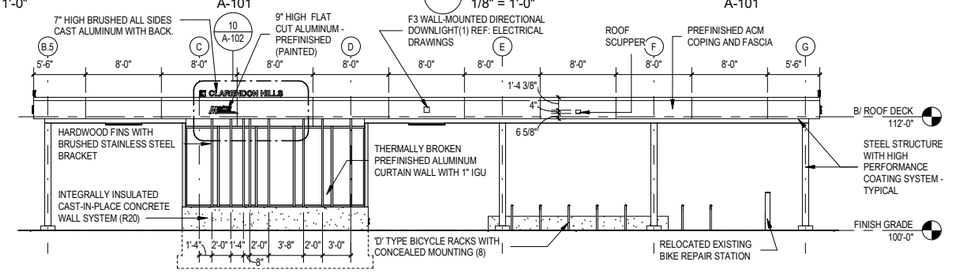
2 NORTH ELEVATION WITHOUT SHADING
1/8" = 1'-0" A-101



13 ROOF SECTION DETAIL @ BUILDING
1 1/2" = 1'-0" A-102



10 OUTBOUND SHELTER - SIGNAGE
1/2" = 1'-0" A-102



1 OUTBOUND SHELTER ELEVATION - SOUTH
1/8" = 1'-0" A-101

STATE OF ILLINOIS
ZACHERY R. WEEN
001.021669
LICENSED ARCHITECT

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ
		DRAWN BY	TZ
PLOT SCALE	As indicated	CHECKED BY	MZ
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20

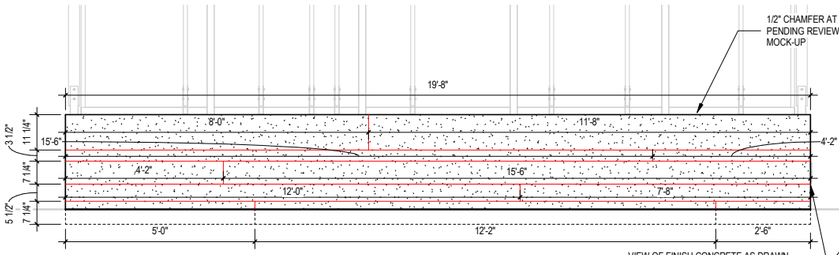
REVISED
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated SHEET OF

BUILDING
A-102 SHELTER ELEVATIONS & SECTIONS
STA. TO STA.

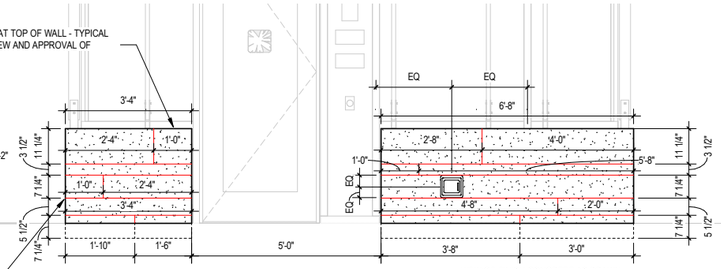
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	50
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



10 BOARD-FORMED EXTERIOR ELEVATION - SOUTH
1/2" = 1'-0" A-101

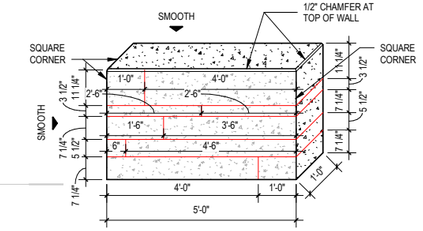
VIEW OF FINISH CONCRETE AS DRAWN (VIEW OF WOOD FORM-LINER) WOULD BE MIRRORED

JOINTS ARE TO ALIGN AT ALL CORNERS - TYPICAL

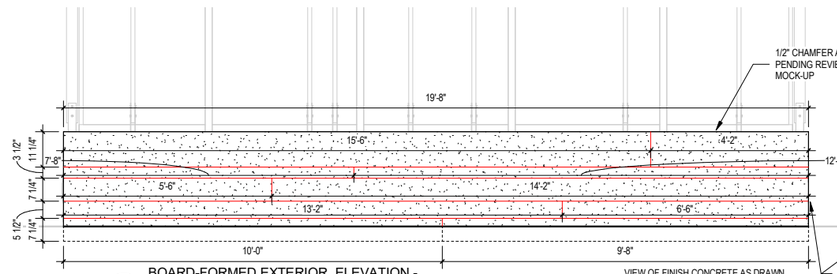


6 BOARD-FORMED EXTERIOR ELEVATION - EAST
1/2" = 1'-0" A-101

VIEW OF FINISH CONCRETE AS DRAWN (VIEW OF WOOD FORM-LINER) WOULD BE MIRRORED



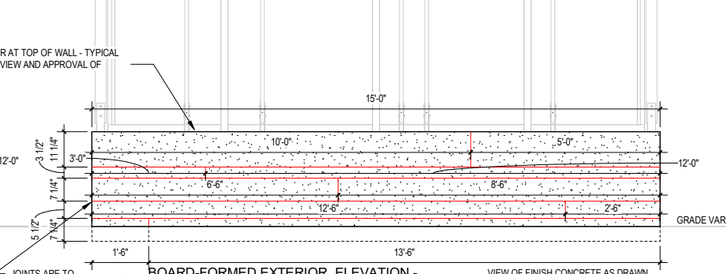
2 BOARD-FORMED CONCRETE MOCK-UP
1/2" = 1'-0"



9 BOARD-FORMED EXTERIOR ELEVATION - NORTH
1/2" = 1'-0" A-101

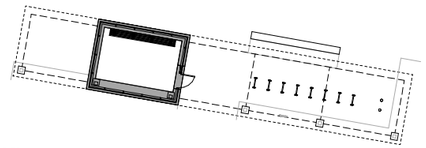
VIEW OF FINISH CONCRETE AS DRAWN (VIEW OF WOOD FORM-LINER) WOULD BE MIRRORED

JOINTS ARE TO ALIGN AT ALL CORNERS - TYPICAL



5 BOARD-FORMED EXTERIOR ELEVATION - WEST
1/2" = 1'-0" A-101

VIEW OF FINISH CONCRETE AS DRAWN (VIEW OF WOOD FORM-LINER) WOULD BE MIRRORED

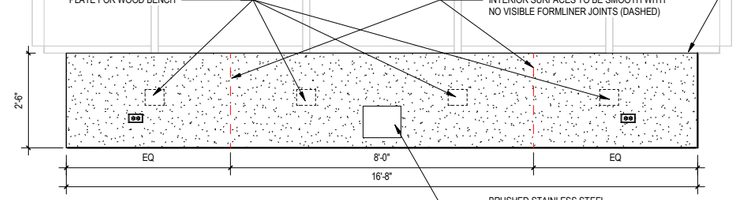


1 COLORED CONCRETE KEY PLAN
EXTENT OF CONCRETE WITH INTEGRAL COLOR

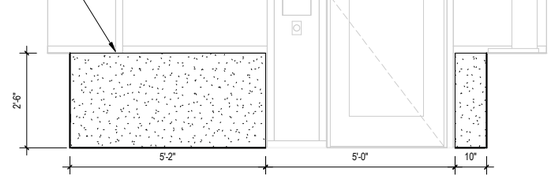
ARCHITECTURAL BOARD-FORMED CONCRETE FINISH

PROVIDE NATURAL WOOD BOARD FORM-LINER

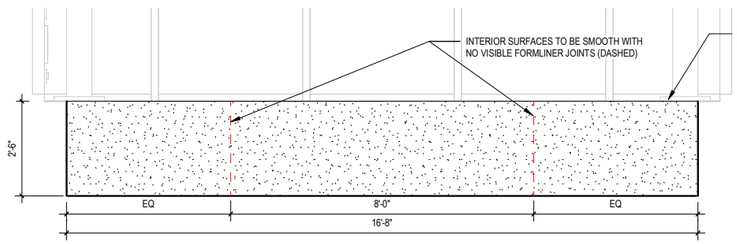
- ARCHITECT TO LAY OUT BOARD PATTERN FROM MULTIPLE BOARD SIZES.
- BOARD FORMS TO BE SET PLUMB, STRAIGHT, LEVEL AND TRUE.
- BOARD JOINTS TO BE STAGGERED TO AVOID UNWANTED PATTERNS.
- BOARDS TO BE ARRANGED FROM, 1X4'S, 1X6'S, 1X8'S & 1X12'S PENDING APPROVAL OF MOCK-UPS.
- BOARDS TO BE DOUGLAS FIR PENDING APPROVAL OF MOCK-UPS. REUSE OF BOARDS IS TO BE LIMITED AS SURFACE TEXTURE IS REDUCED WITH EACH USE.
- CONCRETE POURS TO BE VIBRATED TO MINIMIZE BUG HOLES AND HONEYCOMBING, WHILE LIMITING THE AMOUNT OF EXPOSED AGGREGATE VISIBLE AT THE SURFACE, AND EXPOSING THE DETAIL OF THE WOOD GRAIN.
- FORM TIE HOLES TO BE SPACED REGULARLY WITH RECESSED PATCH TO MATCH CONCRETE COLOR, TEXTURE AND SHEEN.
- JOINTS BETWEEN BOARDS TO BE TREATED TO LIMIT AMOUNT OF CONCRETE ESCAPING FORMWORK AND MINIMIZE CONCRETE FINS. JOINTS BETWEEN BOARDS TO BE CONSISTENT IN WIDTH.
- FORM RELEASE AGENT AND CONCRETE CURING AGENT THAT WILL NOT BOND WITH, STAIN, OR ADVERSELY AFFECT FINISH SURFACE OF CONCRETE; AND WILL NOT IMPAIR SUBSEQUENT SURFACE TREATMENTS TO CONCRETE (I.E., FUTURE ANTI-GRAFFITI COATING IF REQUIRED).
- PROVIDE POUR SEQUENCE DRAWINGS FOR REVIEW AND APPROVAL.
- PROVIDE SERIES OF MOCK-UPS USING THE ACTUAL SPECIFIED CONCRETE MIX TO OBTAIN OWNER AND ARCHITECT APPROVALS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - COLOR
  - WOOD SPECIES FOR BOARD FORMS
  - TREATMENT OF JOINTS BETWEEN BOARDS
  - COLD JOINTS
  - TIES, TIE HOLES, AND PATCHING
  - CONCRETE CURING AGENT
  - FORM RELEASE AGENTS
  - MOCK-UPS CAN VARY IN SIZE DEPENDING WHAT IS BEING TESTED AND REVIEWED.
- INSTALLATION IS TO MATCH TRAIN STATION PROJECT AT INBOUND PLATFORM IN COLOR, TEXTURE, FINISH & DETAILS.
- ADDITIONAL PRECEDENTS FOR BOARD-FORMED CONCRETE INCLUDE NORTHWESTERN SAILING CENTER. A JOINT SITE VISIT WITH OWNER, ARCHITECT, GENERAL CONTRACTOR, AND CONCRETE SUBCONTRACTOR IS REQUIRED.



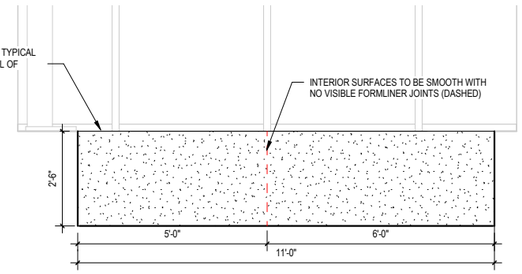
8 BOARD-FORMED INTERIOR ELEVATION - NORTH
1/2" = 1'-0"



4 BOARD-FORMED INTERIOR ELEVATION - EAST
1/2" = 1'-0"

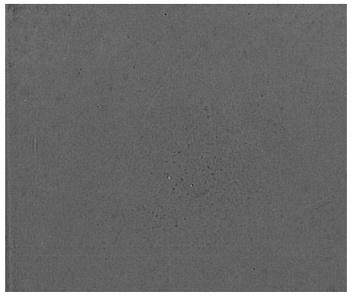


7 BOARD-FORMED INTERIOR ELEVATION - SOUTH
1/2" = 1'-0"

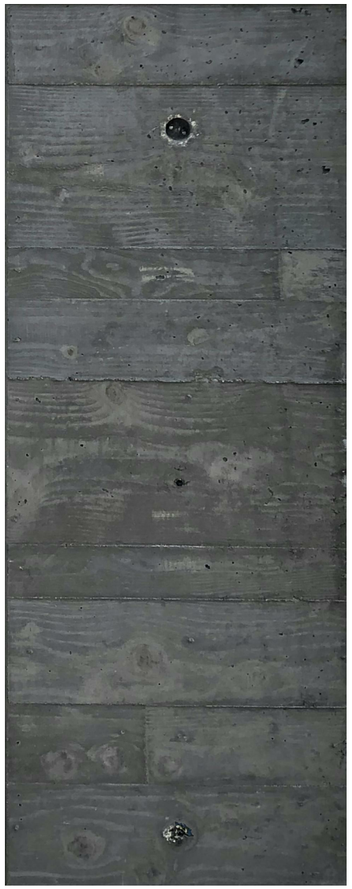


3 BOARD-FORMED INTERIOR ELEVATION - WEST
1/2" = 1'-0"

WOOD BOARD FORM LINER FROM TRAIN STATION MOCK-UP FOR REFERENCE



SAMPLE OF COLOR FOR INTEGRAL PIGMENTED ADMIXTURE FOR BOARD -FORMED CONCRETE



FULL-SIZE MOCK-UP AT TRAIN STATION:
MATCH EXISTING BOARD-FORMED CONCRETE COLOR, TEXTURE, & FINISH

STATE OF ILLINOIS
ZACHERY R. MISENKO
001.021669
LICENSED ARCHITECT

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ
		DRAWN BY	TZ
PLOT SCALE	As indicated	CHECKED BY	EM
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20

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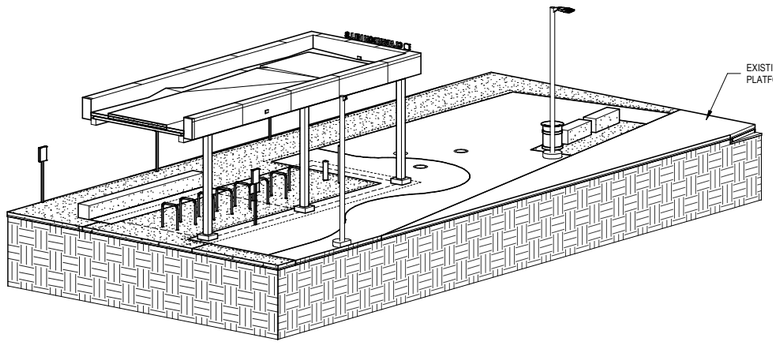
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

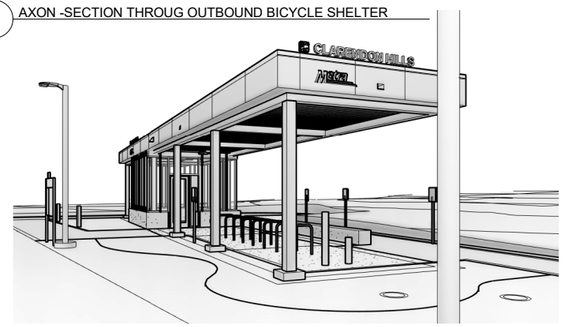
CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF
STA. | TO STA.

BUILDING
A-103 BOARD-FORMED CONCRETE DETAILS

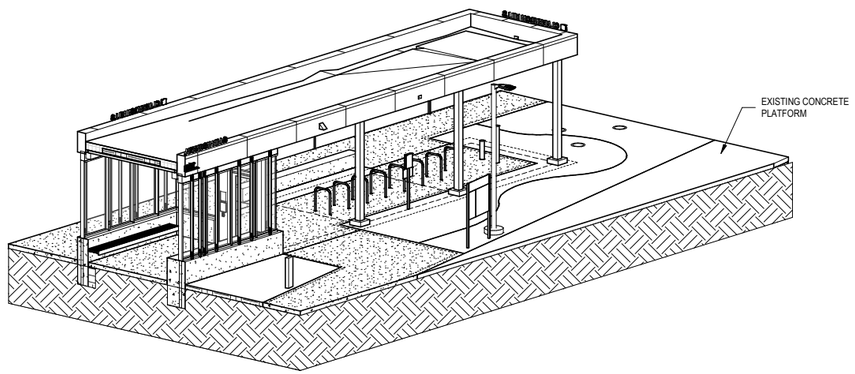
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	51
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



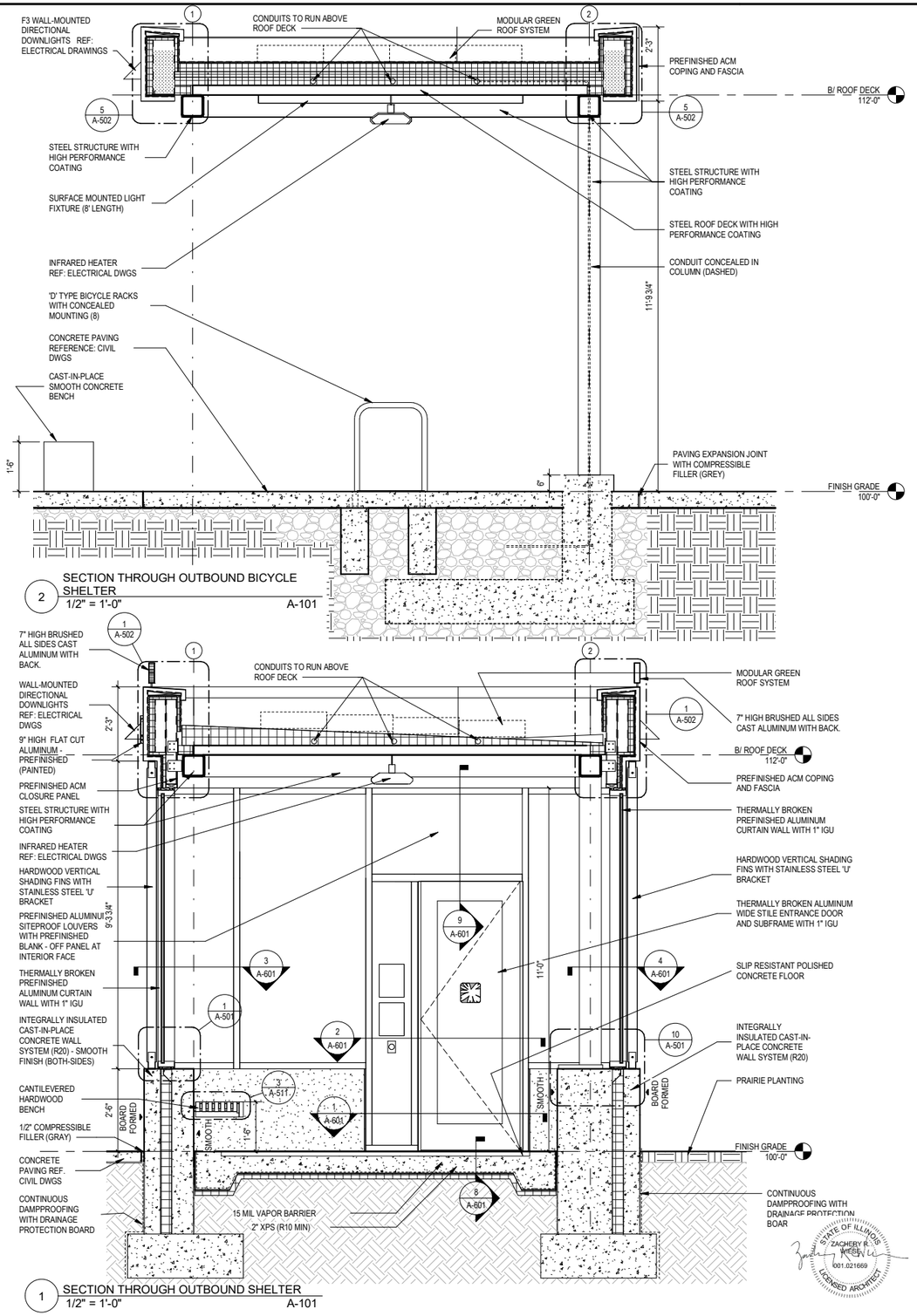
5 AXON -SECTION THROUG OUTBOUND BICYCLE SHELTER



4 VIEW FROM SOUTHEAST



3 AXON - SECTION THROUGH OUTBOUND SHELTER



2 SECTION THROUGH OUTBOUND BICYCLE SHELTER
1/2" = 1'-0" A-101

1 SECTION THROUGH OUTBOUND SHELTER
1/2" = 1'-0" A-101

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED
		DRAWN BY	TZ	REVISED
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED

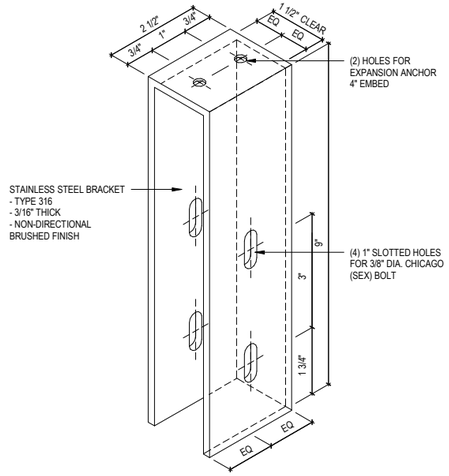
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION

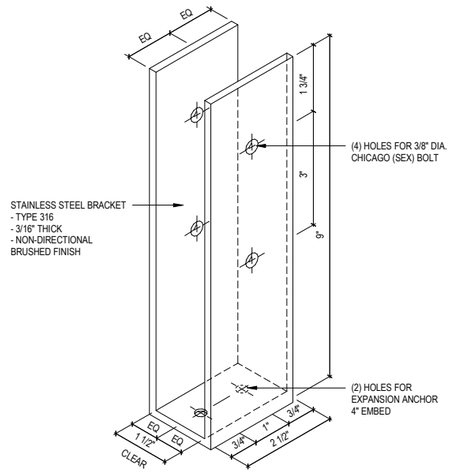
SCALE: As indicated | SHEET OF

BUILDING
A-311 BUILDING SECTIONS
STA. TO STA.

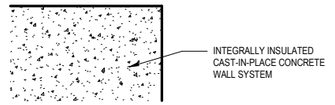
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	52
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



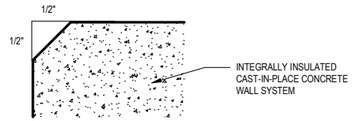
12 STAINLESS STEEL SILL BRACKET @ WOOD SHADING FIN
6" = 1'-0"



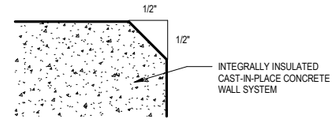
11 STAINLESS STEEL SILL BRACKET @ WOOD SHADING FIN
6" = 1'-0"



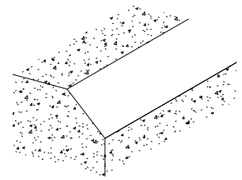
9 TYPICAL CONCRETE VERTICAL CORNER (UNO)
12" = 1'-0"



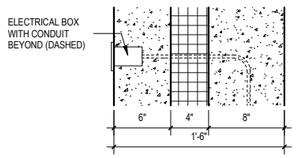
8 TYPICAL CONCRETE HORIZONTAL CORNER - EXTERIOR (UNO)
12" = 1'-0" A-501



7 TYPICAL CONCRETE HORIZONTAL CORNER - INTERIOR (UNO)
12" = 1'-0" A-501

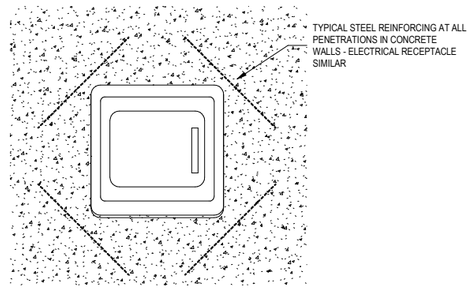


6 TYPICAL CONCRETE CORNER @ DOOR OPENINGS
12" = 1'-0" A-601

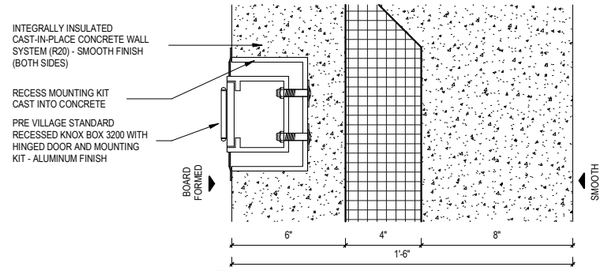


5 RECEPTACLE DETAIL
1 1/2" = 1'-0"

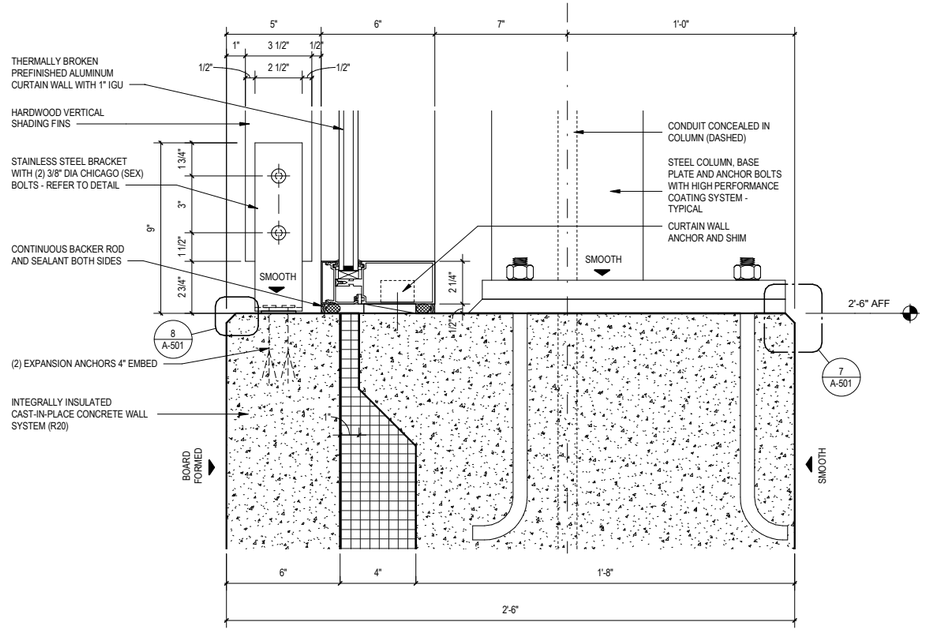
4 HARDWOOD SHADING FIN SAMPLE (GARAPA)
FULL SCALE



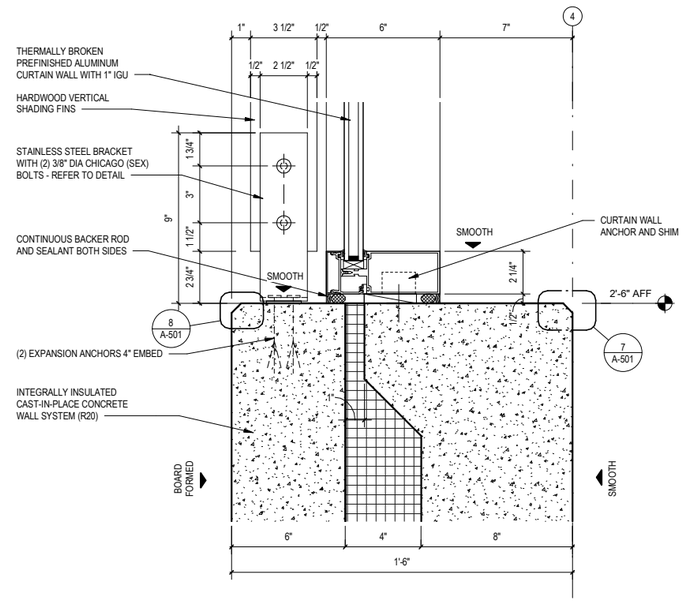
3 RECESSED KNOX BOX DETAIL
3" = 1'-0" A-102



2 RECESSED KNOX BOX DETAIL
3" = 1'-0" A-101



10 TYPICAL SILL DETAIL
3" = 1'-0" A-111



1 TYPICAL SILL DETAIL @ COLUMN BASE
3" = 1'-0" A-111

STATE OF ILLINOIS
ZACHERY R. MOSS
001.021669
LICENSED ARCHITECT

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

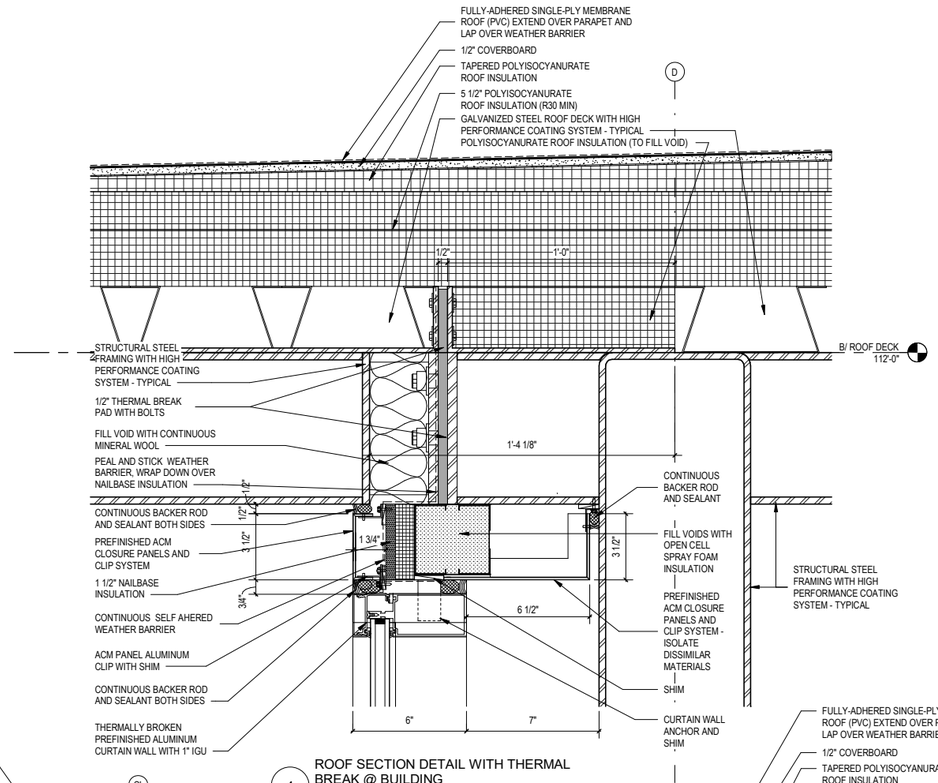
USER NAME		DESIGNED BY	EM/TZ	REVISED	
		DRAWN BY	TZ	REVISED	
PLOT SCALE	As indicated	CHECKED BY	EM	REVISED	
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

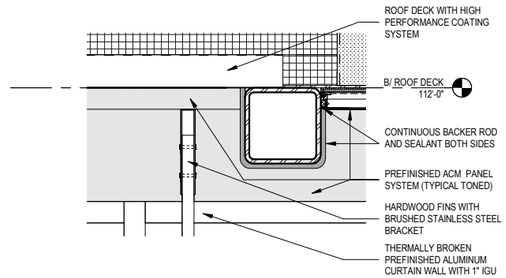
CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF

BUILDING
A-501 EXTERIOR DETAILS
STA. | TO STA.

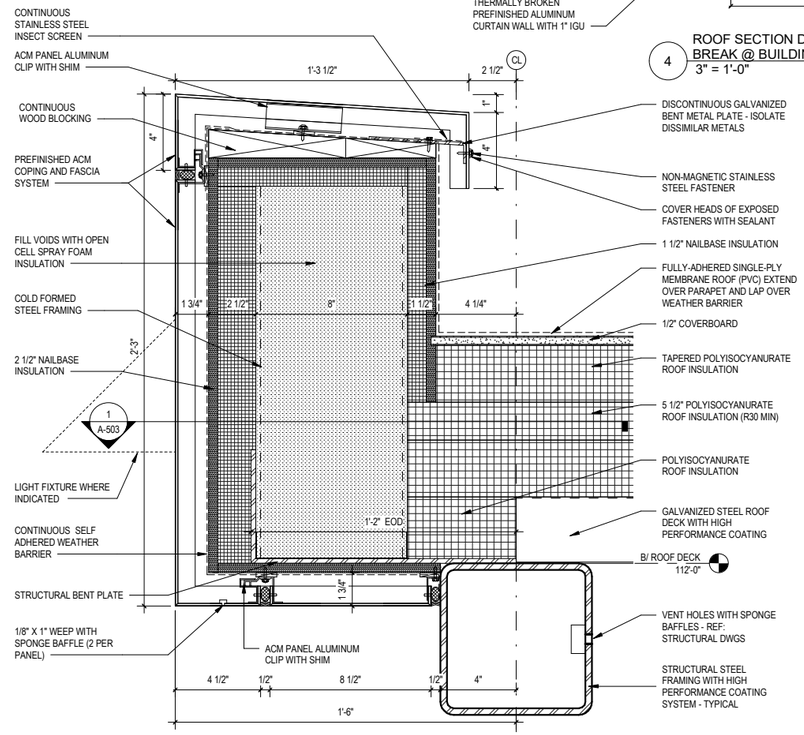
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	53
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



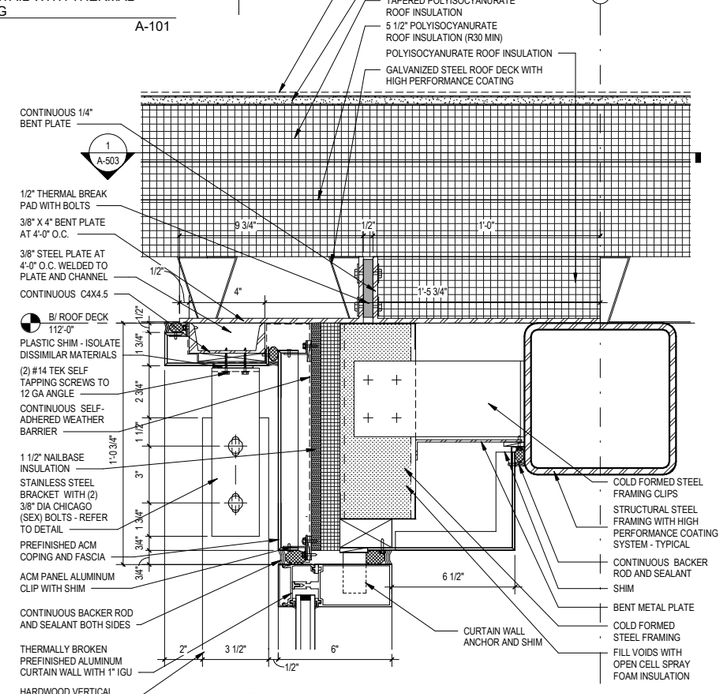
4 ROOF SECTION DETAIL WITH THERMAL BREAK @ BUILDING
3" = 1'-0" A-101



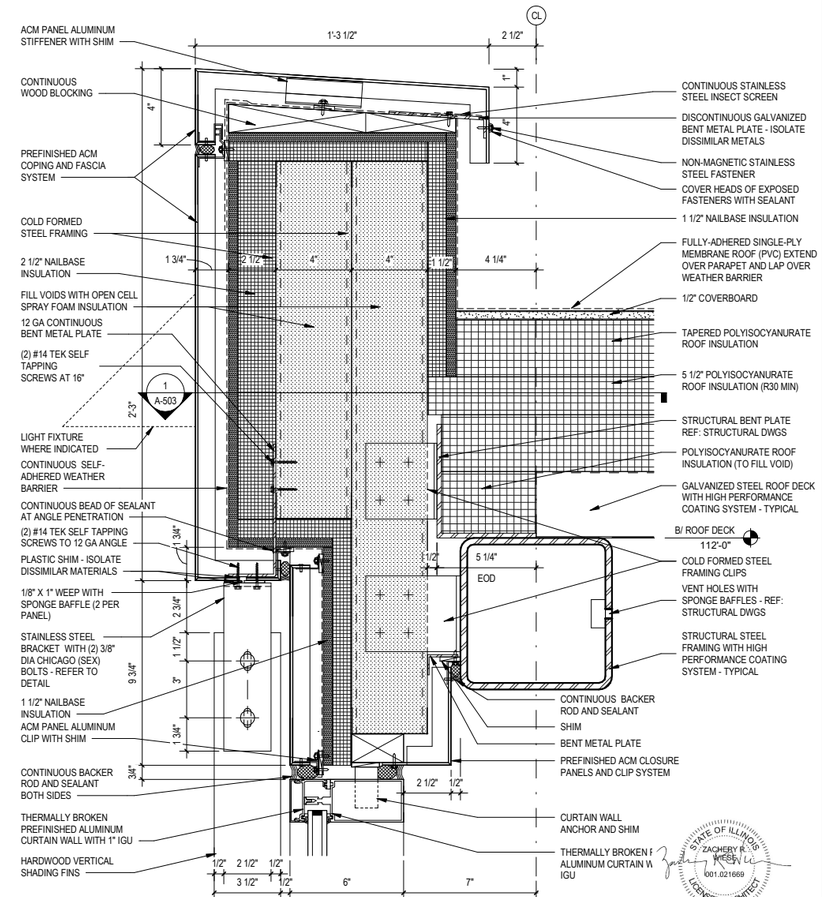
2 ROOF DETAIL ELEVATION WITH THERMAL BREAK
1 1/2" = 1'-0" A-101



5 ROOF EDGE DETAIL @ CANOPY
3" = 1'-0" A-101



3 ROOF SECTION DETAIL @ BUILDING
3" = 1'-0" A-101



1 ROOF EDGE DETAIL @ BUILDING
3" = 1'-0" A-101

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY EM/TZ	REVISED	
			DRAWN BY JC/TZ	REVISED	
	PLOT SCALE	As indicated	CHECKED BY EM	REVISED	
	PLOT DATE	05.15.20	DATE OF ISSUE 05.15.20	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

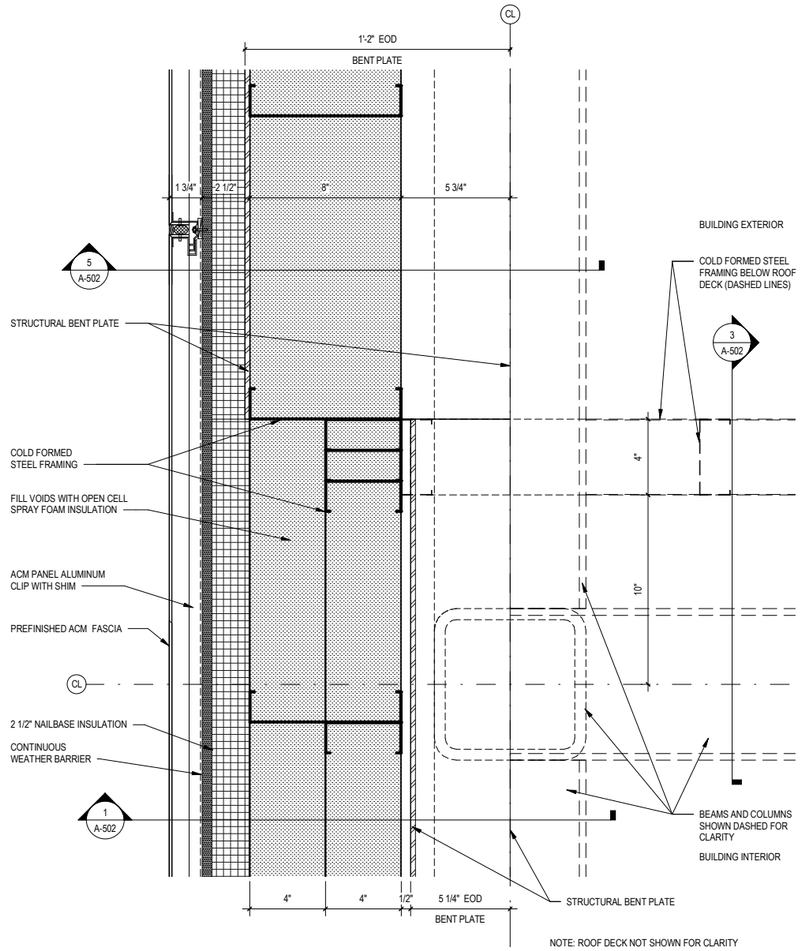
CLARENDON HILLS DOWNTOWN REVITILIZATION

SCALE: As indicated | SHEET | OF

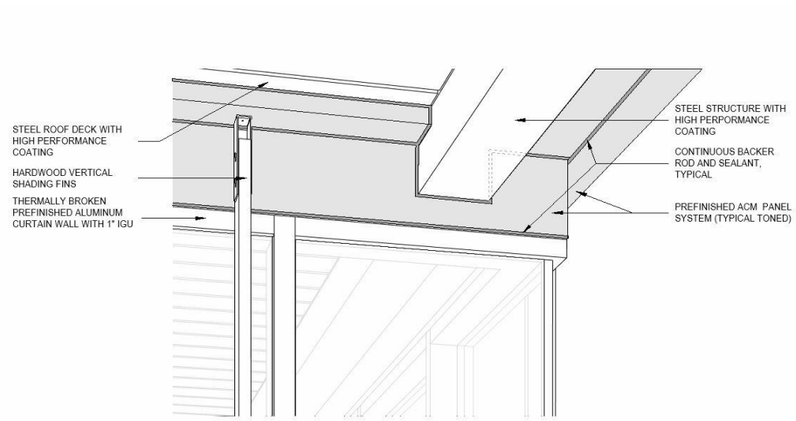
BUILDING
A-502 EXTERIOR DETAILS

STA. | TO STA.

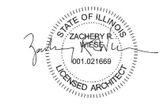
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	54
		CONTRACT NO. 61G62		
	ILLINOIS	FED. AID PROJECT		



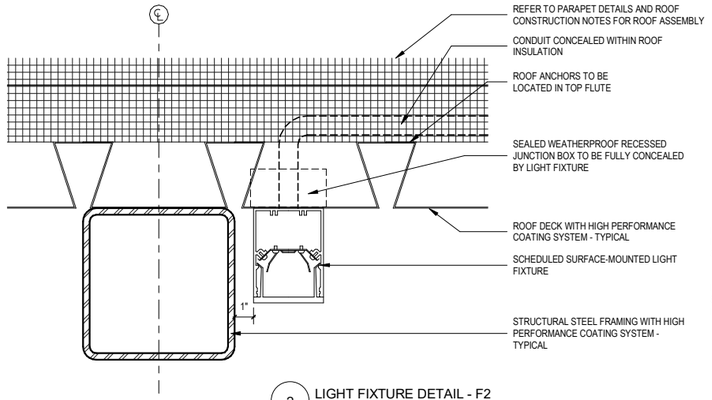
1 PARAPET PLAN DETAIL @ BUILDING CORNER
3" = 1'-0" A-502



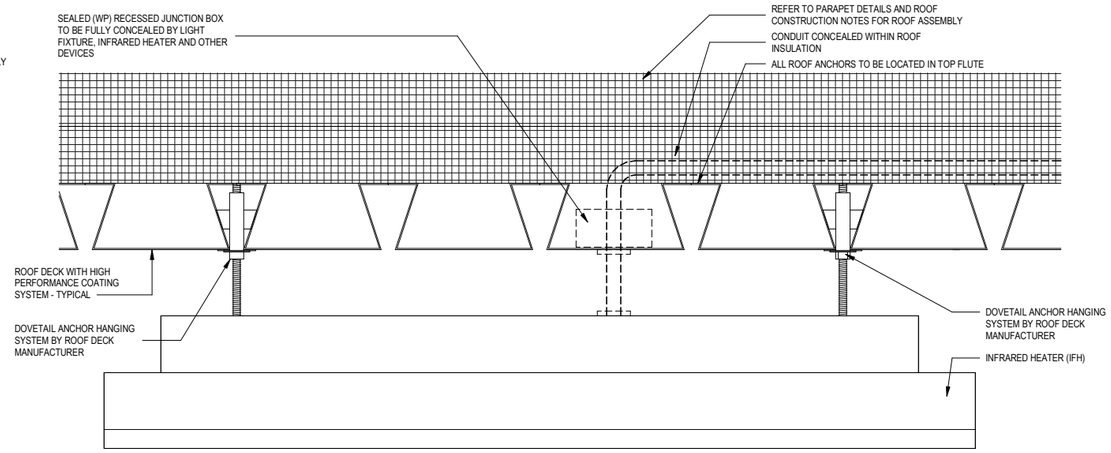
2 FASCIA DETAIL



LEGAT ARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY EM/TZ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLARENDON HILLS DOWNTOWN REVITILIZATION	BUILDING A-503 EXTERIOR DETAILS	MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			DRAWN BY JC/TZ	REVISED				1003	16-00045-01-MS	DUPAGE	79	55
	PLOT SCALE	3" = 1'-0"	CHECKED BY EM	REVISED		SCALE: 3" = 1'-0" SHEET OF	STA. TO STA.			CONTRACT NO.	61G62	
	PLOT DATE	05.15.20	DATE OF ISSUE 05.15.20	REVISED					ILLINOIS	FED. AID PROJECT		

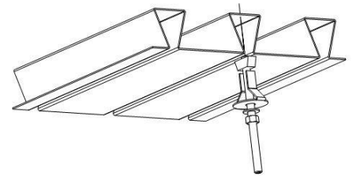


2 LIGHT FIXTURE DETAIL - F2
3" = 1'-0" A-101

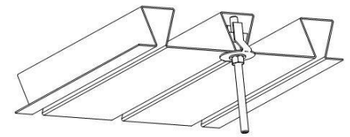


5 INFRARED FIXTURE DETAIL
3" = 1'-0"

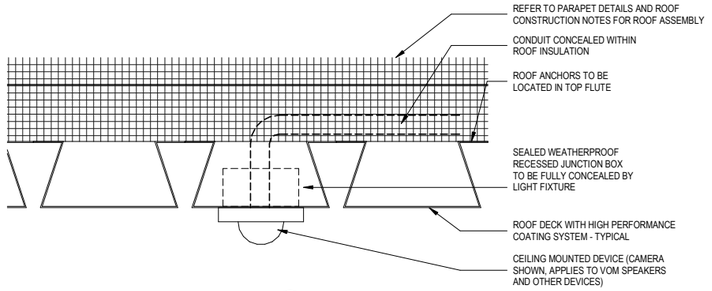
1. INSTALLING DOVETAIL ANCHOR HANGING SYSTEM



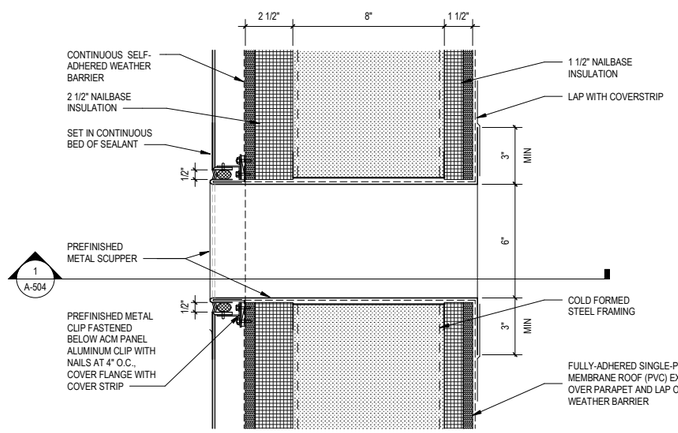
2. INSTALLED DOVETAIL ANCHOR HANGING SYSTEM



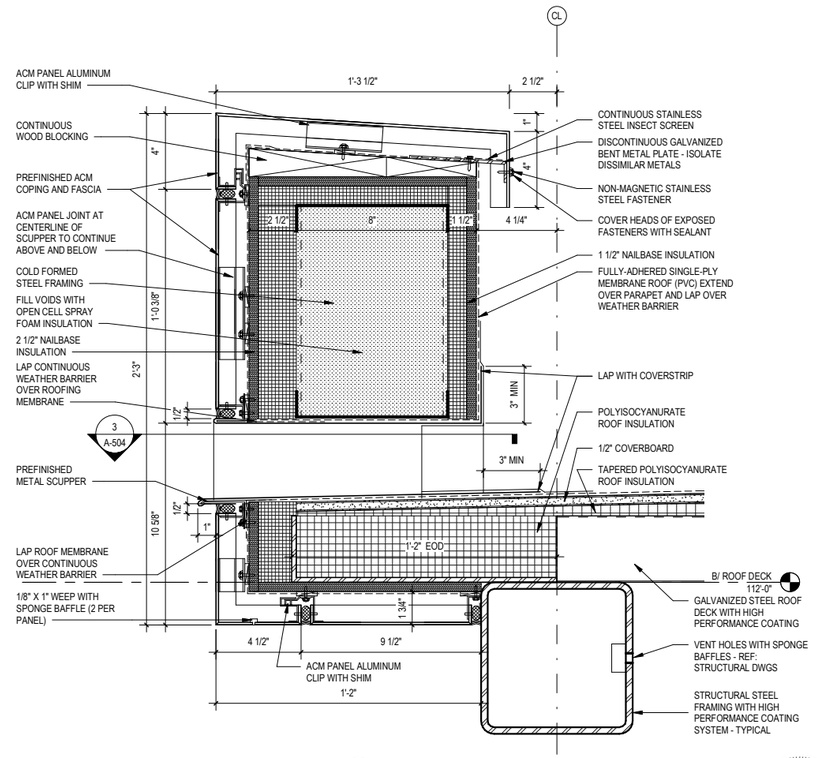
A DOVETAIL ANCHOR HANGING SYSTEM DETAILS
N.T.S.



4 CEILING MOUNTED DEVICE DETAIL
3" = 1'-0"



3 ROOF SCUPPER PLAN DETAIL @ CANOPY
3" = 1'-0" A-504



1 ROOF SCUPPER DETAIL @ CANOPY
3" = 1'-0" A-102

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	EM/TZ	REVISED
		DRAWN BY	JC/TZ	REVISED
PLOT SCALE	3" = 1'-0"	CHECKED BY	EM	REVISED
PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED

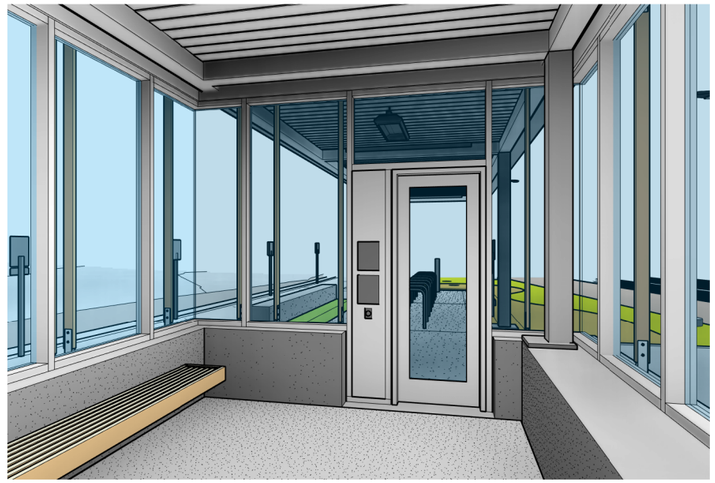
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION

SCALE: 3" = 1'-0" | SHEET | OF

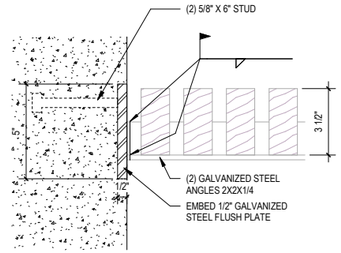
BUILDING
A-504 EXTERIOR DETAILS
STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	56
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

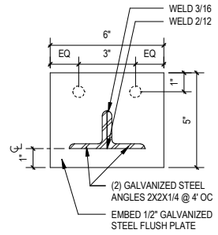


10 BENCHES VIEW 1

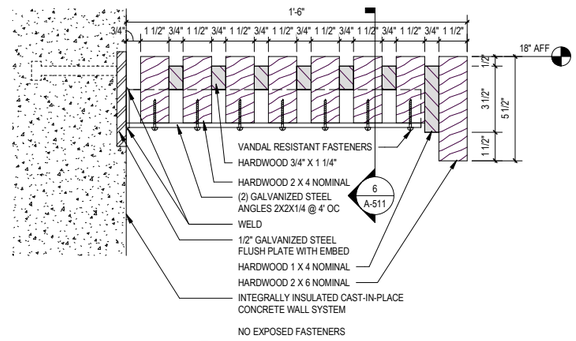
9 HARDWOOD SHADING FIN SAMPLE (GARAPA)
1/2" = 1'-0"



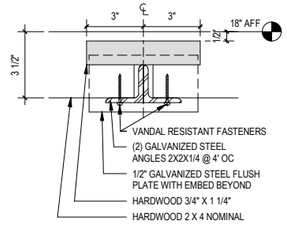
8 CANTILEVERED WOOD BENCH SUPPORT SECTION
3" = 1'-0"



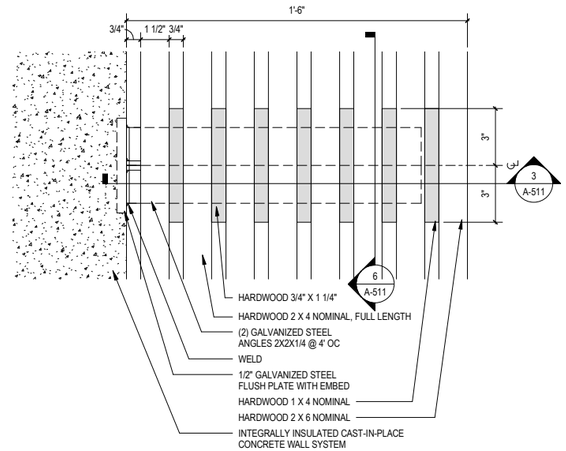
7 CANTILEVERED WOOD BENCH SUPPORT ELEVATION
3" = 1'-0"



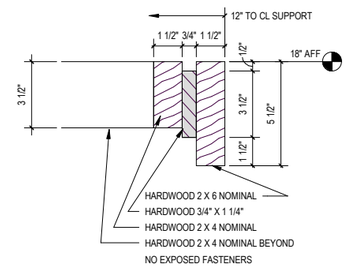
3 BENCH SECTION DETAIL
3" = 1'-0" A-311



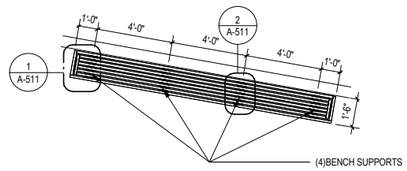
6 TYPICAL BENCH SUPPORT DETAIL
3" = 1'-0" A-511



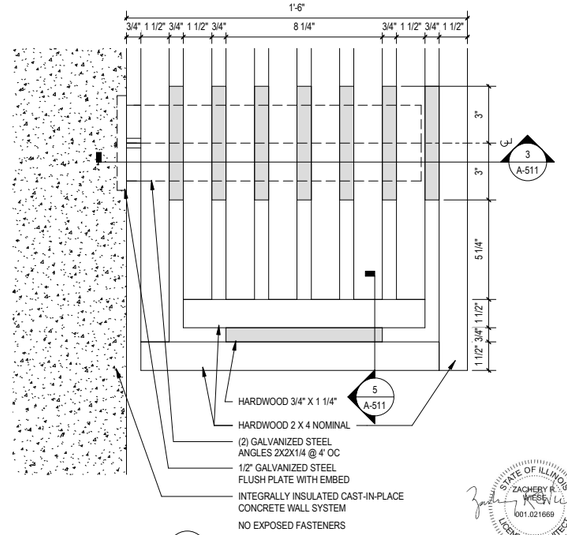
2 BENCH PLAN DETAIL @ SUPPORT
3" = 1'-0" A-101



5 BENCH SECTION DETAIL @ END
3" = 1'-0" A-511



4 BENCH SUPPOTS LOCATION
1/4" = 1'-0"



1 BENCH PLAN DETAIL @ END
3" = 1'-0" A-101

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	EM/TZ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLARENDON HILLS DOWNTOWN REVITILIZATION	BUILDING A-511 INTERIOR DETAILS
			DRAWN BY	JC/TZ	REVISED			
	PLOT SCALE	As indicated	CHECKED BY	EM	REVISED		SCALE: As indicated SHEET OF	STA. TO STA.
	PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED			

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	57
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

DOOR AND FRAME SCHEDULE

DOOR#	DOOR TYPE	DOOR MATERIAL	DOOR WIDTH	DOOR HEIGHT	DOOR THICK	FRAME TYPE	FRAME MATERIAL	FIRE RATING	HDWR	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS JAMB	FRAME DETAILS SILL	REFERENCED NOTES
1	FG	AL	3'-0"	8'-2"	1 3/4"	CW	AL	NA	1	9/A-601	2/A-601	1/A-601	8/A-601	

DOOR HARDWARE SETS

HARDWARE SET 1: EXTERIOR ALUMINUM DOOR (SINGLE)

- 1 BRUSHED STAINLESS STEEL DOOR PULL
- 1 ELECTRIC TIMER LOCKET
- 1 HAGAR #780 SERIES ROTON HINGES WITH ELECTRIC POWER TRANSFER - DULL ALUMINUM CONCEALED LEAF TYPE
- 1 VON DUPRIN ELECTRIC POWER SUPPLY LOCATED IN MECHANICAL ROOM WITH CONCEALED RACEWAY (UNDERSLAB) TO CURTAIN WALL MULLIONS AND DOOR SUBFRAME
- 1 VON DUPRIN #88 SERIES - BRUSHED STAINLESS STEEL WITH ELECTRICAL LATCH RETRACTION
- 1 CONCEALED HEAVY DUTY DOOR CLOSER WITH STOP ARM-ALUMINUM
- 1 POWER SUPPLY
- 1 THERMALLY BROKEN THRESHOLD - DULL ALUMINUM
- 1 INTEGRAL DOOR SWEEP - CLEAR ANODIZED ALUMINUM
- 1 WEATHER STRIPPING - CLEAR

GENERAL NOTES

GENERAL:

1. ALL DOOR AND FRAME TYPES ARE SHOWN AS EXTERIOR VIEW.
2. FRAME WIDTHS ARE INDICATED ON THE FLOOR PLANS. FRAME HEIGHTS ARE INDICATED ON THE FRAME TYPES. DOOR DIMENSIONS ARE INDICATED ON THE DOOR AND FRAME SCHEDULE.
3. DIMENSIONS ARE INDICATED FOR BIDDING PURPOSES ONLY AND SHALL BE FIELD VERIFIED PRIOR TO PREPARATION OF SHOP DRAWINGS AND FABRICATION.
4. THE MANUFACTURER(S) SHALL BE RESPONSIBLE FOR THE ENGINEERING AND STRUCTURAL INTEGRITY OF THEIR FRAME SYSTEMS.
5. HARDWARE SETS AND GLAZING TYPES ARE SPECIFIED IN THE PROJECT MANUAL.
6. FRAMES SHALL BE DESIGNED, CUT, AND FABRICATED TO MINIMIZE JOINTS:
   A. JOINTS IN EXTERIOR ALUMINUM FRAMES SHALL BE AIR AND WATER TIGHT IN ACCORDANCE WITH THE REQUIREMENTS IDENTIFIED IN THE PROJECT MANUAL. LAP AND SEAL ALL JOINTS. ALLOW FOR EXPANSION IN THE TRIM AND AT JOINTS AND INTERSECTIONS OF ADJACENT FRAMES.

ALUMINUM FRAMING SYSTEMS:

1. ALUMINUM CURTAIN WALL ALUMINUM FRAMES SHALL HAVE THE FOLLOWING CHARACTERISTICS UNLESS NOTED OTHERWISE:
   A. FACE WIDTH: 2 1/4"
   B. FRAME DEPTH: 6"
   C. THERMALLY BROKEN
   D. GLAZING SHALL BE BACK GLAZED
2. ANCHORAGE AT ALUMINUM CURTAIN WALL SYSTEMS:
   A. PROVIDE ANCHORAGE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO MEET THE REQUIRED DESIGN LOADS BUT NOT LESS THAN THREE (3) ANCHORS PER JAMB LOCATION.
   B. PROVIDE ALUMINUM FASTENERS, NON-MAGNETIC STAINLESS STEEL FASTENERS, OR OTHER FASTENER TYPES WARRANTED BY THE SYSTEM MANUFACTURER TO BE NON-CORROSIVE, NON-CORRODIBLE, AND COMPATIBLE WITH OTHER BUILDING COMPONENTS.
   C. PROVIDE REINFORCEMENT WHERE FASTENERS ARE SCREWED INTO ALUMINUM COMPONENTS LESS THAN 1/8" THICK.
   D. DO NOT USE EXPOSED FASTENERS AT BUILDING EXTERIOR. AT BUILDING INTERIOR FASTENERS ARE TO MATCH THE FINISH OF THE FRAME.
   E. INTERNALLY REINFORCE MULLIONS AS REQUIRED TO MEET SPANS AS INDICATED IN THE DRAWINGS AND PROJECT MANUAL.
   F. NO EXPOSED FASTENERS.

GLAZING TYPES

GLAZING TYPES

EXTERIOR:

E-1	1" CLEAR INSULATED GLAZING UNIT	VLT = 62% / SHGC = 0.27

REFERENCED NOTES

1. REFER TO ALUMINUM FRAME TYPES FOR ADDITIONAL INFORMATION. ALUMINUM STOREFRONT AND CURTAIN WALL ELEVATION TAGS ARE SHOWN ON FLOOR PLANS.
2. DOOR ASSEMBLY TO MEET FULL RATING.

SPECIFICATION TABLE

BUILDING DEMOLITION

BUILDING CONCRETE
SPCIFICATIONS: 030516, 031000, 032000, 033000

BUILDING METALS
SPECIFICATIONS: 051200, 053000, 055000

BUILDING FINISH CARPENTRY
SPECIFICATIONS: 057000, 062000

BUILDING EXTERIOR ENVELOPE
SPECIFICATIONS: 054000, 061000, 072100, 072119, 072500, 074213.23, 075419, 076200, 077200, 079200, 101401, 329700

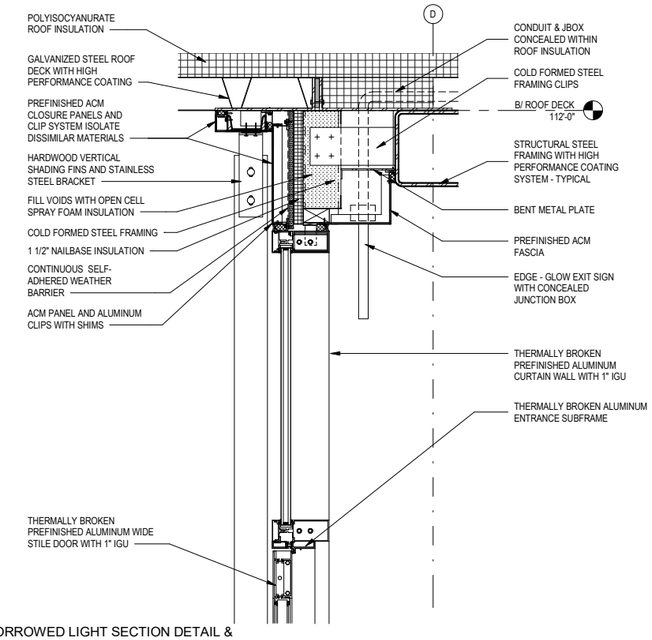
BUILDING OPENINGS
SPECIFICATIONS: 079200, 084313, 084413, 087100, 088000

BUILDING FINISHES
SPECIFICATIONS: 033511, 099123, 099600, 104330, 124816

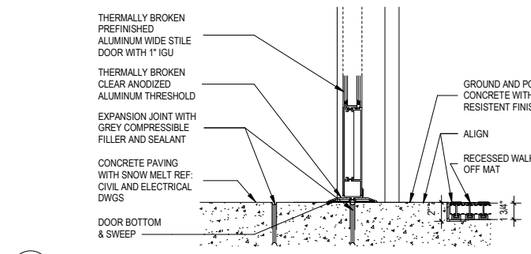
BUILDING SIGNAGE
SPECIFICATION: 101400

BUILDING PLUMBING
SPECIFICATIONS: 221316, 221319, 221413

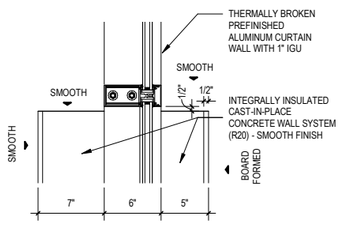
BUILDING ELECTRICAL
SPECIFICATIONS: 260503, 260505, 260511, 260526, 260529, 260533, 260535, 260543, 260553, 260813, 260923, 262726, 262816, 265119, 265600, 268213, 270000, 270500, 270800, 271500, 275116, 280500, 282300



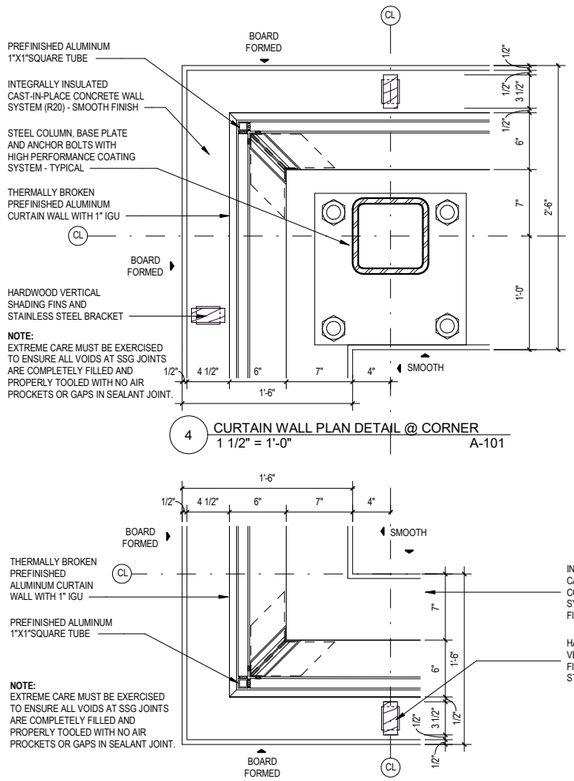
9 BORROWED LIGHT SECTION DETAIL & ALUMINUM DOOR HEAD DETAIL
1 1/2" = 1'-0" A-102



8 DOOR THRESHOLD
1 1/2" = 1'-0" A-311

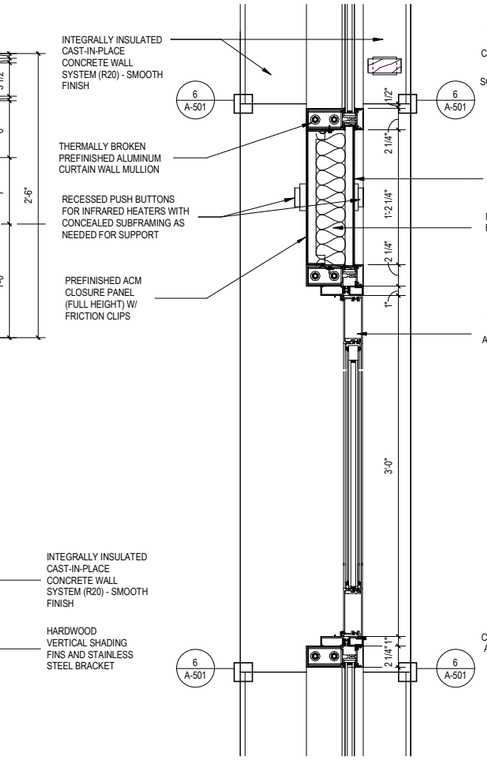


7 BORROWED LIGHT JAMB DETAIL
1 1/2" = 1'-0"

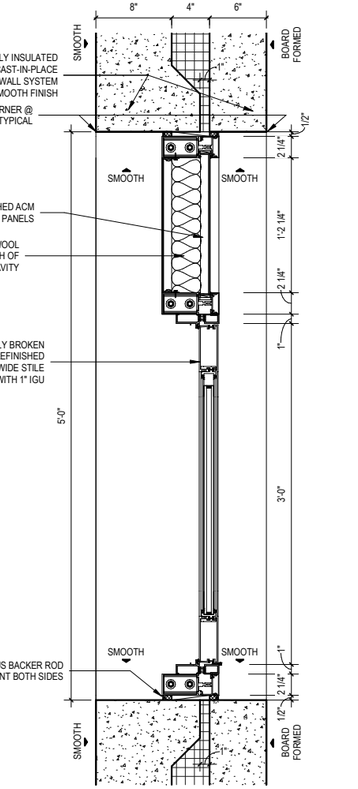


4 CURTAIN WALL PLAN DETAIL @ CORNER
1 1/2" = 1'-0" A-101

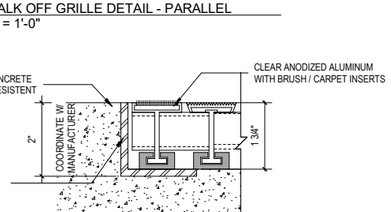
3 CURTAIN WALL PLAN DETAIL @ CORNER
1 1/2" = 1'-0" A-101



2 TYPICAL DOOR JAMB DETAIL
1 1/2" = 1'-0" A-101



1 TYPICAL DOOR JAMB DETAIL
1 1/2" = 1'-0" A-101



FG
DOOR TYPES
1/4" = 1'-0"

6 WALK OFF GRILLE DETAIL - PARALLEL
6" = 1'-0"

5 WALK OFF GRILLE DETAIL - PERPENDICULAR
6" = 1'-0"

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	EM/TZ	REVISED
			DRAWN BY	TZ	REVISED
	PLOT SCALE	As indicated	CHECKED BY	EM	REVISED
	PLOT DATE	05.15.20	DATE OF ISSUE	05.15.20	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF

BUILDING
A-601 DOOR & FRAME DETAILS
STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	58
		CONTRACT NO.	61G62	
		ILLINOIS	FED. AID PROJECT	

SYMBOLS LIST

SYMBOL	DESCRIPTION	SYMBOL	
	ANGLE GATE VALVE		NON-FREEZE WALL HYDRANT
	ALARM CHECK VALVE		OS&Y VALVE
	BALANCING COCK	TS	OS&Y WITH TAMPER SWITCH
	BALL VALVE / ISOLATION VALVE		P-TRAP
	CHECK VALVE		PRESSURE GAUGE
	DETECTOR CHECK VALVE WITH BY-PASS METER		PIPE CAP
	ELBOW DOWN		DESCRIPTION PUMP (TYPICAL)
	ELBOW UP		SHUT-OFF VALVE
	FLOOR CLEAN OUT		STRAINER
	FLOW ARROW		SIAMESE FIRE DEPT. CONNECTION
FS	FLOW SWITCH	TS	TAMPER SWITCH
	GLOBE VALVE		TEE DN
	HOSE BIB		TEE UP
BF	INLINE BACK FLOW PREVENTER		THERMOMETER
	MIXING VALVE		UNION
	WALL/PIPE CLEAN OUT		
	WALL SLEEVE		

SYSTEMS ABBREVIATIONS

ABBREVIATION	SYSTEM NAME
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
SAN	SANITARY
ST	STORM
V	VENT

PLUMBING ABBREVIATIONS

KEY NAME	COMMENT
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
ARCH	ARCHITECTURAL
BFP	BACKFLOW PREVENTER
BLD	BUILDING
BOP	BOTTOM OF PIPE
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CM	COFFEE MAKER
CO	CLEANOUT
CSW	COLD SOFT WATER
CV	CHECK VALVE
D	DRAIN
DET	DETAIL
DFU	DRAINAGE FIXTURE UNITS
DIA, Ø	DIAMETER
DN	DOWN
DT	FOUNDATION DRAIN TILE
DV	DRAIN VALVE
DWG	DRAWING
DWS	DOMESTIC WATER SERVICE
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
EP	ELEVATOR PUMP
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FF ELEV	FINISH FLOOR ELEVATION
FPC	FIRE PROTECTION CONTRACTOR
FT	FEET
GF	GLYCOL FILL STATION
GPM	GALLON PER MINUTE
HD	HUB DRAIN
ICW	INDUSTRIAL COLD WATER
KW	KILOWATT
LAV	LAVATORY
MAX	MAXIMUM
MB	MOP BASIN
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
NFWH	NON FREEZE WALL HYDRANT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	PUMP
PC	PLUMBING CONTRACTOR
PCP	PUMP CONTROL PANEL
PG	PRESSURE GAUGE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
PW	PRESSURIZED WASTE
REX	REMOVE EXISTING
RP	RECIRCULATION PUMP
SAIN	SANITARY WASTE
SK	SINK
SP	SUMP PUMP
SPEC	SPECIFICATION
ST	STORM, PUMP DISCHARGE TO MEET PRESSURIZED WASTE PIPING REQUIREMENTS
T&P	TEMPERATURE & PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TDH	TOTAL DYNAMIC HEAD
TEMP or T	TEMPERATURE
THX	THERMAL EXPANSION TANK
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VENT
VTR	VENT THRU ROOF
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WCO	YARD CLEANOUT
WHA	WATER HAMMER ARRESTER
WS	WATER SOFTENER
°	DEGREE
°F	DEGREES FAHRENHEIT
ø	DIAMETER

GENERAL PLUMBING NOTES:

APPLICABLE TO ALL PLUMBING DRAWINGS

1. DEFINITIONS

A. "FURNISH" MEANS TO "SUPPLY" AND USUALLY REFERS TO DELIVERY OF AN ITEM OF EQUIPMENT TO THE PROJECT SITE, READY FOR INSTALLATION. EQUIPMENT TO THE PROJECT SITE, READY FOR INSTALLATION.

B. "INSTALL" MEANS TO SET IN PLACE, CONNECT AND PLACE IN FULL OPERATIONAL ORDER.

C. PROVIDE" MEANS TO "FURNISH" AND "INSTALL".

D. "FUTURE", "BY OTHERS", "REFER (DISCIPLINE) DIVISION" AND SIMILAR EXPRESSIONS INDICATE WORK THAT MAY BE PERFORMED UNDER THE CONTRACT DOCUMENTS BUT, NOT NECESSARILY UNDER THE DIVISION OR DISCIPLINE ON WHICH THE NOTE APPEARS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK WITH SUPPLIERS, SUBCONTRACTORS, EMPLOYEES, ETC. SHOULD CLARIFICATION OF ANY PORTION OF THE WORK BE REQUIRED, CONTACT THE ARCHITECT/ENGINEER PRIOR TO SUBMITTING BID.

2. CODES

A. THE WORK SHALL COMPLY WITH LATEST ILLINOIS BUILDING CODE. THIS WOULD INCLUDE, BUT IS NOT LIMITED TO, THE CURRENT CITY BUILDING CODE. AMENDMENTS, NFPA, ANSI, OSHA, AND ALL OTHER LOCAL OR MUNICIPAL BUREAUS AND DEPARTMENTS WHICH HAVE AUTHORITY OVER THE PROJECT; ANYTHING IN THESE CONTRACT DOCUMENTS NOT WITHSTANDING. THIS SHALL NOT BE CONSTRUED AS WAIVING COMPLIANCE WITH ANY REQUIREMENTS OF THE PLANS AND SPECIFICATIONS WHICH MAY BE IN EXCESS OF ANY REQUIREMENTS OF THESE CODES.

3. INTERPRETATION OF THE DOCUMENTS

A. THE PLUMBING CONTRACTOR SHALL CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING THE MEASUREMENTS AND CONDITIONS UNDER WHICH CONSTRUCTION IS TO BE IMPLEMENTED. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS AND/OR SPECIFICATIONS, THE DISPUTED ISSUE SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE PLUMBING CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS WORK A COMPLETE AND READY-TO-USE INSTALLATION. IF NOT SO-STATED IN THE PLUMBING CONTRACTOR'S PROPOSAL, ANY SUCH WORK WILL NOT BE CONSIDERED ADDITIONAL.

4. COORDINATION

A. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED. ROUTING OF PIPING, DUCTWORK, CONDUITS, RACEWAYS, ETC. AS SHOWN ON THE DRAWINGS DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. TO THIS EXTENT, DATA GIVEN ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED.

B. THE PLUMBING CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL EXISTING AND NEW REQUIRED WORK AND EQUIPMENT WITH THAT OF THE OTHER TRADES. WHERE THERE ARE POTENTIAL CONFLICTS, THE PLUMBING CONTRACTOR SHALL OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, ETC. AT THE SITE AND SHALL SATISFACTORILY ADAPT HIS WORK TO ACTUAL FIELD CONDITIONS. ALL CHANGES TO EXISTING OR NEW PLUMBING EQUIPMENT, PIPES, FITTINGS, ETC. SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN THE COMPLETION DATE OF THE PROJECT.

C. REFER TO ARCHITECTURAL/MECHANICAL DRAWINGS FOR PLANS, ELEVATIONS AND DETAILS INDICATING THE LOCATIONS OF CEILING ELEMENTS (E.G., LIGHTS, SPRINKLERS, DIFFUSERS, ETC.) AND WALL ELEMENTS. CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS.

D. THE PLUMBING CONTRACTOR SHALL SUBMIT SKETCHES TO ARCHITECT FOR APPROVAL, PRIOR TO MAKING ANY BEAM PENETRATIONS.

E. COORDINATE & VERIFY WITH GENERAL CONTRACTOR AND RELATED DISCIPLINES PRIOR TO START OF ANY WORK, ALL WORK TO BE PERFORMED INSIDE OF THE 5'-0" BUILDING PERIMETER LIMITS OF CONSTRUCTION AND COORDINATED WITH OTHER TRADES TO MATCH WORK OUTSIDE.

F. ALL FLOOR MOUNTED EQUIPMENT NOT PROVIDED ON A SKID IS TO BE INSTALLED ON 4" THICK CONCRETE HOUSEKEEPING PAD.

G. THE PLUMBING CONTRACTOR SHALL GIVE ALL LOCATIONS AND DIMENSIONS OF ALL REQUIRED ACCESS PANELS TO THE GENERAL CONTRACTOR. GENERAL CONTRACTOR WILL SUBMIT TO THE ARCHITECT/ENGINEER FOR APPROVAL ALL FINISH REQUIREMENTS PRIOR TO INSTALLATION. THE PLUMBING CONTRACTOR SHALL FURNISH THE ACCESS PANELS. THE GENERAL CONTRACTOR SHALL INSTALL THE ACCESS PANELS.

H. ALL PIPING, VALVES AND DEVICES SHALL BE INSTALLED SO AS NOT TO OBSTRUCT ANY PORTION OF A WINDOW, DOORWAY, STAIRWAY OR PASSAGEWAY OR ANY PIECE OF MECHANICAL OR ELECTRICAL EQUIPMENT.

5. SITE EXAMINATION

A. THE PLUMBING CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, EXAMINE THE PREMISES, AND MAKE A THOROUGH SURVEY OF THE CONDITIONS UNDER WHICH CONSTRUCTION WILL BE IMPLEMENTED. THE PLUMBING CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. FAILURE TO DO SO SHALL NOT RELIEVE THE PLUMBING CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

B. WATER PRESSURE AND SUPPLY INFORMATION: FIELD VERIFY ALL PRESSURES AND CAPACITIES. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FLOW TEST INFORMATION.

C. CATCH BASINS AND MANHOLES ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR.

6. PERMITS

A. THE PLUMBING CONTRACTOR SHALL SECURE, OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, TAXES, LICENSES, AND FEES TO ALL GOVERNMENT AGENCIES REQUIRED FOR THE EXECUTION AND COMPLETION OF THE PLUMBING WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PREPARE AND SUBMIT ALL SHOP DRAWINGS AS REQUIRED TO THE GOVERNMENTAL AGENCIES AND UTILITY COMPANIES FOR THEIR APPROVAL.

7. SAFETY

A. THE PLUMBING CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE CLIENT'S EMPLOYEES, BUILDING EMPLOYEES AND GUESTS AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CABLE, EQUIPMENT, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

B. ALL PLUMBING ELEMENTS THAT ARE IN CONTACT WITH POTABLE / DRINKING WATER SHALL BE NSF 61 CERTIFIED.

8. CONTRACTOR'S DRAWING REVIEW

A. ALL CONTRACTORS/BIDDERS SHALL HAVE RECEIVED A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR REVIEW AND REFERENCE TO WORK INDICATED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR FINISHED CELING HEIGHTS, AND LOCATION OF WALL, ROOF, AND FLOOR OPENINGS. PIPE LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES OR COMMUNICATION CONDUITS.

B. THE PLUMBING CONTRACTOR SHALL CONFIRM THAT PIPE LOCATE SERVICES HAVE BEEN COMPLETED AND THAT NO POTENTIAL CONFLICTS EXIST BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING DEMOLISHED, REGARDLESS OF THE LOCATION ON THE PROPERTY. THIS SHALL BE REVIEWED WITH THE OWNER'S PROJECT REPRESENTATIVE.

9. STATEMENT OF WORK

A. THE PLUMBING CONTRACTOR SHALL PROVIDE THE COMPLETE PLUMBING INSTALLATION OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

B. PRIOR TO COMMENCEMENT OF WORK, THE PLUMBING CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, ANY SEQUENCE OF WORK, MOP'S (METHOD OF PROCEDURE) AND/OR COORDINATION SHOP DRAWINGS FOR THE INTENDED WORK.

C. THE PLUMBING CONTRACTOR SHALL REMOVE AL EXISTING EQUIPMENT AND MATERIALS PERTAINING TO THEIR CONTRACT AS SPECIFIED OR AS REQUIRED WEATHER SHOWN ON THE DRAWINGS OR NOT, TO PREPARE FOR THE NEW WORK.

D. THE PLUMBING CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION; FAILURE TO DO SO BEFORE CONDUCTING WORK WILL NOT CONSTITUTE LACK OF RESPONSIBILITY ON THE PART OF THE CONTRACTOR, AND ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

E. DISRUPTION OF ANY EXISTING SERVICES SHALL BE COORDINATED WITH THE OWNER, AND SHALL BE PERFORMED AT A TIME AND MANNER SO AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE.

10. WORK PERFORMANCE REQUIREMENTS

A. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL CODES. THESE CODES SHALL BE FOLLOWED AS A MINIMUM PROVIDING HIGHER GRADES OF MATERIAL AND WORKMANSHIP WHERE REQUIRED BY THESE DOCUMENTS. PROVIDE ALL TESTS REQUIRED BY CODE.

B. ALL PIPING PASSING THRU FLOORS, WALLS, CEILINGS OR ROOF SHALL HAVE A DUCTILE IRON PIPE SLEEVE INSTALLED AROUND THE PIPE AND/OR INSULATION. SLEEVES THROUGH FOUNDATION WALLS SHALL BE AT LEAST 2 PIPE SIZES LARGER THAN THE SERVICE PIPE.

C. PROVIDE AN ESCUTCHEON PLATE AROUND PENETRATIONS EXPOSED TO VIEW. ESCUTCHEON PLATES SHALL BE LARGE ENOUGH TO COVER THE ENTIRE HOLE. ALL PENETRATIONS SHALL BE SEALED TO MAINTAIN THE WALL/FLOOR/ROOF FIRE & INSULATION RATINGS.

D. ALL TEMPORARY WALL AND FLOOR OPENINGS SHALL BE PROTECTED AND MARKED AT ALL TIMES.

E. NO WELDING SHALL TAKE PLACE INSIDE OF OPERATING FACILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE OWNER'S PROJECT REPRESENTATIVE. WELDING SHALL NOT TAKE PLACE WITHIN 5 FEET OF ANY TELECOM EQUIPMENT RACK WITHOUT ADEQUATE PROTECTIVE MEASURES, AS DEEMED APPROPRIATE BY THE OWNER'S PROJECT REPRESENTATIVE.

F. TRENCHING, EXCAVATION, AND BACKFILL OPERATIONS SHALL BE IN ACCORDANCE WITH LOCAL BUILDING CODE

11. CUTTING AND PATCHING

A. ALL CUTTING, DRILLING AND PATCHING OF MASONRY STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THE PLUMBING CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTIONS OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE. PATCH ALL DISTURBED WALLS, CEILINGS AND FLOORS TO MATCH ADJACENT SURFACES AS NECESSARY.

12. EQUIPMENT

A. THE PLUMBING CONTRACTOR SHALL PROVIDE PROPER WORKING CLEARANCE IN FRONT AND AROUND EQUIPMENT PER THE MANUFACTURERS RECOMMENDATIONS.

13. SANITARY, STORM & VENT

A. ALL SANITARY AND STORM PIPING SHALL SLOPE AT 1/4" PER FOOT FOR 2-1/2" AND SMALLER, AT 1/8" PER FOOT FOR 3" TO 6", AND 1/16" FOR 8" AND LARGER PIPING UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

B. ALL HORIZONTAL DRAINS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NO MORE THAN 50 FEET APART FOR DRAINS 4" OR LESS, 100 FEET FOR DRAINS 6" & 8", AND 150 FEET FOR DRAINS 10" OR LARGER. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION OF THE DRAINAGE PIPE GREATER THAN 45 DEGREES.

C. THE DIAMETER OF ALL VENTS SHALL BE AT LEAST ONE-HALF THE DIAMETER OF THE DRAIN LINE SERVED BUT NOT LESS THAN 1-1/2".

D. RUN NEW WASTE PIPES AS CLOSE AS POSSIBLE TO UNDERSIDE OF FLOOR SLAB AND VENT PIPING AS CLOSE AS POSSIBLE TO SLAB ABOVE.

E. IN AREAS SUCH AS MECHANICAL/ELECTRICAL ROOMS, WHERE A TRAP SEAL IS SUBJECT TO LOSS BY EVAPORATION, PROVIDE A DEEP SEAL TRAP (CONSISTING OF A 4-INCH SEAL), A TRAP FILLED WITH MINERAL OIL, OR A TRAP PRIMER PER MANUFACTURERS REQUIREMENTS

14. MATERIALS

A. UNDERGROUND STORM, DRAINAGE, AND VENT PIPE SHALL BE: CAST-IRON PIPE, HUB SPIGOT: ASTM A-74; ASTM A-888; CISPI 301

B. ABOVE-GROUND STORM, DRAINAGE AND VENT PIPE SHALL BE: CAST-IRON PIPE, HUB & SPIGOT: ASTM A-74; CISPI 301; ASTM A888 COPPER OR COPPER-ALLOY PIPE: ASTM B-42; ASTM B-302 COPPER OR COPPER-ALLOY TUBING (TYPE K OR L): ASTM 75; ASTM B-88; ASTM B-251; ASTM B-306 GALVANIZED STEEL PIPE: ASTM A-53

C. GASKETED BELL AND SPIGOT C.I. PIPING IS RESERVED FOR UNDERGROUND USE. ABOVE GROUND SHALL BE CAULKED JOINTS.

15. ADDITIONAL REQUIREMENTS

A. FOR EXACT LOCATION OF PLUMBING FIXTURES, REFER TO ARCHITECTURAL PLANS AND ELEVATIONS.

B. PROVIDE ACCESS TO ALL VALVES AND SYSTEM COMPONENTS REQUIRING ACCESS. ALL PIPING ACCESSORIES AND EQUIPMENT IN MECHANICAL ROOMS SUCH AS ISOLATION VALVES, RECIRCULATION PUMPS, ETC. SHALL BE INSTALLED AT A REASONABLE HEIGHT IN ORDER TO FACILITATE MAINTENANCE.

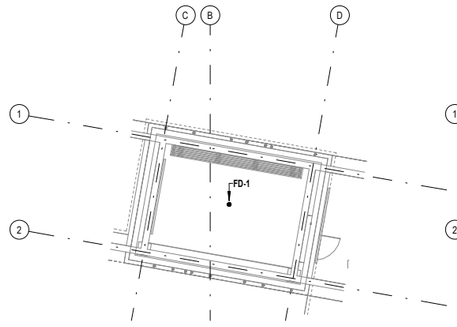
C. FACTORY MUTUAL RESEARCH CORPORATION APPROVED EQUIPMENT SHALL BE PROVIDED WHERE APPLICABLE AND DETAILS OF THE INSTALLATIONS SHALL CONFORM TO FACTORY MUTUAL' S RECOMMENDED PRACTICES

16. AS-BUILT DRAWINGS

A. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL "AS-BUILT" DRAWINGS SCALED 1/4" MINIMUM AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER.

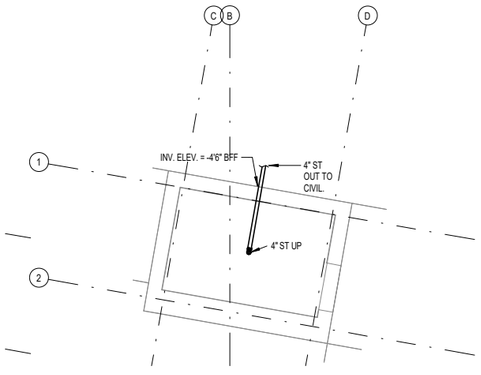
B. SUBMIT ASSEMBLED PRINTED INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF EACH ITEM INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS.

GENERAL NOTE: NOT ALL SYMBOLS, NOTES AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT



2 **NORTH WARMING SHELTER - PLUMBING PLAN**
1/8" = 1'-0"

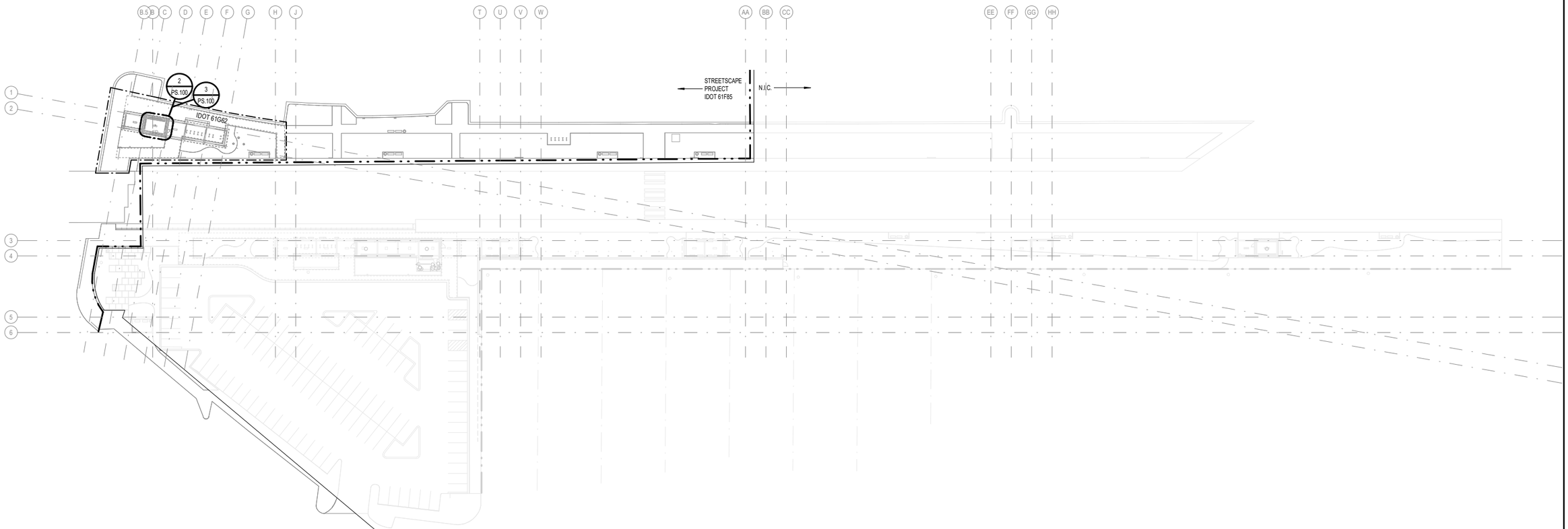
0' 4' 8' 16' 32'



3 **NORTH WARMING SHELTER - UNDERGROUND PLUMBING PLAN**
1/8" = 1'-0"

0' 4' 8' 16' 32'

DRAINS - STREETSCAPE								
		DESIGN OPTION 1		DESIGN OPTION 2		DESIGN OPTION 3		
TAG	FIXTURE	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	REMARKS
FD-1	FLOOR DRAIN	MIFAB	F1100	WATTS	FD-100	ZURN	Z415	FINISH TO BE CHROME OR BRUSHED NICKEL



1 **STREETSCAPE PLUMBING SITE PLAN**
1" = 40'-0"

0' 20' 40' 80' 160'

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	LU	REVISED
		DRAWN BY	AZ	REVISED
PLOT SCALE	As indicated	CHECKED BY	LU	REVISED
PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET OF

BUILDING
PS.100 PLUMBING SITE PLAN
STA. TO STA.

F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	60
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

ELECTRICAL OPTIONS AND MOUNTING CODES

DEVICE OPTIONS

ABBRV	DESCRIPTION
TP	TAMPER PROOF TYPE DEVICE AND COVER
WP	WEATHER PROOF TYPE DEVICE AND COVER
WG	WIRE GUARD DEVICE AND COVER
VR	VANDEL RESISTANT DEVICE AND COVER
GFI	GROUND FAULT INTERRUPTION AND PROTECTION
STI	SHUNT TRIP INTERRUPTION AND PROTECTION
USB	USB CHARGER DEVICE
(XXX)	ARCHITECTURAL EQUIPMENT REFER TO SCHEDULE DWGS FOR EQUIPMENT SCHEDULES FOR CIRCUIT INFORMATION

FIRE ALARM DETECTION

- [S] INTELLIGENT MANUAL PULL STATION
- [SD] INTELLIGENT SMOKE DETECTOR
- [MM] INTELLIGENT MONITOR MODULE
- [AV] AUDIBLE AND VISUAL ALARM DEVICE
- [FACP] FIRE ALARM CONTROL PANEL

RECEPTACLES

- WALL MOUNTED DUPLEX RECEPTACLE
- WALL MOUNTED QUAD RECEPTACLE
- RECESSED FLOOR BOX MOUNTED DUPLEX REC
- WALL MOUNTED NEMA RECEPTACLE
- ABOVE COUNTER MOUNTED DUPLEX RECEPTACLE 48" AFF

RISER ELECTRICAL DIAGRAM/SYMBOLS

- POLY PHASE TRANSFORMER
- POTENTIAL TRANSFORMER
- CURRENT TRANSFORMER
- GROUND
- CONTACTOR
- CIRCUIT BREAKER
- SINGLE THROW SWITCH
- FUSE

CONDUITS RACEWAYS WIREWAYS & J-BOXES

- (J) JUNCTION BOX
- (J) JUNCTION BOX - WALL MOUNTED
- [H] HAND HOLE

LIGHT FIXTURE MOTOR, LISTED-EQUIPMENT, SWITCHES-OPERATORS

3 $ A K

"a-z"	SWITCH LEG CONTROL LETTER CODE(S)
"3W"	THREE WAY SWITCH
"4W"	FOUR WAY SWITCH
"K"	KEY OPERATED SWITCH
"O"	OCCUPANCY SENSOR SWITCH
"T"	THERMAL SWITCH
"WS"	WALL SWITCH

LTG SWITCHES SHOWN ON LTG PLAN VIEWS, EQP SWITCHES SHOWN ON PWR PLAN VIEWS

$ SINGLE POLE TWO-POSITION 20A TOGGLE SWITCH U.N.O. ON THE DWGS WITH SUBSCRIPT CODE(S)

(OS) CEILING MOUNTED DUAL TECHNOLOGY 360° OCCUPANCY SENSOR, UNLESS NOTED OTHERWISE

$ WALL SWITCH MOUNTED PASSIVE INFRARED 180° OCCUPANCY SENSOR

(PB) PUSH BUTTON TIMER FOR ELECTRICAL INFRARED HEATER

EXIT SIGNS

X1 2 #2A EXIT-STAIR-FIRE ESCAPE LIGHTING FIXTURE

X1	INDICATES EXIT FIXTURE TYPE, REFER TO EXIT LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION, CAT #, AND MOUNTING.
"Z"	INDICATES BRANCH CIRCUIT NUMBER
"#3"	INDICATES VISUAL SIGNAGE TYPE SEE DESCRIPTION BELOW

#3 #5A #6 #8A #9 #11A #12 EXIT-STAIR-FIRE ESCAPE DIRECTIONAL SIGN NO. INDICATE INSCRIPTION, ARROWS AND SINGLE OR DOUBLE FACED AS SHOWN IN THE FOLLOWING SCHEDULE:

SYMBOLS
CEILING MOUNTED - SINGLE FACE | CEILING MOUNTED - DOUBLE FACE | WALL MOUNTED

SINGLE FACE		DOUBLE FACE		SINGLE FACE	
#2A	'STAIRS'	#17A	'STAIRS'	#2B	'FIRE ESCAPE'
#3	'EXIT'	#18	'EXIT'	#5B	'FIRE ESCAPE'
#5A	'STAIRS'	#20A	'STAIRS'	#8B	'FIRE ESCAPE'
#6	'EXIT'	#21	'EXIT'	#11B	'FIRE ESCAPE'
#8A	'STAIRS'	#23A	'STAIRS'	DOUBLE FACE	
#9	'EXIT'	#24	'EXIT'	#17B	'FIRE ESCAPE'
#11A	'STAIRS'			#20B	'FIRE ESCAPE'
#12	'EXIT'			#23B	'FIRE ESCAPE'

REMARKS:
1. ALL WORK AND EQUIPMENT SHALL BE NEW.
2. ALL CONDUIT SHALL BE 3/4" MINIMUM. ALL CONDUCTORS SHALL NE #12 THHN, MINIMUM.
3. PROVIDE #10 THHN CONDUCTORS FOR CIRCUITS INSTALLED 150FT AND ABOVE.

LIGHTING LUMINAIRES

LIGHTING FIXTURE

F2 3A
F5 3A

"F2"	INDICATES FIXTURE TYPE REFER TO LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND MOUNTING.
"3"	INDICATES BRANCH CIRCUIT NUMBER
"A"	INDICATES SWITCH CONTROL LETTER CODE

PANELBOARDS AND CONTROLLERS

- FLUSH MOUNTED PANEL - SEE DESCRIPTION FOR TYPE
- SURFACE MOUNTED PANEL - SEE DESCRIPTION FOR TYPE
- FREE STANDING RACK/CABINET/HOUSING

ABBREVIATIONS

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
CB	CIRCUIT BREAKER
CCT	CIRCUIT
CO	CONDUIT ONLY
CP	CONTROL PANEL
DISC	DISCONNECT
DN	DOWN
DPDT	DOUBLE POLE DOUBLE THROW
EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FCU	FAN COIL UNIT
FPB	FAN POWERED BOX
GRD	GROUND
JB	JUNCTION BOX
KV	KILOVOLT
KW	KILOWATT
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED (CONTACTS)
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN (CONTACTS)
NTS	NOT TO SCALE
PNL	PANEL
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
RCP	REFLECTED CEILING PLAN
SEC	SECONDARY
SPDT	SINGLE POLE DOUBLE THROW
SW	SWITCH
T	TELEPHONE
TP	TAMPER PROOF
UH	UNIT HEATER
WP	WEATHERPROOF
WT	WATERTIGHT

GENERAL ELECTRICAL NOTES

APPLICABLE TO ALL ELECTRICAL DRAWINGS

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THE CONTRACTOR SHALL CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING THE MEASUREMENTS AND CONDITIONS UNDER WHICH CONSTRUCTION IS TO BE IMPLEMENTED. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS AND/OR SPECIFICATIONS, THE DISPUTED ISSUE SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS WORK A COMPLETE AND READY-TO-USE INSTALLATION. IF NOT SO-STATED IN THE CONTRACTOR'S PROPOSAL, ANY SUCH WORK WILL NOT BE CONSIDERED ADDITIONAL.

4. COORDINATION

THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED. TO THIS EXTENT, DATA GIVEN ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL REQUIRED WORK AND EQUIPMENT WITH THAT OF THE OTHER TRADES. WHERE THERE ARE POTENTIAL CONFLICTS, THE CONTRACTOR SHALL OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, ETC. AT THE SITE AND SHALL SATISFACTORILY ADAPT HIS WORK TO ACTUAL FIELD CONDITIONS. REFER TO ARCHITECTURAL/MECHANICAL DRAWINGS FOR PLANS, ELEVATIONS AND DETAILS INDICATING THE LOCATIONS OF CEILING ELEMENTS (E.G., LIGHTS, SPRINKLERS, DIFFUSERS, ETC.) AND WALL ELEMENTS. CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS.

5. SITE EXAMINATION

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS. VISIT THE SITE, EXAMINE THE PREMISES, AND MAKE A THOROUGH SURVEY OF THE CONDITIONS UNDER WHICH CONSTRUCTION WILL BE IMPLEMENTED. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. FAILURE TO DO SO SHALL NOT RELEIVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

6. PERMITS

THE CONTRACTOR SHALL SECURE, OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, TAXES, LICENCES, AND FEES TO ALL GOVERNMENT AGENCIES REQUIRED FOR THE EXECUTION AND COMPLETION OF THE ELECTRICAL WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PREPARE AND SUBMIT ALL SHOP DRAWINGS AS REQUIRED TO THE GOVERNMENTAL AGENCIES AND UTILITY COMPANIES FOR THEIR APPROVAL.

7. SAFETY

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE CLIENT'S EMPLOYEES, BUILDING EMPLOYEES AND GUESTS AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CABLE, EQUIPMENT, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

8. CONTRACTOR'S DRAWING REVIEW

ALL CONTRACTORS/BIDDERS SHALL HAVE RECEIVED A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR REVIEW AND REFERENCE TO WORK INDICATED. CONDUIT LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES OR COMMUNICATION CONDUITS. THE CONTRACTOR SHALL CONFIRM THAT CONDUIT LOCATE SERVICES HAVE BEEN COMPLETED AND THAT NO POTENTIAL CONFLICTS EXIST BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING DEMOLISHED, REGARDLESS OF THE LOCATION ON THE PROPERTY. THIS SHALL BE REVIEWED WITH THE OWNER'S PROJECT REPRESENTATIVE.

9. STATEMENT OF WORK

THE CONTRACTOR SHALL PROVIDE THE COMPLETE ELECTRICAL INSTALLATION OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS. PRIOR TO COMMENCEMENT, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, ANY SEQUENCE OF WORK, MOP'S (METHOD OF PROCEDURE) AND/OR COORDINATION SHOP DRAWINGS FOR THE INTENDED WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.

10. WORK PERFORMANCE REQUIREMENTS

ANY PENETRATIONS OR OPENINGS IN FIRE-RATED PARTITIONS (WALLS OR FLOORS) SHALL BE CLOSED AT THE END OF EACH WORK DAY, OR WHENEVER IT IS ANTICIPATED THAT NO FURTHER WORK WILL OCCUR IN THAT OPENING DURING THE DAY. THIS INCLUDES ALL TEMPORARY OPENINGS. CLOSURE SHALL BE IN COMPLIANCE WITH FIREPROOFING TEMPORARY OPENINGS. CLOSURE SHALL BE IN COMPLIANCE WITH FIREPROOFING END OF EACH WORK DAY. ALL TEMPORARY WALL AND FLOOR OPENINGS SHALL BE PROTECTED AND MARKED AT ALL TIMES. PAINTING SHALL BE SCHEDULED SUCH THAT DRYING TIME OCCURS DURING NON-WORKING HOURS FOR OPERATIONS PERSONNEL COMFORT. NO WELDING SHALL TAKE PLACE INSIDE OF OPERATING FACILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE OWNER'S PROJECT REPRESENTATIVE. ALL THREE-PHASE PANELS SERVING SINGLE-PHASE LOADS SHALL BE BALANCED WITHIN 10 PERCENT, USING AMMETER READINGS. MEASUREMENTS SHALL BE TAKEN AT THE END OF CONSTRUCTION AND AGAIN AFTER 30 DAYS IN SERVICE.

11. CUTTING AND PATCHING

ALL CUTTING, DRILLING AND PATCHING OF MASONRY STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTIONS OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE.

12. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE ALL "AS-BUILT" DRAWINGS SACLED 1/4" MINIMUM AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER.

13. TEMPORARY POWER AND LIGHTING

THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING FOR THIS WORK DURING CONSTRUCTION. TEMPORARY LIGHTING SHALL AT LEAST BE THE EQUAL OF (1)100-WATT FIXTURE EVERY 100 SQUARE FEET, WITH A MINIMUM ONE FIXTURE PER ROOM. TEMPORARY LIGHTING SHALL BE LEFT IN PLACE UNTIL PERMANENT LIGHTING IS COMPLETELY OPERATIONAL. COORDINATE TEMPORARY POWER REQUIREMENTS WITH THE OTHER TRADES AND PROVIDE ADEQUATE PROVISIONS. THE CONTRACTOR SHALL PERFORM ALL COORDINATION WITH THE OWNER AND/OR LANDLORD AND UTILITY COMPANY.

14. SWITCH AND RECEPTACLE IDENTIFICATION

PROVIDE MACHINE-PRINTED, PRESSURE SENSITIVE, ABRASION RESISTANT LABEL TAPE ON FACE OF ALL DEVICE PLATES TO IDENTIFY THE PANELBOARD AND CIRCUIT NUMBER FROM WHICH EACH DEVICE IS SERVED.

15. PANELBOARDS

ALL PANELBOARDS IN WHICH WORK OCCURS PER THESE DOCUMENTS, SHALL BE PROVIDED WITH UPDATED-COMPUTER GENERATED DIRECTORIES. GIVEN ONLY FOR CLARITY AND QUANTITY, CIRCUIT NUMBERS SHOWN IN THE PLANS MAY NOT NECESSARILY REPRESENT ACTUAL CIRCUIT NUMBERS IN PANELBOARD. FROM FLUSH-MOUNTED PANELBOARDS, STUB-OUT ONE 3/4" CONDUIT INTO THE CEILING CAVITY FOR EACH SET OF 3 SPARES AND/OR SPACES OR FRACTION THEREOF. REFER TO TRAIN STATION SCOPE PROJECT FOR ALL CIRCUITS WHICH ARE SPECIFICALLY IDENTIFIED FOR THE TRAIN SCAPE PROJECT.

16. WIRING

UNLESS NOTED OTHERWISE, ALL WIRE AND CABLE SHALL BE 600-VOLT COPPER CONDUCTORS WITH TYPE "THHN/THWN" INSULATION. MINIMUM WIRE SIZE SHALL BE #12 AWG FOR LIGHTING AND POWER CIRCUITS AND #14 AWG FOR CONTROL CIRCUITS. PROVIDE GROUNDING FOR CIRCUITS PER BUILDING CODE. UNLESS SPECIFICALLY NOTED OTHERWISE IN THE PLANS, ALL CABLING SHALL BE (2) #12 AND (1) #12 G IN 3/4" C. (NO SHARED NEUTRALS).

17. CONDUIT/RACEWAY SYSTEMS

THE CONDUIT ROUTINGS INDICATED ARE ONLY DIAGRAMMATIC IN NATURE. FIELD CONDITIONS SHALL DICTATE THE CONTRACTOR'S EXACT CONDUIT ROUTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER THE NATIONAL ELECTRICAL CODE AND FOR COORDINATION WITH OTHER DISCIPLINES. ALL EXPOSED RACEWAYS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS OR STRUCTURAL MEMBERS, SUCH AS TO FOLLOW STRUCTURAL SURFACE CONTOURS AND NOT OBSTRUCT PASSAGEWAYS. MULTIPLE RACEWAYS SHALL BE RUN TOGETHER, IN GROUPING. ALL EXPOSED CONDUIT SHALL BE ROUTED PERPENDICULAR, PARALLEL AND TIGHT TO COLUMNS AND BEAMS. ALL EXPOSED CONDUIT SHALL BE COORDINATED WITH THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION. EXTRA TIME SHOULD BE ALLOWED FOR THIS REVIEW AND APPROVAL. NO ADDITIONAL COST TO OWNER WILL BE ALLOWED DUE TO LACK OF COORDINATION. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT) AND MINIMUM SIZE SHALL BE 3/4" UNLESS NOTED OTHERWISE. CONNECTORS AND COUPLINGS SHALL BE INSULATED-THROAT COMPRESSION TYPE ONLY. RIGID GALVANIZED-STEEL (RGS) CONDUIT SHALL BE USED WHEN CONDUIT IS INSTALLED IN OUTDOOR AREAS OR WHERE OTHERWISE EXPOSED TO PHYSICAL HARM. EMERGENCY SYSTEMS SHALL BE RUN IN SEPARATE RACEWAY/CONDUIT SYSTEM(S). A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PULLED WITH THE CIRCUIT CONDUCTORS, WHETHER OR NOT INDICATED ON THE DRAWINGS. METAL RACEWAY OR CABLE ARMOR/SHEATH SHALL NOT BE USED AS THE PRIMARY EQUIPMENT GROUNDING CONDUCTOR. RACEWAY SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS AND SHALL BE BONDED AT ALL POINTS TO THE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ACCORDANCE WITH THE APPLICABLE PROVISIONS IN ARTICLE 250 OF NATIONAL ELECTRICAL CODE. NOTE THAT METRA REQUIRES ALL CONDUIT RACEWAYS TO BE CONCEALED FROM VIEW, NO EXCEPTIONS. IF APPROVED BY METRA, ENGINEER/ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.

18. EQUIPMENT

ALL MATERIALS AND EQUIPMENT PROVIDED IN THIS WORK SHALL BE NEW AND SHALL HAVE THE APPROPRIATE UL LISTING AND/OR FM APPROVAL. UNLESS NOTED OTHERWISE, DISCONNECT/SAFETY SWITCHES SHALL BE NON-FUSED HEAVY-DUTY 600-VOLT TYPE. INDOOR ENCLOSURES SHALL BE NEMA 1 AND OUTDOOR ENCLOSURES SHALL BE NEMA 3R.

19. MISCELLANEOUS SUPPORTING MEMBERS

ALL ANGLES, CHANNELS, AND OTHER MISCELLANEOUS STEEL, BOLTS, THREADED RODS, ETC., REQUIRED TO SUPPORT LIGHT FIXTURES, LADDER TRAY OR OTHER ELECTRICAL EQUIPMENT OR DEVICES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL THREADED RODS SHALL BE A MINIMUM OF 3/8" IN DIAMETER. ALL LIGHTING FIXTURES AT SUSPENDED CEILINGS SHALL BE PROPERLY SUPPORTED.

20. ELECTRICAL AND TECHNOLOGY ALTERATION AND DEMOLITION:

A. A COMPLETE AND ACCURATE DESCRIPTION OF ALL ELECTRICAL WORK WITHIN THE AFFECTED AREAS CANNOT BE ACCOMPLISHED THROUGH THE MEDIA OF DRAWINGS AND SPECIFICATIONS. IN EVERY CASE WHERE SUCH EXISTING ELECTRICAL WORK PREVENTS PROPER CONSTRUCTION OF NEW WORK AS INDICATED, PERFORM WHATEVER WORK AND PROVIDE WHATEVER MATERIALS ARE REQUIRED IN ORDER TO REMOVE, REROUTE, RELOCATE OR IN OTHER WAYS ALTER THAT EXISTING INTERIOR AND/OR SITE ELECTRICAL AND TECHNOLOGY WORK, SUCH PERFORMANCE AS GENERALLY OUTLINED HEREIN AND AS IS FOUND NECESSARY UNDER FIELD CONDITIONS SHALL BE CONSIDERED IS INCLUDED UNDER THE CONTRACT.

B. EXISTING ELECTRICAL MATERIALS AND EQUIPMENT, INCLUDING INTERIOR AND/OR SITE LIGHTING FIXTURES, SWITCHES, RECEPTACLES, SIGNAL LIGHTS, SPEAKERS, INTERCOM EQUIPMENT, EMERGENCY CALL PHONES, CONTROLS, CONDUIT OUTLETS, FITTINGS, WIRE, CABLE AND OTHER DEVICES WHICH AREA REMOVED AS A RESULT OF THE ALTERATIONS SHALL BE STORED ON THE SITE AS DIRECTED.

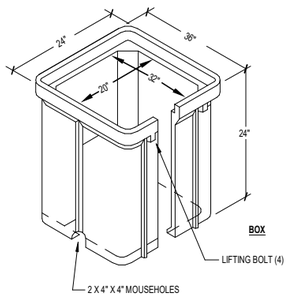
C. ALL ITEMS OF EXISTING EQUIPMENT, MATERIALS, FIXTURES, ETC. SHALL REMAIN THE PROPERTY OF THE BUILDING OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION SHALL BE RETAINED AND TURNED OVER TO THE BUILDING OWNER.

D. LEGALLY DISPOSE ALL ITEMS REJECTED OR UNWANTED BY THE BUILDING OWNER. EXISTING ELECTRICAL MATERIALS AND EQUIPMENT, WITH THE EXCEPTION OF WIRE AND CABLE, AS GENERALLY OUTLINED IN THE PREVIOUS PARAGRAPH, SHALL BE REUSED AS COMPLETELY AS IS FOUND PRACTICAL. EXAMINE THE CONDITION OF SUCH MATERIALS AND EQUIPMENT AND MAKE A PRIOR DETERMINATION OF WHETHER IT IS SUITABLE FOR REUSE. PRESENT FINDINGS PERIODICALLY TO THE ARCHITECT WHO IN TURN WILL MAKE THE FINAL DECISION REGARDING REUSABILITY. ALL WIRE AND CABLE SHALL BE NEW.

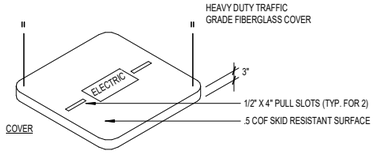
E. THIS CONTRACTOR SHALL REPAIR ALL DAMAGES TO EXISTING CONSTRUCTION DUE TO DEMOLITION, ALTERATIONS, OPERATION OR INSTALLATION OF NEW WORK.

F. THIS CONTRACTOR SHALL PERFORM ALL INTERIOR AND/OR SITE CUTTING AND PATCHING FOR ELECTRICAL AND TECHNOLOGY WORK UNLESS NOTED OTHERWISE.

GENERAL NOTE: NOT ALL SYMBOLS, NOTES AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT



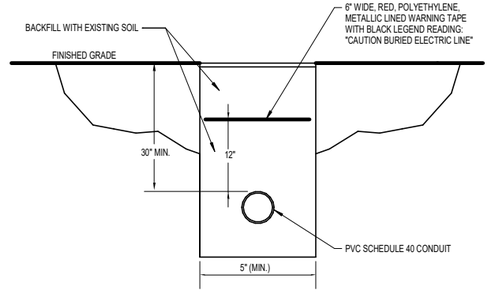
BOX



NOTES:

1. COORDINATE DEPTH OF HANDHOLES WITH EXISTING CONDITIONS IN THE FIELD. CONTRACTOR SHALL PROVIDE EXTENSION BOXES AS REQUIRED.
2. PROVIDE CRUSHED STONE BELOW HANDHOLE FOR DRAINAGE.
3. HANDHOLES SHOULD BE LOCATED PARALLEL TO ADJACENT PAVING. REVIEW LOCATIONS ONSITE WITH ENGINEER AND ARCHITECT PRIOR TO FINAL INSTALLATION

2 **OPEN BOTTOM HAND HOLE DETAIL**
NTS



3 **TYPICAL DIRECT BURIED CONDUIT DETAIL**
NTS

POWER NOTES

1. PROVIDE NEW PVC UNDERGROUND 2" PVC SCHEDULE 40 CONDUITS BETWEEN NEW HANDHOLE TO NEW CANOPY/SHELTER FOR NEW INFRARED HEATER CIRCUITS, LIGHTING AND RECEPTACLE CIRCUITS. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION
2. EXISTING UNDERGROUND HANDHOLE #1 TO BE REPLACED WITH A NEW 24" X 36" HANDHOLE IN ORDER TO ACCOMMODATE NEW BRANCH SYSTEM CIRCUITS (SNOW MELT SYSTEM, SHELTER INFRARED HEATERS, LIGHTING AND RECEPTACLE AND PLATFORM POLE LIGHT CIRCUITS). BY TRAIN STATION PROJECT CONTRACTOR STREET SCAPE PROJECT CONTRACTOR SHALL CONNECT PROVIDE ALL NEW BRANCH CIRCUITS (CONDUIT AND WIRING) FOR STREET SCAPE SIDE CIRCUITS TO EXISTING WITHIN EXISTING HANDHOLE #1. THE TRAIN STATION(IN BOUND SIDE) PROJECT CONTRACTOR TO PROVIDE ALL REQUIRED STREET SCAPE (OUT BOUND SIDE) BRANCH CIRCUITS FROM ELECTRICAL ROOM LOCATED ON TRAIN SCAPE SIDE TO HANDHOLE #1 VIA EXISTING 4" UNDERGROUND CONDUIT CURRENTLY ROUTED UNDER TRAIN TRACKS. STREET SCAPE CONTRACTOR SHALL THEN CONNECT AND EXTEND NEW STREET SCAPE BRANCH CIRCUITS LOCATED WITHIN HANDHOLE #1.
3. PROVIDE A NEW UNDERGROUND 2" PVC SCHEDULE 40 CONDUIT BETWEEN NEW HANDHOLES FOR NEW SNOW MELT SYSTEM CIRCUITS.
4. COORDINATE SNOWMELT CABLES WITH TRENCH DRAIN. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION
5. PROVIDE A NEW UNDERGROUND HANDHOLE IN ORDER TO ACCOMODATE NEW INFRARED HEATERS, LIGHTING AND RECEPTACLES LOCATED IN SHELTER.

GENERAL SCOPE NOTE

1. STREET SCAPE (OUT BOUND SIDE) PROJECT CONTRACTOR SHALL PROVIDE ALL BRANCH CIRCUITS (SNOW MELT SYSTEM, INFRARED HEATERS, LIGHTING, RECEPTACLES, VOM SYSTEM, ETC. ASSOCIATED WITH STREET SCAPE SHELTER). STREET SCAPE CONTRACTOR SHALL PROVIDE NEW BRANCH CIRCUITS AND CONNECT TO EXISTING WIRING LOCATED WITHIN NEW UNDERGROUND HANDHOLE #1 WITH HIGH COMPRESSION IN-LINE SPLICES. COORDINATE WITH IN BOUND (TRAIN STATION SIDE) PROJECT CONTRACTOR PRIOR TO ROUGH-IN.

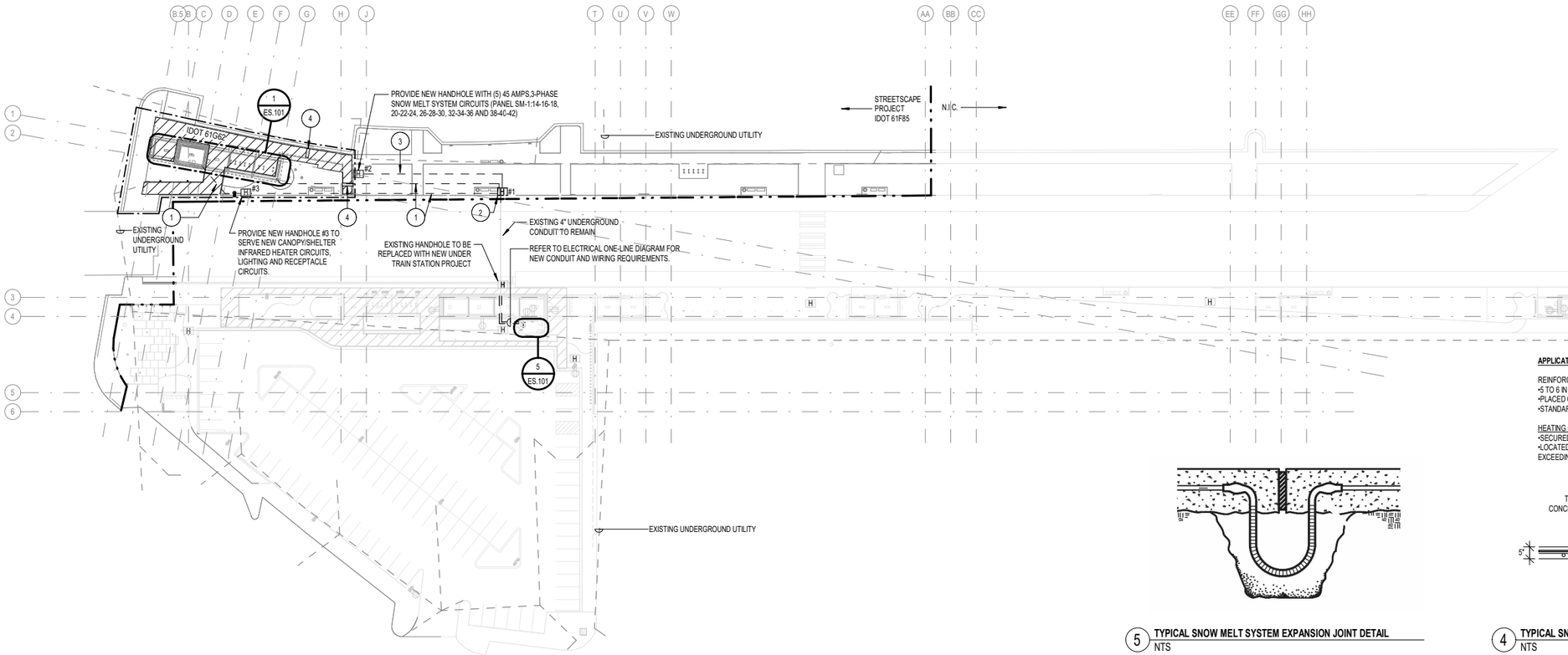
GENERAL SHEET NOTES

1. COORDINATE ALL UNDERGROUND CONDUIT ROUTING WITH CIVIL PLANS AND EXISTING UNDERGROUND UTILITIES.
2. COORDINATE ALL SITE DEMOLITION WORK WITH CIVIL PLANS.
3. CONTRACTOR SHALL PROVIDE ALL SAW-CUTTING, OF PAVEMENT EXCAVATING, TRENCHING AND BACK-FILLING TO MATCH EXISTING FINISHED SURFACE FOR INSTALLATION OF ALL NEW CONDUITS AND HAND HOLES. COORDINATE WITH CIVIL. CONTRACTOR SHALL USE EXTREME CAUTION WHEN SAWCUTTING FLOOR SLAB WHERE SNOW MELT SYSTEM IS LOCATED

LEGEND

AREA WHERE SNOW MELT SYSTEM TO BE PROVIDED

PROVIDE ALL SNOW CONTROLLERS, CONDUIT AND WIRING (LINE VOLTAGE AND LOW VOLTAGE) INCLUDING ALL IN-GROUND PAVEMENT SNOW MELT SENSORS, HEATING CABLES AND AERIAL SNOW SENSORS FOR A COMPLETE AND OPERATIONAL SNOW MELT SYSTEM.



1 **STREETSCAPE ELECTRICAL SITE PLAN**
1" = 40'-0"

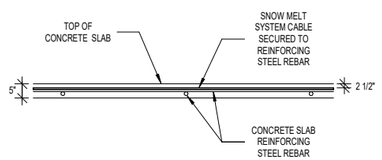
0' 20' 40' 80' 160'

APPLICATION REQUIREMENTS FOR SNOW MELT SYSTEM:

REINFORCED CONCRETE;
•5 TO 6 IN (10 TO 15 CM) THICK
•PLACED ON GRADE
•STANDARD DENSITY

HEATING CABLE:
•SECURED TO REINFORCING STEEL, MESH OR WITH PRE-PUNCHED STRAPPING
•LOCATED APPROXIMATELY 2 IN (5 CM) BELOW FINISHED SURFACE, BUT NOT EXCEEDING 3 IN (7.5 CM)

5 **TYPICAL SNOW MELT SYSTEM EXPANSION JOINT DETAIL**
NTS



4 **TYPICAL SNOW MELT SYSTEM SLAB INSTALLATION DETAIL**
NTS

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	VA	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLARENDON HILLS DOWNTOWN REVITILIZATION	BUILDING ES.100 ELECTRICAL SITE PLAN	F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			DRAWN BY	VA	REVISED				1003	16-00045-01-MS	DUPAGE	79	62
	PLOT SCALE	As indicated	CHECKED BY	VA	REVISED						CONTRACT NO.	61G62	
	PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED		SCALE: As indicated SHEET OF	STA. TO STA.		ILLINOIS	FED. AID PROJECT		

POWER NOTES

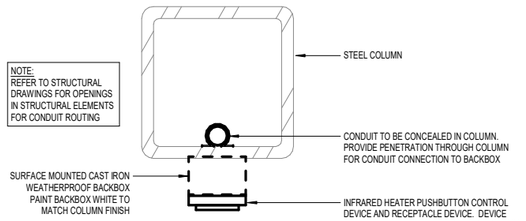
1. PROVIDE GREY RECEPTACLES WITH BRUSHED STAINLESS STEEL COVERPLATE.
2. PROVIDE GREY RECEPTACLES WITH USB CHARGING AND BRUSHED STAINLESS STEEL COVERPLATE. RECEPTACLES SHALL BE CENTERED UNDER FRONT FACE OF BENCH UNLESS OTHERWISE NOTED. RECEPTACLES MUST BE GFCI WITH WP COVERS IF EXPOSED TO THE ELEMENTS PER CODE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT. CONTRACTOR SHALL PRE-SET / EMBED RECEPTACLE BACKBOX WITHIN CONCRETE PRIOR TO ROUGH-IN FOR A FULLY RECESSED RECEPTACLE DEVICE INSTALLATION.
3. PROVIDE JUNCTION BOX FOR HARDWIRED 120V, 20A, SINGLE PHASE POWER CONNECTION TO ACCESS CONTROL PANEL. PROVIDE 2 #12 & 1 #12 GRD., 3/4" CONDUIT FROM PANEL LRP-1, CIRUCIT #41.

LIGHTING CONTROL NOTES

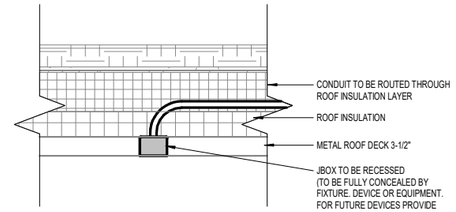
1. SHELTER LIGHTING FIXTURES TYPE "F2" SHALL BE CONTROLLED VIA LOCAL CEILING MOUNTED OCCUPANCY SENSORS.
2. ALL PLATFORM LIGHTING, FOUNDATIONS, CONDUIT, CABLING & ATTACHED VOM DEVICES (& ASSOCIATED RACEWAYS/CABLING) ARE BEING PROVIDED & INSTALLED AS PART OF TRAIN STATION PROJECT EXCEPT WHERE SPECIFICALLY NOTED. ALL SITE POLE LIGHTING TO BE CONTROLLED FROM PHOTOCELL VIA LIGHTING CONTACTOR RELAY PANEL.
3. ALL CONDUITS SHALL BE CONCEALED. EXPOSED CONDUITS THAT ARE VISIBLE SHALL NOT BE ALLOWED.

GENERAL NOTES:

1. ROUTE LOW VOLTAGE CABLING BACK TO MECHANICAL ROOM UNLESS NOTED OTHERWISE.
2. ALL CONDUITS SHALL BE ROUTED ABOVE STRUCTURE AND CONCEALED IN VERTICAL COLUMNS. COORDINATE ALL CONDUIT ROUTING WITH ARCHITECT PRIOR TO ROUGH-IN.
3. METRA REQUIRES ALL CONDUIT TO BE CONCEALED FROM VIEW.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR DEVICE LOCATIONS. REVIEW DEVICE LAYOUT WITH ARCHITECT PRIOR TO ROUGH-IN.
5. ALL ELECTRICAL RECEPTACLES LOCATED IN PUBLIC AREAS OF STATIONS AND WARMING SHELTERS SHALL HAVE HINGED COVERS PER METRA STANDARDS. PLEXIGLASS OR OTHER PLASTIC COVERS SHALL NOT BE ACCEPTED.
6. ALL EXTERIOR ELECTRICAL GFCI RECEPTACLES SHALL HAVE LOCKABLE HINGED COVERS. PLEXIGLASS OR OTHER PLASTIC COVERS SHALL NOT BE ACCEPTED.
7. CONDUIT TO BE FASTENED INTO TOP FLUTE OF ROOF DECK ONLY SO SCREW IS CONCEALED FROM VIEW



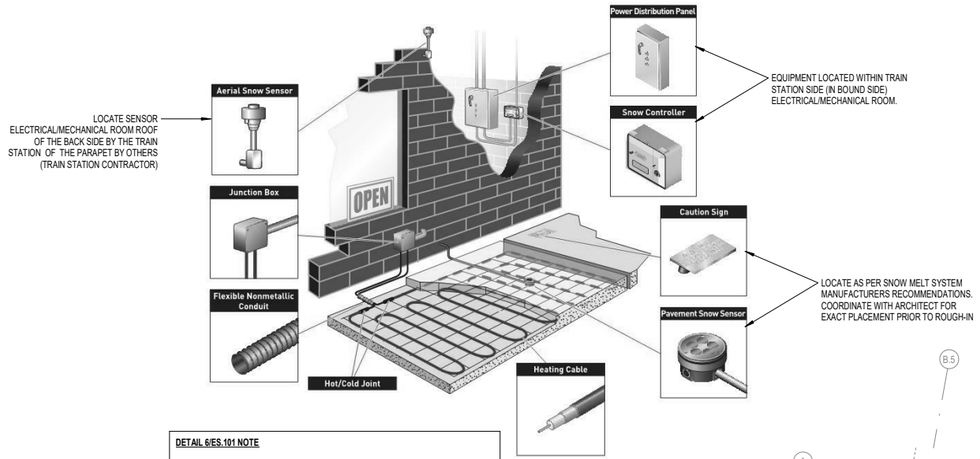
4 **CONCEALED CONDUIT DETAIL IN COLUMN**
NTS



3 **CONCEALED CONDUIT DETAIL IN ROOFING**
NTS

A typical system includes the following:

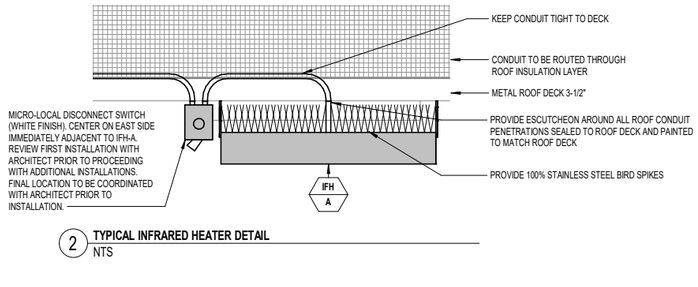
- MI heating cable
- Junction boxes and accessories
- Snow controller and sensors
- Power distribution



DETAIL 6/ES.101 NOTE

1. THIS DETAIL IS FOR INFORMATIONAL PURPOSES ONLY WHICH INDICATES REQUIRED SNOW MELT SYSTEM DEVICES AND COMPONENTS AND IS NOT SPECIFIC FOR THIS PROJECT.

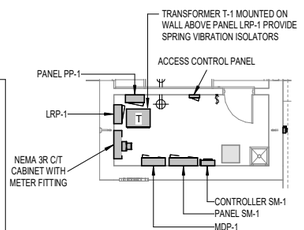
6 **TYPICAL SNOW MELT SYSTEM INSTALLATION**
NTS



2 **TYPICAL INFRARED HEATER DETAIL**
NTS

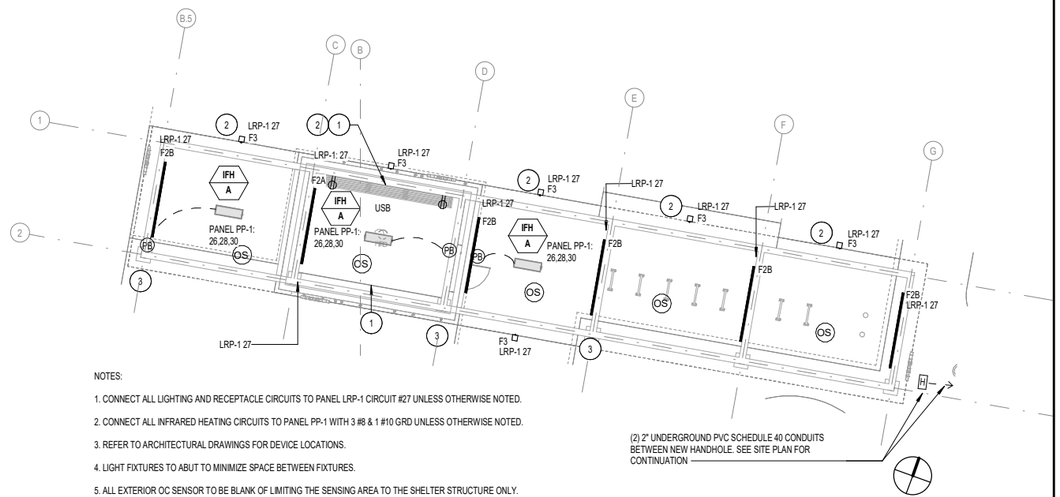
DETAIL 5/ES.101 NOTES

1. THIS PLAN IS SHOWN FOR REFERENCE ONLY. TRAIN STATION (IN BOUND SIDE) PROJECT CONTRACTOR SHALL PROVIDE ALL ELECTRICAL EQUIPMENT AND INFRASTRUCTURE INCLUDING ASSOCIATED CONDUIT AND WIRING UP TO NEW UNDERGROUND HANDHOLE LOCATED ON THE OUT BOUND SIDE.
2. PROVIDE A MINIMUM OF TEN FEET OF CABLE SLACK, TAPE, COIL, TAG FOR ALL STREET SCAPE SIDE BRANCH CIRCUITS
3. STREET SCAPE (OUT BOUND SIDE) PROJECT CONTRACTOR SHALL PROVIDE ALL BRANCH CIRCUITS (SNOW MELT SYSTEM, INFRARED HEATERS, LIGHTING, RECEPTACLES, VOM SYSTEM, ETC. ASSOCIATED WITH STREET SCAPE SHELTER). CONNECT ALL STREET SCAPE BRANCH CIRCUITS TO EXISTING WIRING LOCATED WITHIN NEW UNDERGROUND HANDHOLE #1 ON THE OUT BOUND SIDE WITH HIGH COMPRESSION IN-LINE SPLICES. COORDINATE WITH IN BOUND (TRAIN STATION SIDE) PROJECT CONTRACTOR PRIOR TO ROUGH-IN.



5 **TRAIN STATION ELECTRICAL ROOM**
1/8" = 1'-0"

0' 4' 8' 16' 32'



NOTES:

1. CONNECT ALL LIGHTING AND RECEPTACLE CIRCUITS TO PANEL LRP-1 CIRCUIT #27 UNLESS OTHERWISE NOTED.
2. CONNECT ALL INFRARED HEATING CIRCUITS TO PANEL PP-1 WITH 3 #8 & 1 #10 GRD UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL DRAWINGS FOR DEVICE LOCATIONS.
4. LIGHT FIXTURES TO ABUT TO MINIMIZE SPACE BETWEEN FIXTURES.
5. ALL EXTERIOR OC SENSOR TO BE BLANK OF LIMITING THE SENSING AREA TO THE SHELTER STRUCTURE ONLY.

1 **OUTBOUND SHELTER ELECTRICAL PLAN - BASE BID**
1/8" = 1'-0"

0' 4' 8' 16' 32'

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	VA	REVISED	
		DRAWN BY	VA	REVISED	
PLOT SCALE	As indicated	CHECKED BY	VA	REVISED	
PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION

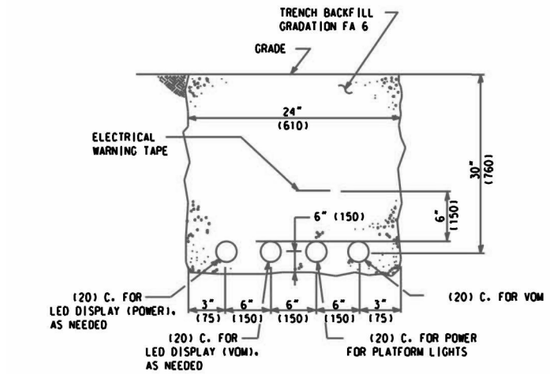
SCALE: As indicated | SHEET | OF

BUILDING

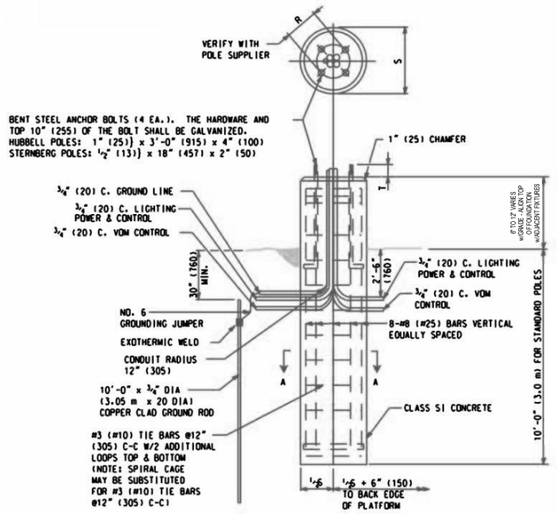
ES.101 FLOOR PLANS - ELECTRICAL

STA. | TO STA.

F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	63
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



3 **POWER AND CONTROL CONDUITS TRENCH DETAIL**
NTS



2 **PLATFORM LIGHTING POLE FOUNDATION**
NTS

NOTES:

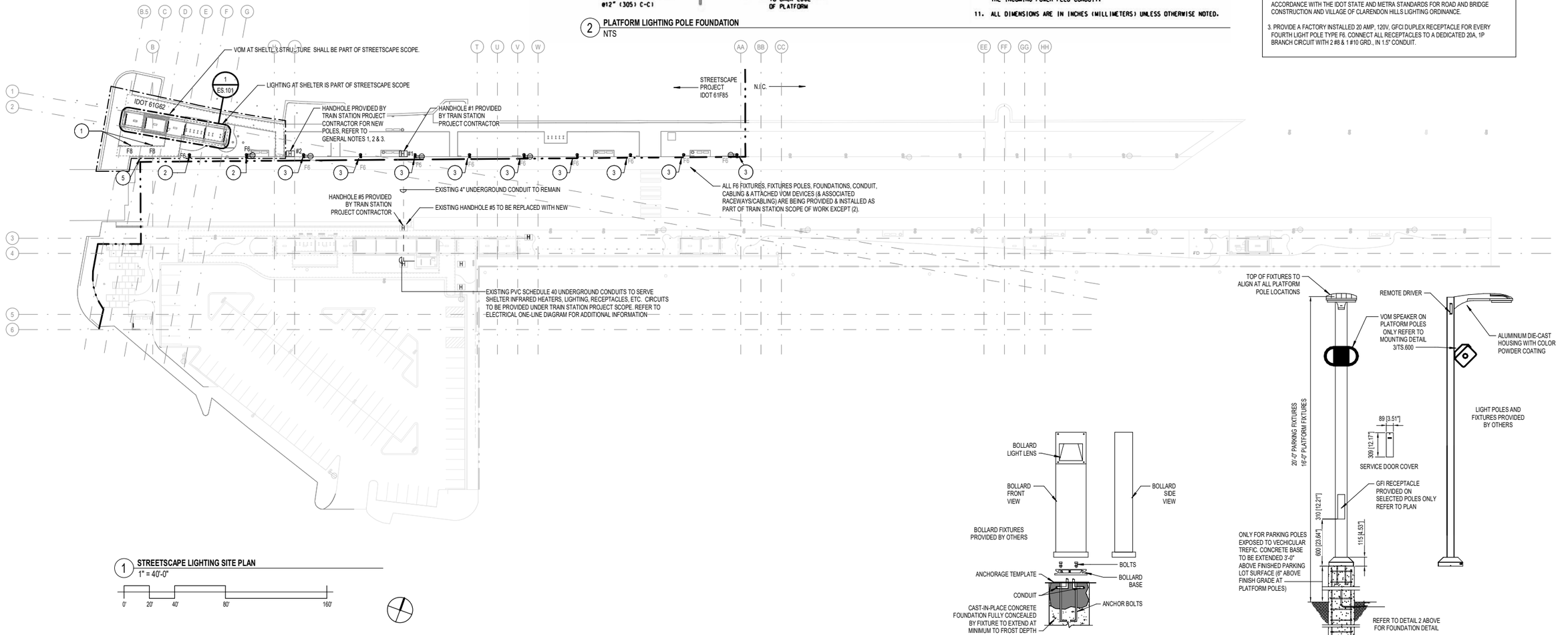
1. THE POWER AND CONTROL CONDUITS SHALL BE SIZED AS NOTED ON LAYOUT DRAWINGS. TWO ADDITIONAL 3/4" (20) DIAMETER CONDUITS ARE TO BE ADDED IN THE POLE FOUNDATION NEAREST TO THE ELECTRIC CABINET AND VOM CABINET. WITH ONE CONDUIT CONNECTED TO EACH CABINET. AS NOTED ON THE CABINET PAD PLAN VIEWS.
2. ALL CONDUIT STUBS SHALL BE CAPPED.
3. ALL CONCRETE SHALL BE 4000 PSI (28 kPa) AT 28 DAYS COMPRESSIVE STRENGTH. (REF. IDOT STD. SPEC. 720.)
4. THE CONTRACTOR SHALL FURNISH AND INSTALL THE CONDUITS AS REQUIRED. FOR COMPLETE INSTALLATION OF THE ELECTRICAL CONTROL AND VOICE OF METRA SYSTEM.
5. GRANULAR SUBBASE (CA 6) SHALL MEET IDOT STANDARD SPECIFICATION 1004.04. TRENCH BACKFILL (FA 6) SHALL MEET IDOT STANDARD SPECIFICATION 1003.04.
6. THE BENDING RADIUS OF ALL THE CONDUITS STUBBED OUT OF THE CABINET PADS SHALL BE 24" (610) UNLESS OTHERWISE INDICATED.
7. THE CONTRACTOR SHALL IDENTIFY THE CONDUITS AS SPECIFIED AND FURNISH AN ADHESIVE COLOR CODED MARKING ON THE CONDUITS FOR IDENTIFICATION.
8. 3/4" (20) C. INDICATES 3/4" (20) DIAMETER CONDUIT.
9. ALL CONDUITS SHALL INCLUDE PULL STRINGS.
10. ELECTRICAL TRIM AND METER TO BE PLACED ON SIDE OF ELECTRICAL CABINET, 5' ABOVE THE TOP OF THE CABINET PAD, CENTERED OVER THE INCOMING POWER FEED CONDUIT.
11. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

LIGHTING KEYNOTES

1. STREETSCAPE CONTRACTOR SHALL INSTALL, WIRE AND TERMINATE (2) TYPE "F8" FIXTURES WHICH HAVE BEEN FURNISHED BY TRAIN STATION CONTRACTOR. REFER TO GENERAL NOTES #1 FOR WIRE AND CONDUIT SIZES.
2. STREETSCAPE CONTRACTOR SHALL INSTALL, WIRE AND TERMINATE (2) "F6" FIXTURES WHICH HAVE BEEN FURNISHED BY TRAIN STATION CONTRACTOR. REFER TO GENERAL NOTES #1 FOR WIRE AND CONDUIT SIZES.
3. ALL F6 FIXTURES, FIXTURES POLES, FOUNDATIONS, CONDUIT, CABLING & ATTACHED VOM DEVICES (& ASSOCIATED RACEWAYS/CABLING) ARE BEING PROVIDED & INSTALLED AS PART OF TRAIN STATION SCOPE OF WORK EXCEPT (2). REFER TO GENERAL NOTES 1, 2 & 3 FOR WIRE AND CONDUIT SIZES.
4. EXTEND EMPTY CONDUIT FROM LIGHT POLE FOUNDATION TO 4' WEST OF FUTURE SIDWALK FOR FUTURE CONNECTION TO (4) F6 & (3) F8 FIXTURES INSTALLED BY STREESCAPE CONTRACTOR
5. (2) OLD PLATFORM LIGHT FIXTURES AND POLE TEMPORARILY TIED INTO NEW SITE LIGHTING SYSTEMS BY OTHERS (TRAIN STATION CONTRACTOR). FIXTURES AND POLES TO BE SALVAGED AND FOUNDATIONS AND ELECTRICAL SERVICE REMOVED BY CONTRACT 2 CONTRACTOR

LIGHTING GENERAL NOTES

1. FOR LIGHT FIXTURE TYPES "F6" AND "F8", CONTRACTOR TO PROVIDE NEW LIGHT POLES AND ALL ASSOCIATED CONDUIT AND WIRING FOR NEW POWER CONNECTION. 2 #6 & 1 #8 GRD., 1.5" PVC SCHEDULE 40 CONDUIT BURIED 30" BELOW FINISHED GRADE). CONTRACTOR IS RESPONSIBLE TO VERIFY COMPLY WITH ALL RULES AND REGULATION APPLICABLE FOR THE MUNICIPALITY. CALL BEFORE DIGGING TO VERIFY NO UNDERGROUND UTILITIES ARE IN THE AREA OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL SAW-CUTTING, TRENCHING, EXCAVATING, ETC. BACKFILL AND PATCH TO MATCH EXISTING FINISHED FLOOR/GRADE. ALTERNATE CIRCUIT EVERY OTHER LIGHT POLE.
2. ALL PROPOSED WORK AS IT RELATES TO THE NEW SITE LIGHTING SHALL BE IN ACCORDANCE WITH THE IDOT STATE AND METRA STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION AND VILLAGE OF CLARENDON HILLS LIGHTING ORDINANCE.
3. PROVIDE A FACTORY INSTALLED 20 AMP, 120V, GFCI DUPLEX RECEPTACLE FOR EVERY FOURTH LIGHT POLE TYPE P6. CONNECT ALL RECEPTACLES TO A DEDICATED 20A, 1P BRANCH CIRCUIT WITH 2 #8 & 1 #10 GRD., IN 1.5" CONDUIT.



1 **STREETSCAPE LIGHTING SITE PLAN**
1" = 40'-0"

0' 20' 40' 80' 160'

4 **BOLLARD DETAIL**
NTS

5 **LIGHT POLE DETAIL**
NTS

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY KD	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
			DRAWN BY KP	REVISED	
	PLOT SCALE	As indicated	CHECKED BY KD	REVISED	
	PLOT DATE	05/15/20	DATE OF ISSUE 05/15/20	REVISED	

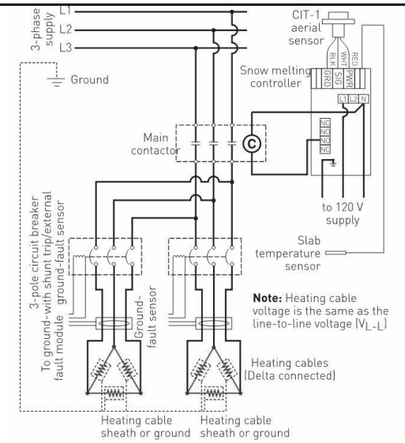
CLARENDON HILLS DOWNTOWN REVITILIZATION
SCALE: As indicated SHEET OF

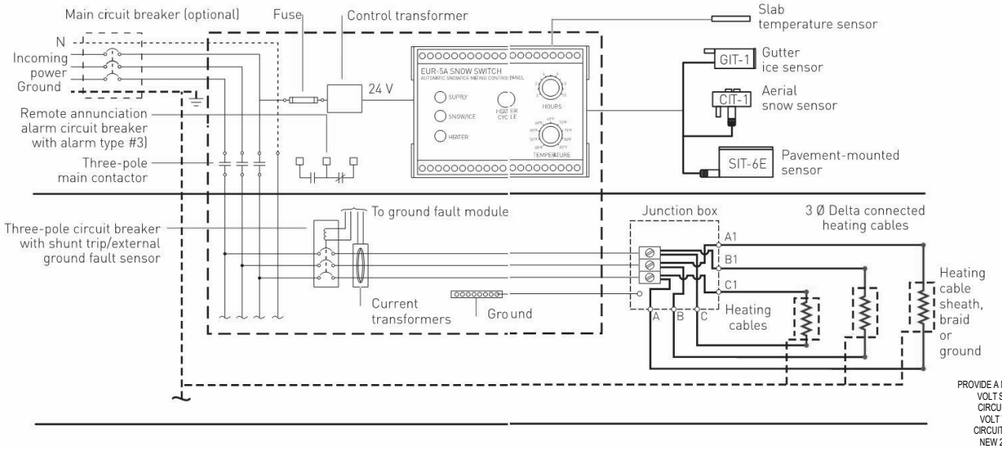
BUILDING
ES.200 LIGHTING SITE PLAN
STA. TO STA.

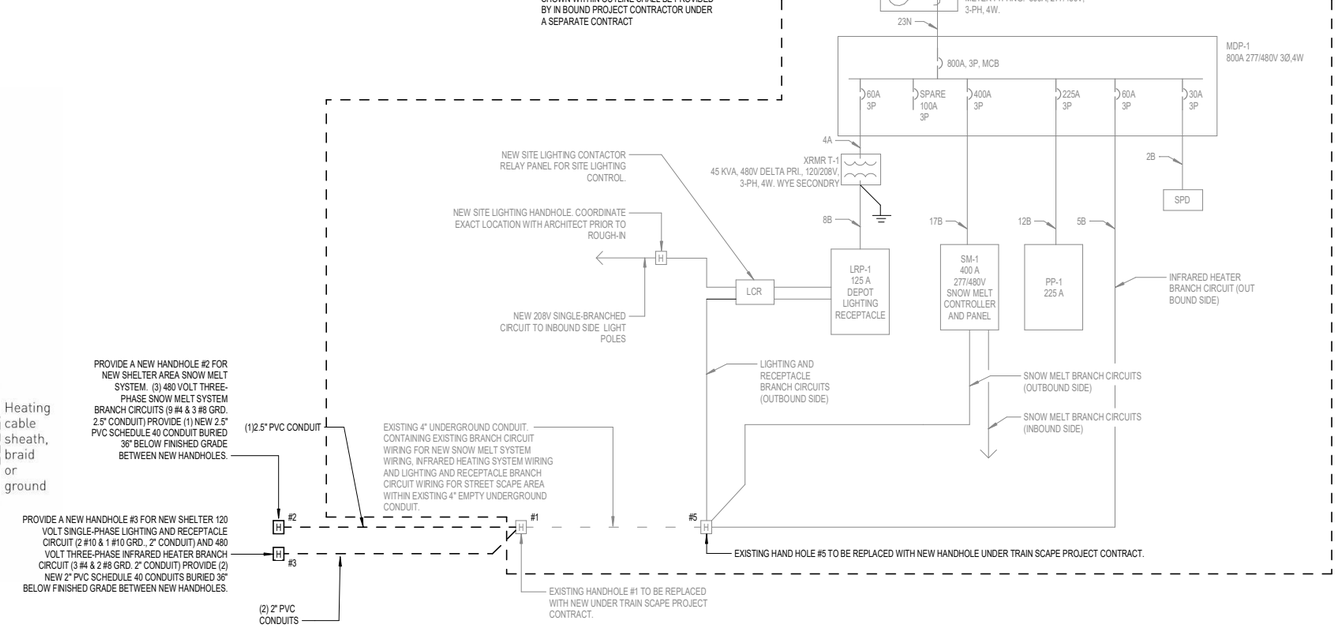
F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	64
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

POWER GENERAL NOTES

1. ALL PANELS AND BRANCH CIRCUITS SHALL BE FURNISHED AND INSTALLED BY IN BOUND (TRAIN STATION SIDE) PROJECT CONTRACTOR. INBOUND PROJECT CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL BRANCH CIRCUIT TERMINATIONS. THE OUT BOUND (STREET SCAPE) PROJECT CONTRACTOR SHALL COORDINATE WITH IN BOUND (TRAIN SCAPE) PROJECT CONTRACTOR FOR ALL BRANCH CIRCUIT WIRING INSTALLATION AND CABLE TERMINATIONS.







LEGAT ARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	VA	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLARENDON HILLS DOWNTOWN REVITILIZATION	BUILDING ES.400 ELECTRICAL RISER DIAGRAMS	F.A.RTE. 1003	SECTION 16-00045-01-MS	COUNTY DUPAGE	TOTAL SHEETS 79	SHEET NO. 65
			DRAWN BY	VA	REVISED							CONTRACT NO. 61G62	
	PLOT SCALE	12" = 1'-0"	CHECKED BY	VA	REVISED		SCALE: 12" = 1'-0" SHEET OF	STA. TO STA.			ILLINOIS	FED. AID PROJECT	
	PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED								

STEPS	1			2	3								4A	4B	5					6 & 7	8 & 9																10							11										12
	EQUIPMENT			EQUIPMENT UNIT NAME	EQUIPMENT POWER CHARACTERISTICS								FEED	FEED	OCPD: SW-CB FRAME:FR					FDR	MOTOR-LISTED EQP - CONTROLLER-STARTER TYPES & LOCATIONS																LOCAL DISCONNECT SWITCH							MOTOR-LISTED EQUIP CONN & OEM REQUIREMENTS										REMARKS
ITEM	LOCATION - TAG - QUANTITY				& LOAD SPECIFICATIONS								PWR	FROM	FUSE-CB TRIP:TR					BRNCH	MTR CONTROLLER - SWITCH RATING - OCPD TRIP SIZE																FOR LOCAL LOCK-OUT & TAG-OUT							CORD & PLUG REC OR FLEX WHIP FOR MOTOR OR SINGLE POINT CONN										
No.	NAME	TAG	No.	NAME - TAG - AREA - AREA #	V	Ø	N	G	PIN	W	HP	MCA	FLA	KW	SYS	PANEL	SW FR	FU TR	CB FR	CB TR	P	TAG	PB	FB	IB	ROOM	SIZE	TYPE	ENC	CPT	DS-SW	OCPD	P	NOTE	PB	FB	IB	SIZE	ENC	P	NOTE	PB	FB	IB	REC	LOC	NEMA	GFI	REC No	CPC	HWC	FWC	NOTE	
1	- SPACE	IFH	A	INFRARED HEATER IFH-A SPACE -	480	3	1	1	4	5	-	15.2	-	12.6	NML	PP-1	NA	NA	30	15	3	2B	EC	-	-	-	-	NA	RMUC	3R	NA	30	15	3	1	EC	-	-	30	3R	3	3	EC	-	-	NA	-	NA	NA	NA	NA	YES	YES	4	

EQUIPMENT SCHEDULE

STEP 1 CONFIRM FINAL LOCATION OF EQUIP. WITH THE MECH. DWGS. & OEM'S SHOPS PRIOR TO INSTALLING CONDUIT. SEE PWR. DWGS. FOR EQUIP. TAG LOCATIONS

STEP 2 REVIEW ARCH, KIT, MECH, PLBG, FIRE PROT. SUBMITTALS-SHOP DWGS. FINAL EQP. LOCATION, ELEVATION, & PWR. REQUIREMENTS PRIOR TO INSTALLING CONDUIT.

STEP 3 CONFIRM LOAD REQUIREMENTS WITH MECH'S OEM PRIOR TO INSTALLING CONDUIT SEE SCHDLE DWGS. FOR PANELBOARD FEEDER-BRANCH CIRCUIT NUMBERS.

STEP 4 CONFIRM IN THE FIELD PNLBD-SWBD RATINGS WITH MECH'S OEM PRIOR TO INSTALLING CONDUITS. SEE PWR. DWGS. FOR PNLBD-SWBD LOCATIONS.

STEP 5 CONFIRM IN THE FIELD OCPD REQUIREMENTS WITH MECH'S OEM PRIOR TO INSTALLING CONDUIT. OCPD RATINGS DERIVED FROM MECH'S OEM'S SPECS OR MOTOR SIZING PER CODE.

STEP 6 CONFIRM IN THE FIELD FEEDER-BRANCH CIRCUIT SIZING WITH MECH'S OEM PRIOR TO INSTALLING CONDUIT.

STEP 7 SEE FEEDER-BRANCH CIRCUIT SCHEDULE FOR TAG-WIRE SIZE.

STEP 8 CONFIRM IN THE FIELD CONTACTOR-STARTER-VFC-PRMS-DS SW RATINGS WITH MECH'S OEM PRIOR TO INSTALLING CONDUIT.

STEP 9 CONFIRM IN THE FIELD THERMAL OVERLOAD RATINGS WITH OEM PROVIDE OVERLOADS PER OEM SPECS.

STEP 10 CONFIRM IN THE FIELD WITH OEM PRIOR TO INSTALLING CONDUIT LOCATE DISC SW SWITCH WITHIN 5FT & WITHIN SIGHT OF THE MOTOR-LISTED EQUIPMENT.

STEP 11 PROVIDE CONN. TO MOTOR-LISTED EQUIP PROVIDE A Cu EQUIP GROUND (EGC) FROM DISC SW SWITCH TO MOTOR ELECT.-EQUIP CONNECTION POINT-JUNCTION BOX.

FVNR FULL VOLT NON-REVERSING MAGNETIC STARTER
FVR FULL VOLT REVERSING MAGNETIC STARTER
VFC VARIABLE FREQUENCY CONTROLLER
PRMS PWR RELAY-MANUAL STARTER W- OVERLOADS
2SP1W TWO-SPEED SINGLE WINDING FVNR MAG STRTR
2SP2W TWO-SPEED TWO WINDING FVNR MAG STRTR
CPT CONTROL POWER TRANSFORMER
IMUC INTERNAL MOUNTED UNIT CONTROLLER
RMUC REMOTE MOUNTED UNIT CONTROLLER

PR POWER RELAY
TC TIME CLOCK CNTRLER
T-S TEMP-SENSOR SW
W-S... WALL LINE VOLT STAT
WS WALL LINE VOLT SW
FB FURNISHED BY
IB INSTALLED BY
PB PROVIDED BY
FDR FEEDER CIRCUIT

EM EMERGENCY POWER
NML NORMAL POWER
SBY STANDBY POWER
NA NOT APPLICABLE
BRNCH BRANCH CIRCUIT
GC GENERAL...
KC KITCHEN...
MC MECHANICAL...
PC PLUMBING...

FPC FIRE PROTECTION CONTRACTOR
OWN OWNER
CPC CORD-PLUG CONNECTION
FWC FLEXIBLE WHIP CONDUIT
HWC HARD WIRED CONN
ENC NEMA ENCLOSURE
LOC LOCKING
REC RECEPTACLE
OCPD OVERCURRENT PROTECT DEVICE
OEM ORIGINAL EQP MANUFACTURER

NOTES:

1 PROVIDE RACKING FOR STRTR TYPES (FVNR, FVR, PRMS, 2SP1W, & 2SP2W)
PROVIDE THERMAL OVERLOADS PER OEM-FIELD VERIFICATION
PROVIDE TWO SETS FORM "C" AUX CONTACTS WITH STARTER
PROVIDE 120Vac CONTROL COILS FOR (FVNR, FVR, 2SP1W, & 2SP2W)
PROVIDE 24Vac CONTROL COIL FOR POWER RELAYS-MANUAL STRTR "PRMS"

2 PROVIDE RACKING FOR VARIABLE FEQUENCY CONTROLLER "VFC"
CALIBRATE OVERLOADS PER OEM-FIELD VERIFICATION RESULTS
PROVIDE FOUR SETS FORM "C" CONTACTS WITH VFC
PROVIDE OEM START-UP & COMMISSIONING PRIOR TO PUNCHLIST
PROVIDE WRITTEN VFC FIELD PROGRAMMED SETTINGS

3 DISC SW SHALL BE IN SIGHT OF MOTOR-EQP & SHALL NOT EXCEED MAX DIST OF 5FT FROM MOTOR-EQUIP MAX HEIGHT OF DISC SW SW HANDLE SHALL NOT EXCEED 6'-3"
PROVIDE SIX POLE DISC SW FOR TWO SPEED, ONE-TWO WINDING MOTORS
VERIFY WITH OEM IF MAX FUSE SIZE IS MARKED ON NAME PLATE IF SO THEN EC SHALL PROVIDE FUSE DS SWITCH WITH TD FUSE TRIP SIZE TO 150% OF THE FLA OF MOTOR - EQP

4 CONFIRM MOTOR ROTATION-OPERATION WITH OEM REP PRIOR TO ENERGIZING MOTOR
EQUIP PROVIDE GROUNDING-BONDING PER OEM
SPECS EQP FLEX SHALL NOT EXCEED 72" MAX LENGTH CONFIRM CPC NEMA CONN WITH OEM

5. LOCAL DISCONNECT SWITCH SHALL BE BE RATED FOR 600V, 3-PHASED TOGGLE TYPE NEMA 3R RATED (BRYANT #30303D)

INFRARED HEATER (ELECTRIC)

TAG			MOUNTING			ON/OFF SWITCH			UNIT DATA		ELECTRICAL DATA								
ABBR.	#	LOCATION	SURFACE MOUNTED	RECESSED	SEMI-RECESSED	REMOTE	UNIT MOUNTED	BTUH	DIMESIONS (L x W x H)	WEIGHT (LBS)	AMPS	KW	VOLTS	PH	HZ	MANUFACTURER	MODEL	REMARKS
IFH	A	WAITING AS101	Yes	No	No	Yes		24909	46"15"10.5"	32	15.21	7.3	480	3	60	KING	RH-46S2-G36R	1,2,3,4,5,6,7

1 CONTROLLED BY LOW VOLTAGE PUSH BUTTON TIMER. REFER TO PLAN FOR LOCATIONS
2 TIMER RELAY. ADJUST TIME AS DIRECTED BY OWNER
3 MICRO DISCONNET SWITCH
4 PUSH BUTTON MFRMODEL: REESE/2.25" MUSHROOM PLUNGER WEATHERPROOF & w/SHIELD
5 WIRE GUARD PROVIDED BY MANUFACTURER
6 STAINLESS STEEL FINISH
7 100% STAINLESS STEEL BIRD SPIKES

LUMINAIRE SCHEDULE

FIXTURE TAG	MANUFACTURER	CATALOG #	LAMP TYPE	CCT	TOTAL LM OUTPUT DELIVERED	CRI	TOTAL WATTS	VOLTAGE	CONTROL	MOUNTING	FINISH	LOCATION	DESCRIPTION	NOTES
F2A	ALIGHT	D3 8' C 30 U HE F W D Q MOD + 125% LUMENS	LED	3000K	952LM/FT	80	12.5W/FT	UNV	0-10V DIM	SURFACE	WHITE	SURFACE MOUNTED	CONTINUES UNDER ROOF BETWEEN STRUCTURES LINEAR VANDAL RESISTANCES DIRECT...	1,2,3
F2B	ALIGHT	D3 8' LS 30 U HE F W D Q	LED	3000K	408LM/FT	80	4.5W/FT	UNV	0-10V DIM	`SURFACE	WHITE	SURFACE MOUNTED	CONTINUES UNDER ROOF BETWEEN STRUCTURES LINEAR VANDAL RESISTANCES DIRECT ILLUMINATION FIXTURE.	1,2,3,20
F2C	ALIGHT	D3 8' LH 30 U HE F W D Q	LED	3000K	762LM/FT	80	9.5W/FT	UNV	0-10V DIM					
F3	BEGA	22 433 K3	LED	3000K	2319	80	32W	UNV	0-10V DIM	SURFACE	CUSTOM TO MATCH METAL PANELS	BUILDING MOUNT	MOUNTED FOR DIRECT LIGHT	1,3
F6	LITHONIA LIGHTING	DSX0 LED P2 30K VLS VC MVOLT RPA DNAXD / RSA 15'-6" SE DM19AS DNA. PROVIDED BY TRAIN STATION CONTRACTOR	LED	3000K	7,974	80	83W	UNV	0-10V DIM	6" BASE AS PER DETAILS	NATURAL ALUMINUM	PLATFORM	NEW 15'-6" ROUND PLATFORM POLE FIXTURES 16'-0" OVERALL	3
F8	BEGA	99554 K3 SLV PROVIDED BY TRAIN STATION CONTRACTOR	LED	3000K	444	80	6.3W	UNV	0-10V DIM	LANDSCAPE	SILVER	ALONG WALKWAY AT MAIN TRAIN STATION STRUCTURE	BOLLARD FIXTURE TO PROVIDE ILLUMINATION ALONG THE WALKWAY AT MAIN BUILDING STRUCTURE	3

1. COORDINATE EXACT FIXTURE LENGTHS AND MOUNTING TYPE WITH ARCHITECTURAL DRAWINGS.
2. EMERGENCY OPTION WITH THE INTEGRAL BATTERY MUST BE PROVIDED FOR FIXTURES INSTALLED WITHIN ENCLOSED SHELTERS.
3. CONTRACTOR TO VERIFY LIGHTING CONTROL COMPATABILITY WITH FIXTURES TYPE AND FIXTURES REQUIEREMENTS.

GENERAL SCHEDULE NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE SUBMITTAL ON FULL LIGHTING FIXTURE PURCHASE FOR ARCHITECT'S APPROVAL PRIOR TO ORDER. SUBMIT PDF SET OF CATALOG CUTS TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING LIGHTING FIXTURES.
2. FIXTURES SHALL HAVE APPROPRIATE UL LABEL, DAMP, OR WET AS REQUIRED BY LOCAL CODES.
3. WALLS DIRECTLY ILLUMINATED SHALL BE INSTALLED AND FINISHED IN A MANNER TO ELIMINATE SHADOWS OR BLEMISHES (I.E. HANG DRY WALL VERTICALLY).
4. THE ARCHITECT AND ENGINEER SHALL APPROVE FIXTURE SUBSTITUTIONS PRIOR TO BID. CONTRACTOR SHALL SUPPLY A SAMPLE AND/OR PHOTOMETRIC DATA IF REQUESTED. IF SUBSTITUTION IS REJECTED, CONTRACTOR SHALL PROVIDE SPECIFIED PRODUCT.
5. FIXTURES SHALL INCLUDE ACCESSORIES FOR INSTALLATION ACCORDING TO LOCAL AND NATIONAL CODES.
6. PRIOR TO ORDERING LIGHTING EQUIPMENT, THE CONTRACTOR SHALL VERIFY LOCATIONS AND RECESS DEPTHS.
7. LAMPS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE ABOVE FIXTURE SCHEDULE.
8. VERIFY EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.
9. ALL FIXTURE FINISHES TO BE SUBMITTED TO ARCHITECT FOR FINAL APPROVAL.
10. CONTRACTOR SHALL VERIFY CEILING TRIM COMPATIBILITY PRIOR TO ORDERING FIXTURES.
11. MANUFACTURER'S CATALOG NUMBERS ARE INTENTIONALLY INCOMPLETE (MARKED WITH 'XX'). VERIFY AND COORDINATE REQUIRED TRIM KITS, MOUNTING BRACKETS, LAMPS, FINISHES, ETC. WITH CONTRACT DOCUMENTS AND SPECIFICATIONS, AND REFER TO ARCHITECTURAL DETAILS.
12. THE FINAL FIXTURE HOUSING AND REFLECTOR FINISH SHALL BE SELECTED BY ARCHITECT.
13. FIXTURES LOCATED IN AN INSULATED CEILING AREA, SHALL HAVE AN IC HOUSING (CONTRACTOR SHALL VERIFY LOCATIONS WITH CEILING INSULATION).
14. ALL FIXTURES SHALL BE PROVIDED WITH VANDAL RESISTANT HARDWARE.
15. ADJUSTABLE AND DIRECTIONAL LUMINAIRES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND AIMED TO OBTAIN MAXIMUM UNIFORM COVERAGE. CONTRACTOR TO AIM LIGHTING FIXTURES PER SPECIFICATIONS AND TO PROVIDE THE FINAL LIGHTING CALCULATIONS AND LIGHT MEASUREMENTS.
16. FOR FIXTURES W/REMOTE DRIVERS, VERIFY MANUFACTURER'S RECOMMENDATIONS FOR MOUNTING DISTANCE AND TO PROVIDE ADEQUATE NUMBER OF DRIVERS. PROVIDE INTERCONNECTING WIRING FROM DRIVER TO FIXTURES PER MANUFACTURER'S REQUIREMENTS. MOUNT THE DRIVERS IN A CONCEALED, READILY ACCESSIBLE AREA WITHIN THE MANUFACTURER'S RECOMMENDED REMOTE DISTANCE, AND LOCATION TYPE.
17. PROVIDE ALL NECESSARY ACCESSORIES FOR FIXTURES AND SENSORS IN ORDER TO ENSURE A COMPLETE AND PROPER OPERATION. CONTRACTOR TO ENSURE COMPONENTS COMAPTIBILITY PRIOR TO ORDERING.
18. CONTRACTOR SHALL PROVIDE FULL PHOTOMETRIC DRAWINGS FOR OWNER'S, ARCHITECT'S AND ENGINEER'S REVIEW AND APPROVAL WITH LIGHTING FIXTURE PRODUCT DATA AND PERFORMANCE CUT SHEETS PRIOR TO PROCEEDING
19. F2B SHOULD BE DIMMED IN THE FIELD TO HALF OUTPUT. FOR OPEN CANOPY LOCATIONS

THREE PHASE (Ø) AND SINGLE PHASE (Ø) POWER FEEDERS - BRANCH CIRCUITS - SERVICE ENTRANCE SCHEDULE UPTO 3,000A

TABLE A: FEEDER-BRANCH CIRCUITS 3Ø 3W NO GC "NEUTRAL" AND WITH "GROUND" EGC				TABLE B: FEEDER-BRANCH CIRCUITS 3Ø 4W WITH GC "NEUTRAL" & "GROUND" EGC			TABLE C: FEEDER-BRANCH CIRCUITS 1Ø 2W NO GC "NEUTRAL" AND WITH GRD EGC			TABLE D: FEEDER-BRANCH CIRCUITS 1Ø 3W WITH GC "NEUTRAL" AND WITH GRD EGC			TABLE N: SERVICE ENTRANCE 3Ø 4W WITH GC "NEUTRAL"		
CKT	PWR	STR Cu THWN-2 OR	COND	PWR	STR Cu THWN-2 OR	COND	PWR	STR Cu THWN-2 OR	COND	PWR	STR Cu THWN-2 OR	COND	PWR	STR Cu XHHW-2	COND
AMPS	TAG	XHHW-2 AWG - Kcmil	SIZE	TAG	XHHW-2 AWG - Kcmil	SIZE	TAG	XHHW-2 AWG - Kcmil	SIZE	TAG	XHHW-2 AWG - Kcmil	SIZE	TAG	AWG - Kcmil	SIZE
20	1A	3 #12 & 1 #12 EGC	3/4"	1B	4 #12 & 1 #12 EGC	3/4"	1C	2 #12 & 1 #12 EGC	3/4"	1D	3 #12 & 1 #12 EGC	3/4"	1N	NA	NA
30	2A	3 #10 & 1 #10 EGC	3/4"	2B	4 #10 & 1#10 EGC	3/4"	2C	2 #10 & 1 #10 EGC	3/4"	2D	3 #10 & 1#10 EGC	3/4"	2N	NA	NA
40	3A	3 #8 & 1 #8 EGC	3/4"	3B	4 #8 & 1 #8 EGC	3/4"	3C	2 #8 & 1 #8 EGC	3/4"	3D	3 #8 & 1 #8 EGC	3/4"	3N	NA	NA
55	4A	3 #6 & 1 #8 EGC	3/4"	4B	4 #6 & 1 #8 EGC	1"	4C	2 #6 & 1 #8 EGC	3/4"	4D	3 #6 & 1 #8 EGC	1"	4N	NA	NA
70	5A	3 #4 & 1 #8 EGC	1"	5B	4 #4 & 1 #8 EGC	1.5"	5C	2 #4 & 1 #8 EGC	1"	5D	3 #4 & 1 #8 EGC	1"	5N	NA	NA
85	6A	3 #3 & 1 #8 EGC	1"	6B	4 #3 & 1 #8 EGC	1.5"	6C	2 #3 & 1 #8 EGC	1"	6D	3 #3 & 1 #8 EGC	1.5"	6N	4 #3	1.5"
95	7A	3 #2 & 1 #6 EGC	1"	7B	4 #2 & 1 #8 EGC	1.5"	7C	2 #2 & 1 #6 EGC	1.5"	7D	3 #2 & 1 #6 EGC	1.5"	7N	4 #2	1.5"
130	8A	3 #1 & 1 #6 EGC	1.5"	8B	4 #1 & 1 #6 EGC	1.5"	8C	2 #1 & 1 #6 EGC	1.5"	8D	3 #1 & 1 #6 EGC	1.5"	8N	4 #1	1.5"
150	9A	3 #1/O & 1 #6 EGC	1.5"	9B	4 #1/O & 1 #6 EGC	2"	9C	2 #1/O & 1 #6 EGC	1.5"	9D	3 #1/O & 1 #6 EGC	1.5"	9N	4 #1/O	2"
175	10A	3 #2/O & 1 #6 EGC	1.5"	10B	4 #2/O & 1 #6 EGC	2"	10C	2 #2/O & 1 #6 EGC	1.5"	10D	3 #2/O & 1 #6 EGC	2"	10N	4 #2/O	2"
200	11A	3 #3/O & 1 #6 EGC	1.5"	11B	4 #3/O & 1 #6 EGC	2"	11C	#2/O & 1 #6 EGC	1.5"	11D	3 #3/O & 1 #6 EGC	2"	11N	4 #3/O	2"
230	12A	3 #4/O & 1 #4 EGC	2"	12B	4 #4/O & 1 #4 EGC	2.5"	12C	2 #4/O & 1 #4 EGC	2"	12D	3 #4/O & 1 #4 EGC	2"	12N	4 #4/O	2.5"
255	13A	3 #250 & 1 #4 EGC	2.5"	13B	4 #250 & 1 #4 EGC	2.5"	13C	2 #250 & 1 #4 EGC	2"	13D	3 #250 & 1 #4 EGC	2.5"	13N	4 #250	2.5"
310	14A	3 #350 & 1 #4 EGC	3"	14B	4 #350 & 1 #4 EGC	3"	14C	2 #250 & 1 #4 EGC	2.5"	14D	3 #350 & 1 #4 EGC	2.5"	14N	4 #350	3"
335	15A	3 #400 & 1 #3 EGC	3"	15B	4 #400 & 1 #4 EGC	3"	15C	2 #400 & 1 #3 EGC	3"	15D	3 #400 & 1 #4 EGC	3"	15N	4 #400	3"
380	16A	3 #500 & 1 #3 EGC	3.5"	16B	4 #500 & 1 #3 EGC	4"	16C	2 #500 & 1 #3 EGC	3"	16D	3 #500 & 1 #3 EGC	3.5"	16N	4 #500	3.5"
420	17A	3 #600 & 1 #3 EGC	4"	17B	4 #600 & 1 #3 EGC	4"	17C	2 #600 & 1 #3 EGC	4"	17D	3 #600 & 1 #3 EGC	4"	17N	4 #600	4"
460	18A	2 Sets 3 #4/O & 1 #2 EGC	2" EA	18B	2 Sets 4 #4/O & 1 #2 EGC	2.5" EA	18C	2 Sets 2 #4/O & 1 #2 EGC	2" EA	18D	2 Sets 3 #4/O & 1 #2 EGC	2" EA	18N	2 Sets 4 #4/O	2.5" EA
510	19A	2 Sets 3 #250 & 1 #2 EGC	2.5" EA	19B	2 Sets 4 #250 & 1 #2 EGC	2.5" EA	19C	2 Sets 2 #250 & 1 #2 EGC	2" EA	19D	2 Sets 3 #250 & 1 #2 EGC	2.5" EA	19N	2 Sets 4 #250	2.5" EA
620	20A	2 Sets 3 #350 & 1 #1 EGC	3" EA	20B	2 Sets 4 #350 & 1 #1 EGC	3" EA	20C	2 Sets 2 #350 & 1 #1 EGC	2.5" EA	20D	2 Sets 3 #350 & 1 #1 EGC	2.5" EA	20N	2 Sets 4 #350	3" EA
670	21A	2 Sets 3 #400 & 1 #1/O EGC	3" EA	21B	2 Sets 4 #400 & 1 #1/O EGC	3" EA	21C	2 Sets 2 #400 & 1 #1/O EGC	3" EA	21D	2 Sets 3 #400 & 1 #1/O EGC	3" EA	21N	2 Sets 4 #400	3" EA
690	22A	3 Sets 3 #4/O & 1 #1/O EGC	3" EA	22B	3 Sets 4 #4/O & 1 #1/O EGC	2.5" EA	22C	3 Sets 2 #4/O & 1 #1/O EGC	2" EA	22D	3 Sets 3 #4/O & 1 #1/O EGC	2" EA	22N	3 Sets 4 #4/O	2.5" EA
840	23A	2 Sets 3 #600 & 1 #1/O EGC	3.5" EA	23B	2 Sets 4 #600 & 1 #1/O EGC	4" EA	23C	2 Sets 2 #600 & 1 #1/O EGC	3.5" EA	23D	2 Sets 3 #600 & 1 #1/O EGC	3.5" EA	23N	2 Sets 4 #600	4" EA

LIGHTING CONTROL INTENT
LIGHTING CONTROL SYSTEM LOCATED IN THE METRA STATION ELECTRICAL ROOM IS INTENDED TO CONTROL INBOUND AND OUTBOUND METRA TRAIN STATION INCLUDING PARKING LOT. LIGHTING CONTROL SYSTEM NEEDS TO BE ABLE TO CONTROL WHITE AS WELL AS RGB FIXTURES. IF APPROVED SECURE INTERNET CONNECTION MAY BE REQUIRED FOR SYSTEM SETUP, ADJUSTMENTS AND MONITORING. STATION ROOF MOUNTED PHOTOCELL TO BE USE TO EVALUATE OUTDOOR LIGHT LEVEL.

PLATFORM AND PARKING
PARKING LOT AND PLATFORM FIXTURES WILL BE TURNED ON/OFF BASED ON THE ASTRONOMICAL TIME CLOCK OR OWNER PROVIDED SCHEDULE. FOR SECURITY SOME FIXTURES MAY NEED TO STAY ON TO PROVIDE AVRAGE .5FC AS REQUERED BY METRA. ADDITIONALLY IF THE OUTDOOR PHOTOCELL LIGHT LEVEL READING FALLS BELOW PRESET THRESHOLD, PARKING LOT AND PLATFORM LIGHT WILL TURN ON. THIS WILL ENSURE MINIMUM REQUIRED LIGHT LEVEL AT THE PLATFORM AND PARKING LOT DURING SEVERE WEATHER EVENT.

SHELTERS
LIGHTING WILL BE CONTROLLED BY A COMBINATION OF PHOTOCELL, MOTION SENSOR, AS WELL AS TIMECLOCK READING.

ALL SETTINGS ARE ADJUSTABLE REMOTELY VIA SECURE INTERNET CONNECTION. LIGHTING CONTROL PROVIDER, PROVIDE ALL NECESSARY PROGRAMING FREE OF LICENSING, ACCESSING, MAINTENANCE FEES CONTROLS CREDENTIAL AND TRAINING TO BE PROVIDED BY CONTROL MANUFACTURER TO OWNER DESIGNATED PERSONNEL.

Lighting control criteria		
Station area	Avrage Illuminance (fc.)	Lighting Control Notes
Bus Loading / Unloading	2	3
Kiss - N - Ride	2	3
Parking Area	1	3
Pedestrian Ways	1	3
Waiting Area	20	2
Janitor Closet	20	4
Electrical mechanical Rm	20	4
Platform	Under conopy min 5fc	3
Platform	Edge min 2 fc	3

Lighting control notes
1. To operate continuously

2. To operate during all normal hours of operation. Night security lighting shall maintain a minimum of 2 foot candles in depot and warming house waiting areas.

3. To operate dusk to dawn with time clock and photo sensor override. Fifteen minutes after the last train leaves a station, time clock shall turnoff all lights except security lights and those necessary to maintain a minimum of .5 foot candles average at platform, pedestrian walks, and parking areas.

4. Local switch

STREET SCAPE (OUT-BOUND) SIDE SNOW MELT SYSTEM DESIGN CALCULATIONS

Design: Inbound (40 W/ft^2 min) Area (concrete): 3761.0 ft² (480 V 3 Phase)

Power requirement	40 W/ft²	Heating Cable Catalog Number	SUB22
Technology	Raychem MI	Cable Selection	FI
Total Area	3761.0 ft²	Number of Cables	15
Number of expansion joints	0	Heating Cable Length	525 ft
Cable Selection Preference	No	Total Heater Length	7875 ft
		Calculated Cable Spacing	5.5 in
		Design Watt Density	46 W/ft²
		Individual Cable Current	22.9 A
		Individual Three-Phase Circuit Current	39.7 A
		Number of Circuits	5

PANEL BOARD: PANEL PP-1

LOCATION:	MECHANICAL ROOM	**VOLTS:**	480/277 Wye	**A.I.C. Rating:**	22,000	**NEUTRAL BUS:**	STANDARD, COPPER
MOUNTING TYPE:	SURFACE	**PHASES:**	3	**MAINS TYPE:**	MLO	**GROUND BUS:**	STANDARD, COPPER
ENCLOSURE:	NEMA 1	**WIRES:**	4	**MAINS...**	225 A		
FED FROM:	MDP-1	**MCB TYPE:**	COPPER	**MCB RATING:**	225 A		

CCT NO.	Load Name	TRIP	POLES	A		B		C		POLES	TRIP	Load Name	CCT NO.
1	CUH-1 MAIN BUILDING	20 A	3	3333 VA	3333 VA					3	20 A	CUH - 2 MAIN BUILDING	2
3	--	--	--			3333 VA	3333 VA			--	--	--	4
5	--	--	--					3333 VA	3333 VA	--	--	--	6
7	CUH-3 MAIN BLDG	20 A	3	3333 VA	3333 VA					3	15 A	CUH-5 ELEC/MECH BLDG	8
9	--	--	--			3333 VA	3333 VA			--	--	--	10
11	--	--	--					3333 VA	3333 VA	--	--	--	12
13	CUH-4 MAIN BLDG	20 A	3	3333 VA	4867 VA					3	25 A	(2) IFH-A EASTWARMING SHELTER	14
15	--	--	--			3333 VA	4867 VA			--	--	--	16
17	--	--	--					3333 VA	4867 VA	--	--	--	18
19	(2) IFH-A SOUTH CANOPY	25 A	3	4867 VA	2433 VA					3	20 A	IFH-A BUS STOP CANOPY	20
21	--	--	--			4867 VA	2433 VA			--	--	--	22
23	--	--	--					4867 VA	2433 VA	--	--	--	24
25	(2) IFH-A SOUTH CANOPY	25 A	3	4867 VA	7300 VA					3	30 A	IFH-A OUTBOUND SHELTER	26
27	--	--	--			4867 VA	7300 VA			--	--	--	28
29	--	--	--					4867 VA	7300 VA	--	--	--	30
31	(2) IFH-A MAIN BUILDING	25 A	3	4867 VA	2433 VA					3	20 A	IFH-A MAIN BUILDING	32
33	--	--	--			4867 VA	2433 VA			--	--	--	34
35	--	--	--					4867 VA	2433 VA	--	--	--	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	30 A	EXIST. STREET SCAPE LIGHT POLES	40
41	NEW CONTRACTOR RELAY LIGHT...	--	--					0 VA	0 VA	1	30 A	EXIST. STREET SCAPE LIGHT POLES	42
			TOTAL LOAD:	48300 VA		48300 VA		48300 VA					
			TOTAL AMPS:	174 A		174 A		174 A					

LOAD CLASSIFICATIONS:	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
ELECTRICAL HEATING	108400 VA	100.00%	108400 VA	**TOTAL CONNECTED LOAD:**	144901 VA
LIGHTING	0 VA	0.00%	0 VA	**TOTAL EST. DEMAND:**	144901 VA
MOTOR/EQUIPT.	0 VA	0.00%	0 VA	**TOTAL CONN.:**	174 A
RECEPTACLE	0 VA	0.00%	0 VA	**TOTAL EST. DEMAND:**	174 A

NOTES:
THIS PANELBOARD WILL BE FURNISHED, INSTALLED AND WIRED UNDER THE TRAIN STATION PROJECT. THE STREET SCAPE CONTRACTOR SHALL EXTEND ALL BRANCH CIRCUITS TO STREET SCAPE SHELTER INFRARED HEATERS.

PANEL BOARD: LRP-1

LOCATION:	MECHANICAL ROOM	**VOLTS:**	120/208	**A.I.C. Rating:**	22,000	**NEUTRAL BUS:**	STANDARD, COPPER
MOUNTING TYPE:	SURFACE	**PHASES:**	3	**MAINS TYPE:**	MCB	**GROUND BUS:**	STANDARD, COPPER
ENCLOSURE:	NEMA 1	**WIRES:**	4	**MAINS...**	125 A		
FED FROM:	MDP-1 VIA XFMR T-1	**MCB TYPE:**	COPPER	**MCB RATING:**	125 A		

CCT NO.	Load Name	TRIP	POLES	A		B		C		POLES	TRIP	Load Name	CCT NO.
1	RECEPTACLE SITE POLES	20 A	1	1260 VA	1260 VA					1	20 A	RECEPTACLE SITE POLES	2
3	RECEPTACLE SOUTH WARMING...	20 A	1			540 VA	50 VA			1	20 A	LIGHTING - INGROUND	4
5	RECEPTACLE MAIN BUILDING	20 A	1					1260 VA	180 VA	1	20 A	RECEPTACLE MAIN BUILDING	6
7	RECEPTACLE ELEC/MECH ROOM	20 A	1	180 VA	1180 VA					1	20 A	EF-1 ELEC/MECH ROOM	8
9	JUNCTION BOX MAIN BUILDING	20 A	1			500 VA	240 VA			1	20 A	L-1,2 MAIN BUILDING	10
11	F3 LIGHTING FIXTURES	20 A	1					384 VA	500 VA	1	20 A	ATM MACHINE	12
13	DWH-1	20 A	1	1500 VA									14
15	EXIT SIGN MAIN BUILDING	20 A	1			10 VA	215 VA			2	20 A	TRAIN STATION SIDE LIGHT POLE	16
17	ACCESS CONTROL PANELS	20 A	1					2400 VA	215 VA	--	--	--	18
19	TRAIN STATION SIDE LIGHT POLE	20 A	2	215 VA	2037 VA					1	20 A	MAIN BUILDING LIGHTS	20
21	--	--	--			215 VA	720 VA			2	20 A	STREET SCAPE SIDE LIGHT POLE	22
23	LIGHTING BUS STOP SPACE 102	20 A	1					143 VA	720 VA	--	--	--	24
25	BOLLARD LIGHTING	20 A	1	400 VA	499 VA					1	20 A	SOUTH WARMING SHELTER 1...	26
27	OUTBOUND SHELTER LIGHTING	20 A	1			1230 VA	855 VA			2	20 A	STREET SCAPE SIDE LIGHT POLE	28
29	FIRE ALARM SYSTEM CONTROL...	20 A	1					500 VA	855 VA	--	--	--	30
31	SCHEDULE DISPLAY MONITOR	20 A	1	500 VA	500 VA					1	20 A	FUTURE MESSAGE BOARD	32
33	MOTORIZED LOUVER ACTUATOR	20 A	1			40 VA	40 VA			1	20 A	ACCESS CONTROL PANEL	34
35	SOUTH WARMING SHELTER 2...	20 A	1					511 VA	4000 VA	2	50 A	VOICE OVER METRA CABINET	36
37	ILLUMINATED SIGNAGE	20 A	1	500 VA	4000 VA					--	--	--	38
39	LIGHTING - EXTERIOR	20 A	2			1360 VA	0 VA			2	20 A	PHOTOVOLTAIC SYSTEM DISC.SW.	40
41	--	--	--					1360 VA	0 VA	--	--	--	42
			TOTAL LOAD:	14031 VA		6015 VA		13028 VA					
			TOTAL AMPS:	126 A		50 A		118 A					

LOAD CLASSIFICATIONS:	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
ELECTRICAL HEATING	0 VA	0.00%	0 VA	**TOTAL CONNECTED LOAD:**	32596 VA
LIGHTING	8558 VA	100.00%	8558 VA	**TOTAL EST. DEMAND:**	30200 VA
MOTOR/EQUIPT.	1180 VA	80.00%	944 VA	**TOTAL CONN.:**	90 A
RECEPTACLE	4320 VA	50.00%	2160 VA	**TOTAL EST. DEMAND:**	84 A

NOTES:
THIS PANELBOARD WILL BE FURNISHED, INSTALLED AND WIRED UNDER THE TRAIN STATION PROJECT. THE STREET SCAPE CONTRACTOR SHALL EXTEND ALL BRANCH CIRCUITS TO STREET SCAPE SITE POLE LIGHTING, SITE RECEPTACLES INTEGRAL WITHIN LIGHT POLES INCLUDING ALL SHELTER LIGHTING AND RECEPTACLES WITH THE EXEPTION OF THOSE NOTED ON PLAN.

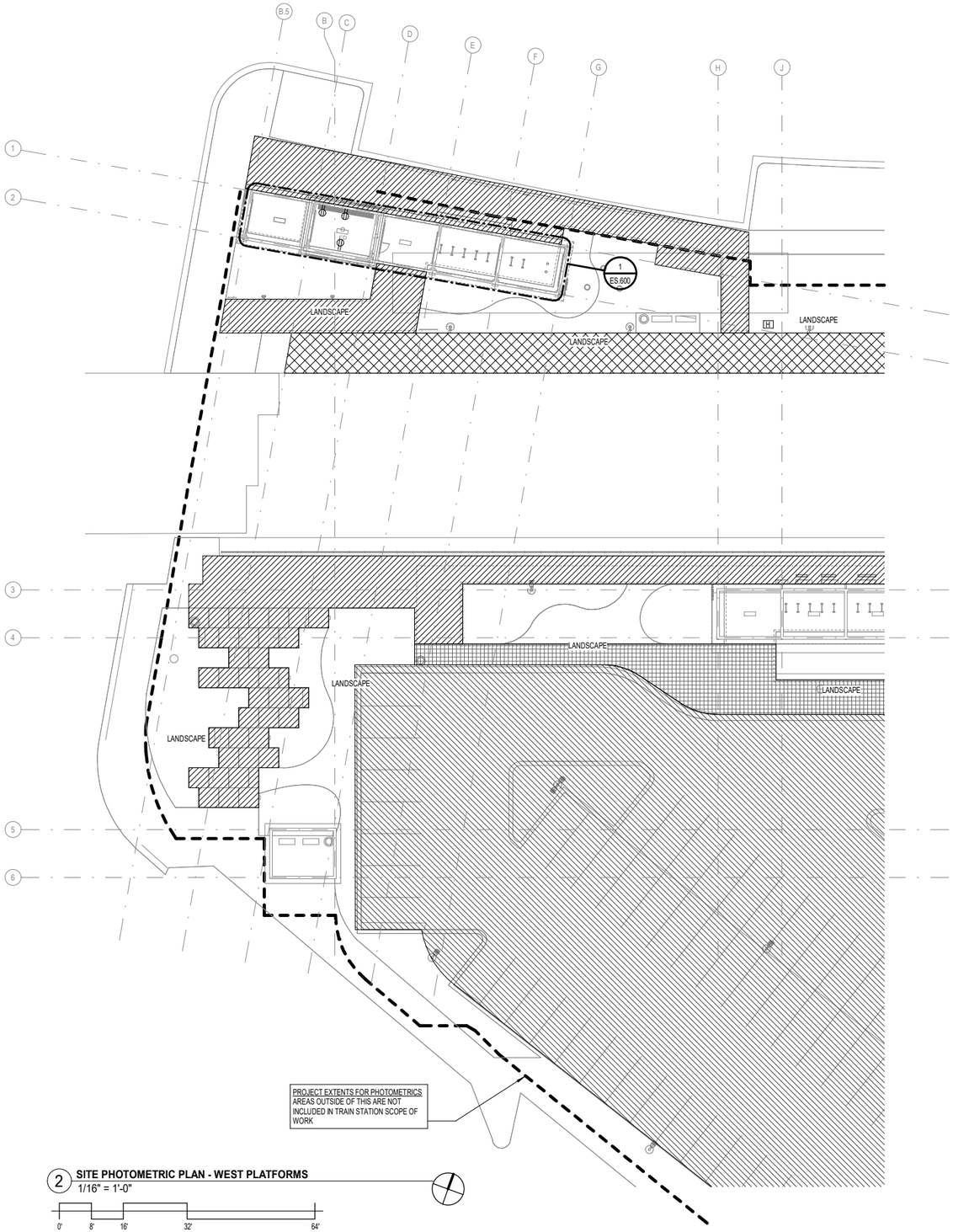
PANEL BOARD: PANEL SM-1

LOCATION:	ELECTRICAL ROOM	**VOLTS:**	480/277 Wye	**A.I.C. Rating:**	22,000	**NEUTRAL BUS:**	STANDARD, COPPER
MOUNTING TYPE:	SURFACE	**PHASES:**	3	**MAINS TYPE:**	MLO	**GROUND BUS:**	STANDARD, COPPER
ENCLOSURE:	NEMA	**WIRES:**	4	**MAINS...**	400 A		
FED FROM:	MDP-1	**MCB TYPE:**	COPPER	**MCB RATING:**	400 A		

CCT NO.	Load Name	TRIP	POLES	A		B		C		POLES	TRIP	Load Name	CCT NO.
1	IN BOUND SIDE SNOW MELT SYSTEM	50 A	3	11080 VA	11080 VA					3	50 A	IN BOUND SIDE SNOW MELT SYSTEM	2
3	--	--	--			11080 VA	11080 VA			--	--	--	4
5	--	--	--					11080 VA	11080 VA	--	--	--	6
7	IN BOUND SIDE SNOW MELT SYSTEM	50 A	3	11080 VA	11080 VA					3	50 A	IN BOUND SIDE SNOW MELT SYSTEM	8
9	--	--	--			11080 VA	11080 VA			--	--	--	10
11	--	--	--					11080 VA	11080 VA	--	--	--	12
13	IN BOUND SIDE SNOW MELT SYSTEM	50 A	3	11080 VA	1030 VA					3	45 A	OUT BOUND SIDE SNOW MELT...	14
15	--	--	--			11080 VA	1030 VA			--	--	--	16
17	--	--	--					11080 VA	1030 VA	--	--	--	18
19	SPARE	50 A	3	0 VA	1030 VA					3	45 A	OUT BOUND SIDE SNOW MELT...	20
21	--	--	--			0 VA	1030 VA			--	--	--	22
23	--	--	--					0 VA	1030 VA	--	--	--	24
25	SPARE	50 A	3	0 VA	0 VA					1	20 A	SPARE	26
27	--	--	--			0 VA	0 VA			1	20 A	SPARE	28
29	--	--	--					0 VA	0 VA	1	20 A	SPARE	30
31	SPACE	--	--	0 VA	0 VA					1	20 A	SPARE	32
33	SPACE	--	--			0 VA	0 VA			1	20 A	SPARE	34
35	SPACE	--	--					0 VA	0 VA	1	20 A	SPARE	36
37	SPACE	--	--	0 VA	0 VA					1	20 A	SPARE	38
39	SPACE	--	--			0 VA	0 VA			1	20 A	SPARE	40
41	SPACE	--	--					0 VA	0 VA	1	20 A	SPARE	42
			TOTAL LOAD:	57460 VA		57460 VA		57460 VA					
			TOTAL AMPS:	207 A		207 A		207 A					

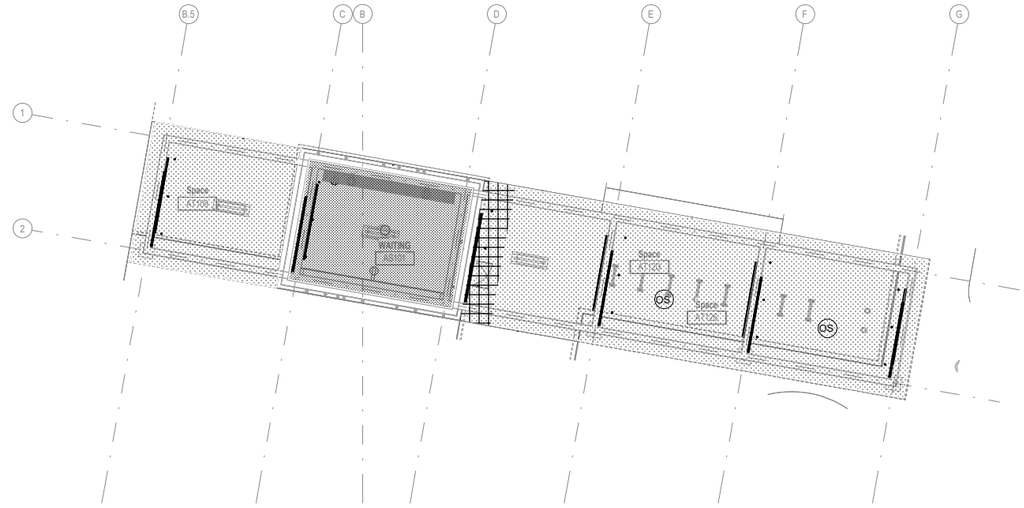
LOAD CLASSIFICATIONS:	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
ELECTRICAL HEATING	172380 VA	100.00%	172380 VA	**TOTAL CONNECTED LOAD:**	172380 VA
LIGHTING	0 VA	0.00%	0 VA	**TOTAL EST. DEMAND:**	172380 VA
MOTOR/EQUIPT.	0 VA	0.00%	0 VA	**TOTAL CONN.:**	207 A
RECEPTACLE	0 VA	0.00%	0 VA	**TOTAL EST. DEMAND:**	207 A

NOTES:
THIS PANELBOARD WILL BE FURNISHED, INSTALLED AND WIRED UNDER THE IN BOUND TRAIN STATION PROJECT CONTRACTOR. THE OUT BOUND PROJECT CONTRACTOR SHALL EXTEND ALL BRANCH CIRCUITS TO OUT BOUND PROJECT SNOW MELTING SYSTEM.
ALL BRANCH CIRCUIT BREAKER SERVING THE SNOW MELT SYSTEM SHALL BE CAPABLE OF BEING LOCKED IN THE OFF POSITION PER CODE. PROVIDE UL LISTED CIRCUIT BREAKER PADLOCK ACCESSORY DEVICES.



2 **SITE PHOTOMETRIC PLAN - WEST PLATFORMS**
1/16" = 1'-0"

0' 8' 16' 32' 64'



1 **OUTBOUND SHELTER ELECTRICAL PLAN - PHOTOMETRIC**
1/8" = 1'-0"

0' 4' 8' 16' 32'

GENERAL NOTE:

THERE ARE EXISTING STREET LIGHTS TO REMAIN AROUND THE PERIMETER OF THE SITE. NUMBERS OF POLES AND SITE FIXTURES SHOWN MAY NEED TO BE EVALUATED AND ADJUSTED BASE ON MANUFACTURER RECOMMENDATION TO ENSURE THE LIGHT LEVEL REQUIREMENT SHOWN BELOW IS MET.

PHOTOMETRIC LIGHT LEVEL REQUIEREMENTS LEGEND

- PLATFORMS - AT PLATFORM EDGE - 2FC MINIMUM
- PEDESTRIAN WAYS - 1FC AVERAGE
- KISS-N-RIDE PICKUP AND DROP- OFF - 2FC AVERAGE
- PARKING AREA - 1FC AVERAGE
- CANOPY (DEPOT LOGGIA) - 5 FC AVERAGE
- WAITING AREA, ELECTRICAL & MECHANICAL ROOMS - 20 FC AVERAGE
- DEPOT / SHELTER ENTRANCE - 10 FC AVERAGE

LEGAT ARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	KD	REVISED	
		DRAWN BY	KP	REVISED	
PLOT SCALE	As indicated	CHECKED BY	KD	REVISED	
PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET OF

BUILDING
ES.600 PHOTOMETRIC CALCULATION
STA. TO STA.

F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	68
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

TECHNOLOGY GENERAL NOTES

APPLICABLE TO ALL TECHNOLOGY DRAWINGS

1. DEFINITIONS

"FURNISH" MEANS TO "SUPPLY" AND USUALLY REFERS TO DELIVERY OF AN ITEM OF EQUIPMENT TO THE PROJECT SITE, READY FOR INSTALLATION. INSTALL" MEANS TO SET IN PLACE, CONNECT AND PLACE IN FULL OPERATIONAL ORDER. PROVIDE" MEANS TO "FURNISH" AND "INSTALL". "FUTURE", "BY OTHERS", "REFER (DISCIPLINE) DIVISION" AND SIMILAR EXPRESSIONS INDICATE WORK THAT MAY BE PERFORMED UNDER THE CONTRACT DOCUMENTS BUT, NOT NECESSARILY UNDER THE DIVISION OR DISCIPLINE ON WHICH THE NOTE APPEARS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK WITH SUPPLIERS, SUBCONTRACTORS, EMPLOYEES, ETC. SHOULD CLARIFICATION OF ANY PORTION OF THE WORK BE REQUIRED, CONTACT THE ARCHITECT/ENGINEER PRIOR TO SUBMITTING BID.

2. CODES

THE WORK SHALL COMPLY WITH LATEST LOCAL BUILDING CODE. THIS WOULD INCLUDE, BUT IS NOT LIMITED TO, THE CURRENT CITY BUILDING CODE, ANSI/TIA/NECS/BICSI, AMENDMENTS, NFPA, ANSI, OSHA, AND ALL OTHER LOCAL OR MUNICIPAL BUREAUS AND DEPARTMENTS WHICH HAVE AUTHORITY OVER THE PROJECT; ANYTHING IN THESE CONTRACT DOCUMENTS NOT WITHSTANDING. THIS SHALL NOT BE CONSTRUED AS WAIVING COMPLIANCE WITH ANY REQUIREMENTS OF THE PLANS AND SPECIFICATIONS WHICH MAY BE IN EXCESS OF ANY REQUIREMENTS OF THESE CODES.

3. INTERPRETATION OF THE DOCUMENTS

THE CONTRACTOR SHALL CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING THE MEASUREMENTS AND CONDITIONS UNDER WHICH CONSTRUCTION IS TO BE IMPLEMENTED. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS AND/OR SPECIFICATIONS, THE DISPUTED ISSUE SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS WORK A COMPLETE AND READY-TO-USE INSTALLATION. IF NOT SO-STATED IN THE CONTRACTOR'S PROPOSAL, ANY SUCH WORK WILL NOT BE CONSIDERED ADDITIONAL.

4. COORDINATION

THE TECHNOLOGY DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED. TO THIS EXTENT, DATA GIVEN ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL REQUIRED WORK AND EQUIPMENT WITH THAT OF THE OTHER TRADES. WHERE THERE ARE POTENTIAL CONFLICTS, THE CONTRACTOR SHALL OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, ETC. AT THE SITE AND SHALL SATISFACTORILY ADAPT HIS WORK TO ACTUAL FIELD CONDITIONS. WALL AND CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL FLOOR AND REFLECTED CEILING PLANS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL FLOOR AND CEILING TYPES IN ALL AREAS.

5. SITE EXAMINATION

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, EXAMINE THE PREMISES, AND MAKE A THOROUGH SURVEY OF THE CONDITIONS UNDER WHICH CONSTRUCTION WILL BE IMPLEMENTED. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

6. SAFETY

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE CLIENT'S EMPLOYEES, BUILDING EMPLOYEES AND GUESTS AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CABLE, EQUIPMENT, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

7. CONTRACTOR'S DRAWING REVIEW

ALL CONTRACTORS/BIDDERS SHALL HAVE RECEIVED A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR REVIEW AND REFERENCE TO WORK INDICATED. CONDUIT LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES OR COMMUNICATION CONDUITS. THE CONTRACTOR SHALL CONFIRM THAT CONDUIT LOCATE SERVICES HAVE BEEN COMPLETED AND THAT NO POTENTIAL CONFLICTS EXIST BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING DEMOLISHED, REGARDLESS OF THE LOCATION ON THE PROPERTY. THIS SHALL BE REVIEWED WITH THE OWNER'S PROJECT REPRESENTATIVE.

8. STATEMENT OF WORK

THE CONTRACTOR SHALL PROVIDE THE COMPLETE TECHNOLOGY INSTALLATION OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS. PRIOR TO COMMENCEMENT, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, ANY SEQUENCE OF WORK, MOP'S (METHOD OF PROCEDURE) AND/OR COORDINATION SHOP DRAWINGS FOR THE INTENDED WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.

9. WORK PERFORMANCE REQUIREMENTS

ANY PENETRATIONS OR OPENINGS IN FIRE-RATED PARTITIONS (WALLS OR FLOORS) SHALL BE CLOSED AT THE END OF EACH WORK DAY, OR WHENEVER IT IS ANTICIPATED THAT NO FURTHER WORK WILL OCCUR IN THAT OPENING DURING THE DAY. THIS INCLUDES ALL TEMPORARY OPENINGS. CLOSURE SHALL BE IN COMPLIANCE WITH 3M FIREPROOFING PRODUCT SPECIFICATIONS. ALL TEMPORARY WALL AND FLOOR OPENINGS SHALL BE PROTECTED AND MARKED AT ALL TIMES. PAINTING SHALL BE SCHEDULED SUCH THAT DRYING TIME OCCURS DURING NON-WORKING HOURS FOR OPERATIONS PERSONNEL COMFORT. NO WELDING SHALL TAKE PLACE INSIDE OF OPERATING FACILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE OWNER'S PROJECT REPRESENTATIVE. WELDING SHALL NOT TAKE PLACE WITHIN 5 FEET OF ANY TELECOMMUNICATIONS EQUIPMENT RACK WITHOUT ADEQUATE PROTECTIVE MEASURES, AS DEEMED APPROPRIATE BY THE OWNER'S PROJECT REPRESENTATIVE.

10. CUTTING AND PATCHING

ALL CUTTING, DRILLING AND PATCHING OF MASONRY STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTIONS OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE.

11. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE ALL "AS-BUILT" DRAWINGS SCALED 1/4" MINIMUM AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER.

12. CONDUIT/RACEWAY SYSTEMS

THE CONDUIT ROUTINGS INDICATED ARE ONLY DIAGRAMMATIC IN NATURE. FIELD CONDITIONS SHALL DICTATE THE CONTRACTOR'S EXACT CONDUIT ROUTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER THE NEC AND APPLICABLE MUNICIPAL CODES AND FOR COORDINATION WITH OTHER DISCIPLINES. ALL RACEWAYS SHALL CONCEALED FROM VIEW AND BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS OR STRUCTURAL MEMBERS, SUCH AS TO FOLLOW STRUCTURAL SURFACE CONTOURS AND NOT OBSTRUCT PASSAGEWAYS. MULTIPLE RACEWAYS SHALL BE RUN TOGETHER, IN GROUPING. ALL CONDUIT SHALL BE COORDINATED AND APPROVED BY METRA, ARCHITECT/ENGINEER AND OWNER PRIOR TO INSTALLATION. EXTRA TIME SHOULD BE ALLOWED FOR THIS REVIEW AND APPROVAL. NO ADDITIONAL COST TO OWNER WILL BE ALLOWED DUE TO LACK OF COORDINATION. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT) AND MINIMUM SIZE SHALL BE 1" UNLESS NOTED OTHERWISE. CONNECTORS AND COUPLINGS SHALL BE INSULATED-THROAT COMPRESSION TYPE ONLY. RIGID GALVANIZED-STEEL (RGS) CONDUIT SHALL BE USED WHEN CONDUIT IS INSTALLED IN OUTDOOR AREAS. METAL RACEWAY OR CABLE ARMOR/SHEATH SHALL NOT BE USED AS THE PRIMARY EQUIPMENT GROUNDING CONDUCTOR.

13. EQUIPMENT

ALL MATERIALS AND EQUIPMENT PROVIDED IN THIS WORK SHALL BE NEW AND SHALL HAVE THE APPROPRIATE UL LISTING AND/OR FM APPROVAL.

14. TECHNOLOGY ALTERATION AND DEMOLITION:

A. A COMPLETE AND ACCURATE DESCRIPTION OF ALL TECHNOLOGY WORK WITHIN THE AFFECTED AREAS CANNOT BE ACCOMPLISHED THROUGH THE MEDIA OF DRAWINGS AND SPECIFICATIONS. IN EVERY CASE WHERE SUCH EXISTING TECHNOLOGY WORK PREVENTS PROPER CONSTRUCTION OF NEW WORK AS INDICATED, PERFORM WHATEVER WORK AND PROVIDE WHATEVER MATERIALS ARE REQUIRED IN ORDER TO REMOVE, REROUTE, RELOCATE OR IN OTHER WAYS ALTER THAT EXISTING INTERIOR AND/OR SITE TECHNOLOGY WORK. SUCH PERFORMANCE AS GENERALLY OUTLINED HEREIN AND AS IS FOUND NECESSARY UNDER FIELD CONDITIONS SHALL BE CONSIDERED AS INCLUDED UNDER THE CONTRACT.

B. EXISTING TECHNOLOGY MATERIALS AND EQUIPMENT, INCLUDING TELECOMMUNICATIONS DEVICES, SECURITY DEVICES, CONDUIT OUTLETS, FITTINGS, WIRE, CABLE AND OTHER DEVICES WHICH ARE DEMOLISHED AS A RESULT OF THE ALTERATIONS SHALL BE DELIVERED TO OWNER. CONTACT THE VILLAGE OF CLARENDON HILLS IT DEPARTMENT PRIOR TO REMOVAL. DAN UNGERLEIDER, 630-286-5412

C. ALL ITEMS OF EXISTING EQUIPMENT, MATERIALS, ETC. SHALL REMAIN THE PROPERTY OF THE BUILDING OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION SHALL BE RETAINED AND TURNED OVER TO THE BUILDING OWNER.

D. LEGALLY DISPOSE ALL ITEMS REJECTED OR UNWANTED BY THE BUILDING OWNER. EXISTING TECHNOLOGY MATERIALS AND EQUIPMENT, WITH THE EXCEPTION OF WIRE AND CABLE, AS GENERALLY OUTLINED IN THE PREVIOUS PARAGRAPH, SHALL BE REUSED AS COMPLETELY AS IS FOUND PRACTICAL. EXAMINE THE CONDITION OF SUCH MATERIALS AND EQUIPMENT AND MAKE A PRIOR DETERMINATION OF WHETHER IT IS SUITABLE FOR REUSE. PRESENT FINDINGS PERIODICALLY TO THE ARCHITECT WHO IN TURN WILL MAKE THE FINAL DECISION REGARDING REUSABILITY. ALL WIRE AND CABLE SHALL BE NEW.

E. CONTRACTOR SHALL PERFORM ALL INTERIOR AND/OR SITE CUTTING AND PATCHING FOR TECHNOLOGY WORK UNLESS NOTED OTHERWISE.

F. CONTRACTOR SHALL REPAIR ALL DAMAGES TO EXISTING CONSTRUCTION DUE TO ALTERATIONS, OPERATION OR INSTALLATION OF NEW FIBER TO VILLAGE HALL. CONTRACTOR SHALL COORDINATE ACCESS TO EXISTING COMMUNICATIONS MANHOLES / DUCT AND VILLAGE HALL BUILDING PENITRATIONS WITH THE VILLAGE OF CLARENDON HILLS.

14. MISCELLANEOUS SUPPORTING MEMBERS:

A. ALL ANGLES, CHANNELS AND OTHER MISCELLANEOUS STEEL, BOLTS, THREADED RODS, ETC., REQUIRED TO SUPPORT TECHNOLOGY EQUIPMENT OR DEVICES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

PATHWAY NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL DEVICE LOCATIONS AND MOUNTING HEIGHTS.
2. PROVIDE A MINIMUM (1) 5 INCH SQUARE X 2-7/8 INCH DEEP DOUBLE GANG JUNCTION BOX WITH MUD/EXTENSION RING AT EACH WALL OR CEILING DEVICE OUTLET LOCATION. PROVIDE A MINIMUM (1) 1 INCH CONDUIT BETWEEN THE DEVICE OUTLET AND THE OUTDOOR RATED NEMA ENCLOSURE. REFER TO DRAWINGS FOR LOCATION OF ENCLOSURE.
3. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

CONDUIT FILL CHART @ 40% BASED ON
0.23" O.D. CAT5E CABLE, 0.27" O.D. CAT6 CABLE & 0.31" O.D. CAT6A CABLE

CONDUIT SIZE	CATEGORY 5E	CATEGORY 6	CATEGORY 6A
1"	7	6	4
1 1/4"	11	10	7
1 1/2"	16	14	10
2"	29	23	17
2 1/2"	46	40	31
3"	67	61	46
3 1/2"	91	80	61
4"	119	103	78

NOTES:
1. CHART IS PROVIDED FOR REFERENCE ONLY.
2. CONDUITS SHALL BE SIZED BASED ON CALCULATIONS UTILIZING ACTUAL O.D. OF CABLING ROUTED WITHIN THE CONDUIT.

SECURITY NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL DEVICE LOCATIONS AND MOUNTING HEIGHTS. COORDINATE MOUNTING OF DEVICES ON EXTERIOR FACADES WITH THE ARCHITECT.
2. PROVIDE A MINIMUM (1) 5 INCH X 5 INCH X 2-7/8 INCH DEEP RECESSED WEATHER-PROOF JUNCTION BOX AND BLANK WEATHER-PROOF COVER AT EACH CEILING MOUNTED SECURITY CAMERA LOCATION. PROVIDE METALIC COVER PLATE AT FUTURE INFRASTRUCTURE ONLY CEILING MOUNT CAMERA LOCATIONS TO CONCEAL RECESSED JUNCTION BOX. COORDINATE COLOR WITH ARCHITECT AND PROVIDE PRODUCT SUBMITTAL PRIOR TO INSTALLATION. PROVIDE A MINIMUM (1) 1.25 INCH CONDUIT BETWEEN EACH SECURITY CAMERA IN SERIES. PROVIDE MINIMUM (1) 1.25 INCH CONDUIT FROM CAMERA LOCATION TO HANDHOLE OR OUTDOOR RATED NEMA ENCLOSURE. REFER TO DRAWINGS FOR LOCATION OF HANDHOLES AND IT ENCLOSURE.
3. PROVIDE (1) CONCEALED 3/4" CONDUIT FROM ENTRY TO DOORS WITH TIMED LOCKED. STUB CONDUIT TO DOOR FRAME CHANNEL. CONTROL CABLE (PROVIDED BY OTHERS) SHALL BE ROUTED AND CONCEALED INSIDE OF MULLION.
4. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

PAGING NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL DEVICE LOCATIONS AND MOUNTING HEIGHTS. COORDINATE MOUNTING OF DEVICES ON EXTERIOR FACADES WITH THE ARCHITECT.
2. METRA WILL FURNINSH AND INSTALL ALL SPEAKER CABLING IN PATHWAYS PROVIDED BY THE ELECTRICAL CONTRACTOR.
3. METRA WILL FURNISH AND INSTALL ALL SPEAKERS
4. PROVIDE A MINIMUM OF (1) 1 INCH CONDUIT BETWEEN EACH LIGHT POLE IN SERIES. PROVIDE MINIMUM (1) 1 INCH CONDUIT FROM LIGHT POLE TO HANDHOLD. REFER TO DRAWINGS FOR LOCATION OF HANDHOLES, LIGHT POLES AND MECHANICAL / IT ROOM.
5. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

TECHNOLOGY LEGEND

COMMUNICATIONS	
◁	DUAL PORT FACEPLATE - (2 CABLES)
◀	QUAD PORT FACEPLATE - (4 CABLES)
◀	SINGLE PORT FACEPLATE - (1 CABLE)
J	JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL EQUIPMENT OR FURNITURE SYSTEM CONNECTION. SUBSCRIPT INDICATES THE FOLLOWING: "D" DATA
HH	HAND HOLE
SECURITY DEVICES	
▭	CAMERA (1 CATEGORY 6 CABLE) (SHALL BE WHITE IN COLOR)
AUDIO VISUAL DEVICES (FURNISHED AND INSTALLED BY METRA)	
S	13" ROUND FLUSH MOUNT LOUDSPEAKER WITH BACKBOX AND TILE-BRIDGE. ALL NEW SPEAKERS SHALL BE WHITE IN COLOR (BOGEN S86T725PG8U/W)
S_L	LIGHT POLE SPEAKER - WEATHERPROOF LOUDSPEAKER - COLOR SHALL BE BLACK (BOGEN A2TBLK) [CONTRACTOR TO PROVIDE AN ALLOWANCE TO SPRAY PAINT OUTER SPEAKER COVER SILVER TO MATCH POLE PRIOR TO INSTALLATION BY METRA]
DEVICE ANNOTATION	
MU	MULLION MOUNTED DEVICE
WP	WEATHERPROOF
THE FOLLOWING SYMBOLS INDICATE THE MOUNT TYPE WHEN COMBINED WITH DATA OUTLETS AND OTHER DEVICES UNLESS OTHERWISE NOTED:	
⊢	WALL / POLE MOUNTED

EQUIPMENT LIST

	COPPER CONNECTIVITY	
KEY	DESCRIPTION	COMMENTS
C2	CABLES, UTP, 4-PAIR, CATEGORY 6 - OUTDOOR RATED	CONTRACTOR
C8	JACK, MODULAR BLANK INSERT	CONTRACTOR
C10	JACK, MODULAR, CATEGORY 6, RJ45	CONTRACTOR
C13	FACEPLATE, MODULAR, 1 POSITION, WHITE	CONTRACTOR
C14	FACEPLATE, MODULAR, 2 POSITION, WHITE	CONTRACTOR
C15	FACEPLATE, MODULAR, 3 POSITION, WHITE	CONTRACTOR
C16	FACEPLATE, MODULAR, 4 POSITION, WHITE	CONTRACTOR
C23	SURFACE MOUNT BOX, SMALL, 1 POSITION	CONTRACTOR
	2-PAIR 18 AWG SPEAKER WIRING - OUTDOOR RATED	FURNINSHED AND INSTALLED BY METRA

	RACKS, CABINETS AND ENCLOSURES	
KEY	DESCRIPTION	COMMENTS
E4	OUTDOOR NEMA RATED IT ENCLOSURE - 24"H x 24"W x 12"D (INCLUDE A/C UNIT, 18" FLOOR STANDING KIT AND ACCESSORIES TO SUPPORT FIBER, COPPER, RUGGEDIZED ETHERNET SWITCH AND MEDIA CONVERTERS) COORDINATE WITH ARCHITECTUAL, CIVIL AND ELECTRICAL.	CONTRACTOR

	COMMUNICATIONS RACEWAY AND CONDUIT	
KEY	DESCRIPTION	COMMENTS
R1	3/4" CONDUIT	CONTRACTOR
R2	1" CONDUIT	CONTRACTOR
R3	1-1/4" CONDUIT	CONTRACTOR
R4	1-1/2" CONDUIT	CONTRACTOR
R5	2" CONDUIT	CONTRACTOR
R6	2-1/2" CONDUIT	CONTRACTOR
R7	3" CONDUIT	CONTRACTOR
R8	3-1/2" CONDUIT	CONTRACTOR
R9	4" CONDUIT	CONTRACTOR
R10	CONDUIT PULL BOX	CONTRACTOR

	VIDEO SURVEILLANCE PRODUCTS - BASES OF DESIGN (REFER TO SPECIFICATION SECTION 281300 FOR ADDITIONAL INFORMATION		
KEY	DESCRIPTION	CAMERA INFORMATION	COMMENTS
360	CAMERA, EXTERIOR, 360 DEGREE, 6MP, WHITE	SPECO TECHNOLOGY P/N: 06MDP2	CAMERA DEDICATED TO VoCH POLICE
FIXED	CAMERA, FIXED, EXTERIOR, 6MP, 2.8MM LENS, WHITE	SPECO TECHNOLOGY P/N: 03VLD1	CAMERA DEDICATED TO VoCH POLICE

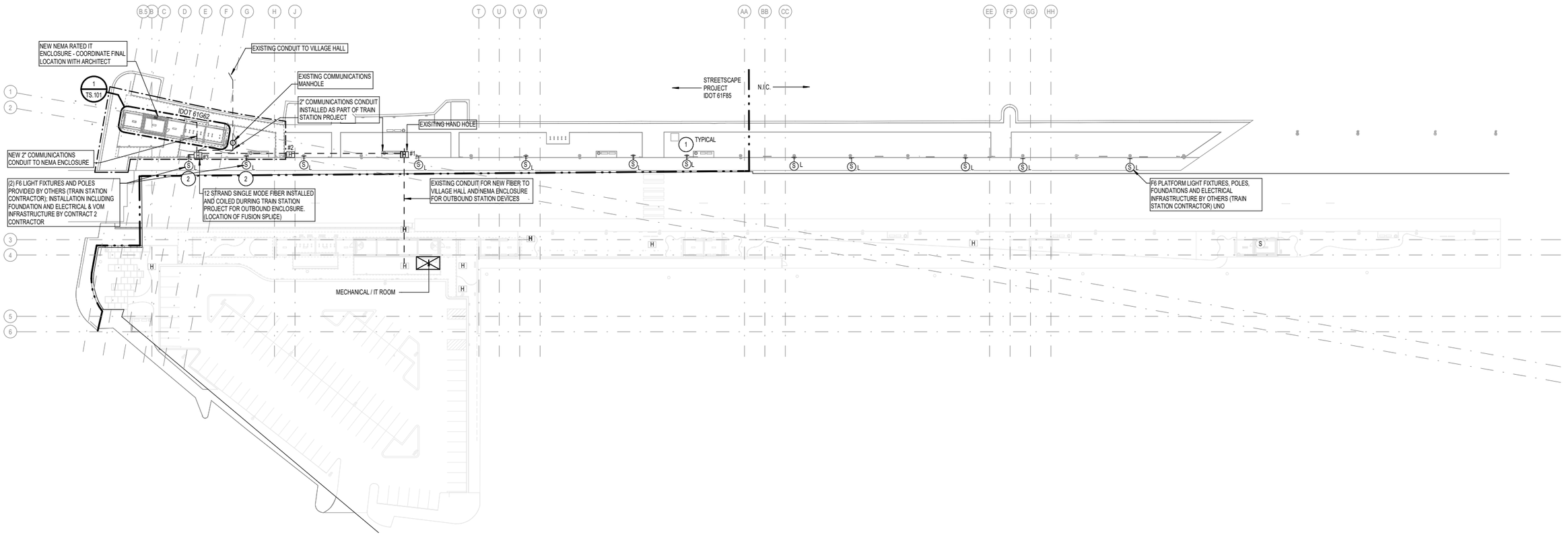
GENERAL NOTE: NOT ALL SYMBOLS, NOTES AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT

TECHNOLOGY GENERAL NOTES

1. SITE PLAN CONDUIT ROUTING FOR TECHNOLOGY:
   ALL MANHOLES AND CONDUIT EXISTING AND INSTALLED AS PART OF THE TRAIN STATION PROJECT UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DRAWINGS (ES SERIES SHEETS) FOR ADDITIONAL INFORMATION AND COORDINATION.
   - ALL COMMUNICATION HANDHOLE TO HANDHOLE CONDUITS SHALL BE 2" INCH
   - ALL SPEAKER CONDUITS FROM HANDHOLE TO LIGHT POLE AND FROM LIGHT POLE TO LIGHT POLE SHALL BE 1" INCH
   - ALL CAMERA CONDUITS FROM HANDHOLE TO CAMERA LOCATION SHALL BE 1.25" INCH
2. ALL COMMUNICATIONS CONDUIT PATHWAYS SHALL MAINTAIN A MINIMUM OF 6" SEPARATION FROM ELECTRICAL LINES / CONDUITS SUPPORTING MED/HIGH VOLTAGE (120V OR GREATER). LOW VOLTAGE IS DEFINED AS 48V OR LESS.
3. PROVIDE (1) 12 STRAND SINGLE-MODE FIBER FROM NEMA RATED ENLOSURE TO OUTBOUND HANDHOLE. FUSION SPLICE TO THE EXISTING 12 STRAND FIBER COILED IN HANDHOLE PROVIDED BY OTHERS AS PART OF TRAIN STATION PROJECT TO IT ROOM. ALL FIBER CONNECTORS SHALL BE LC. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. PROVIDE MIN 12 PORT RUGGEDIZED OUTDOOR POE SWITCH WITH LC SFP MODULES FOR SINGLE-MODE FIBER CONNECTION BACK TO SWITCH IN MECHANICAL / IT ROOM.
5. ALL NEW AND EXISTING SHARED HANDHOLES WITH ELECTRICAL AND COMMUNICATIONS CABLING REQUIRE A PHYSICAL BARRIER TO CREATE (2) PHYICAL COMPARTMENTS. COMMUNICATIONS COMPARTMENT SHALL ALLOW FOR A MINIMUM OF 6" SEPERATION FROM MID/HIGH VOLTAGE CABLES AND COMMUICATIONS FIBER / COPPER CABLES FOR SECURITY AND PAGING APPLICATIONS.
6. CONTRACTOR TO PROVIDE STRAPPING SUPPORTS ON SIDE WALL OF COMMUNICATIONS COMPARTMENT WITHIN ALL HANDHOLES

TECHNOLOGY KEYED NOTES

1. NEW VOICE OF METRA SPEAKER INSTALLED BY TRAIN STATION CONTRACTOR UNLESS NOTED OTHERWISE
2. NEW VOICE OF METRA SPEAKER. MOUNT AT 12' ABOVE GROUND. PROVIDE 1" CONDUIT BETWEEN LIGHT POLES TO ROUTE SPEAKER CABLING IN SERIES. PROVIDE NEW AUDIO CABLING.



1 **STREETSCAPE TECHNOLOGY SITE PLAN**
1" = 40'-0"

0' 20' 40' 80' 160'

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	JF	REVISED
			DRAWN BY	JF	REVISED
	PLOT SCALE	1" = 40'-0"	CHECKED BY	JF	REVISED
	PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: 1" = 40'-0" SHEET OF

BUILDING
TS.100 TECHNOLOGY SITE PLAN
STA. TO STA.

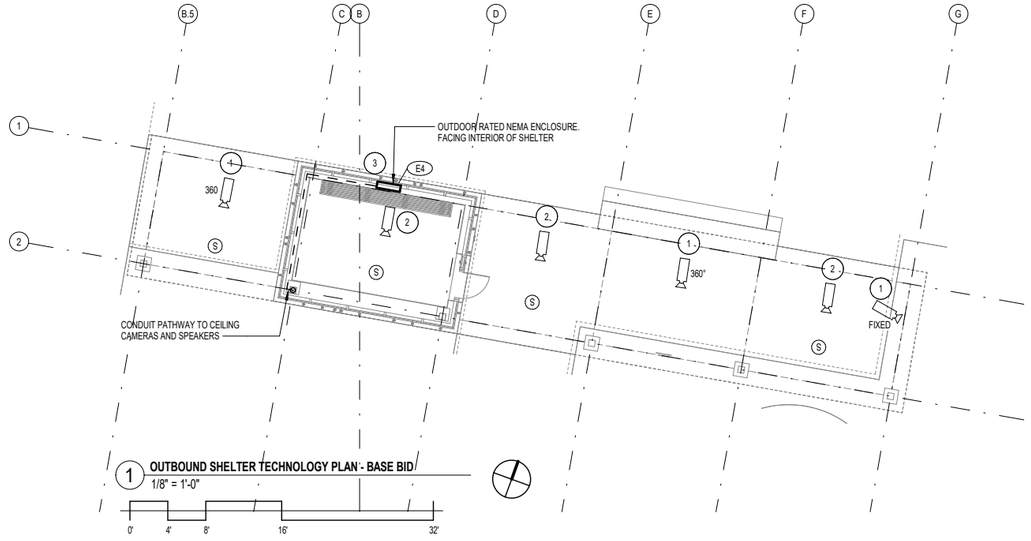
F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	70
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

TECHNOLOGY GENERAL NOTES

1. ROUTE ALL TECHNOLOGY CABLING TO OUTDOOR RATED NEMA ENCLOSURE.
2. ALL CONDUITS SHALL BE ROUTED ABOVE STRUCTURE AND CONCEALED IN VERTICAL COLUMNS. COORDINATE ALL CONDUIT ROUTING WITH ARCHITECT PRIOR TO ROUGH-IN.
3. REFER TO ARCHITECTURAL DRAWINGS FOR CAMERA AND SPEAKER BACK BOX DIMENSIONAL LOCATIONS. FINAL LOCATION TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.

TECHNOLOGY KEYED NOTES

1. SURVEILLANCE CAMERA DEDICATED TO VoCH POLICE. REFER TO DETAILS FOR CAMERA MOUNTING REQUIREMENTS.
2. FUTURE SURVEILLANCE CAMERA DEDICATED TO VoCH POLICE. REFER TO DETAILS FOR CAMERA MOUNTING REQUIREMENTS. CONTRACTOR TO PROVIDE INFRASTRUCTURE ONLY WITH BLANK COVER FOR FUTURE CAMERA
3. IN WALL 24" x 18" x 8" OUTDOOR RATED NEMA ENCLOSURE. HOUSE OUTDOOR RATED ETHERNET POE SWITCH FOR CAMERAS. ELECTRICAL CONTRACTOR TO PROVIDE A 120V/20A CIRCUIT AND 2" CONDUIT TO EXISTING HANDHOLE FOR CONNECTION TO METRA STATION MECHANICAL ROOM.



1 **OUTBOUND SHELTER TECHNOLOGY PLAN - BASE BID**
1/8" = 1'-0"

0' 4' 8' 16' 32'

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

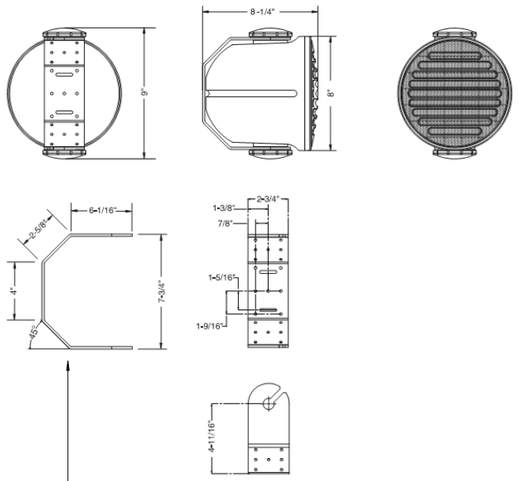
USER NAME		DESIGNED BY	JF	REVISED
		DRAWN BY	JF	REVISED
PLOT SCALE	1/8" = 1'-0"	CHECKED BY	JF	REVISED
PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

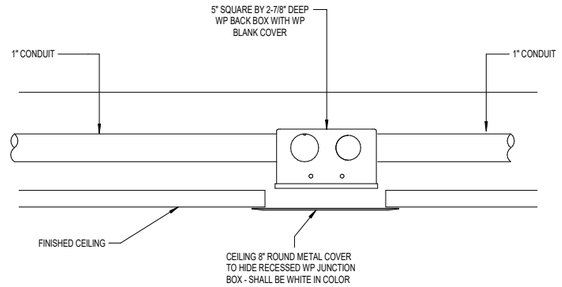
CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: 1/8" = 1'-0" SHEET OF

BUILDING
TS.101 FLOOR PLANS - TECHNOLOGY
STA. TO STA.

F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	71
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		



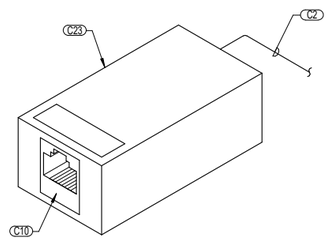
3 POLE SPEAKER MOUNTING DETAIL
NTS



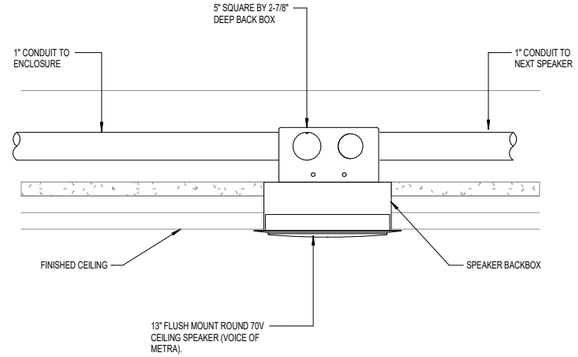
NOTES:

1. JUNCTION BOX SUPPORT SHOWN IS TYPICAL. ELECTRICAL CONTRACTOR SHALL DETERMINE MOST APPROPRIATE MEANS FOR SUPPORTING JUNCTION BOX TO STRUCTURE ABOVE.
2. WEATHER PROOF JUNTION BOX W/ WP COVER SHALL BE MOUNTED TO CEILING STRUCTURE USING MANUFACTURER RECOMMENDED MOUNTING HARDWARE. WP BOX SHALL NOT RELY ON THE CONDUIT FOR SUPPORT.
3. PROVIDE METALIC ROUND BLANK COVER TO COVER RECESSED J-BOX FOR FUTURE USE (CONFIRM COLOR WITH ARCHITECT PRIOR TO INSTALLATION)

5 INTERIOR CEILING RECESSED J-BOX MOUNTED COVER DETAIL FOR FUTURE CAMERAS (INACCESSIBLE CEILING).
NTS



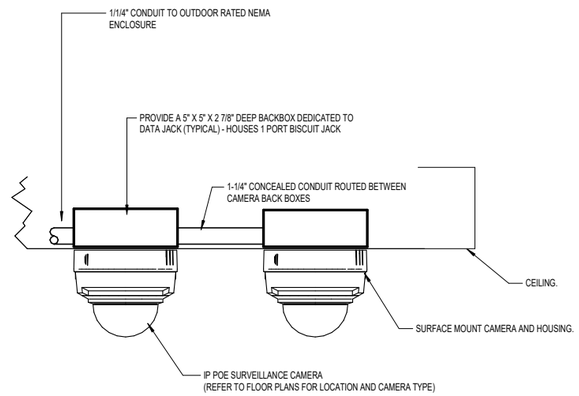
2 1 PORT BISCUIT JACK (SURVEILLANCE OUTLET)
NTS



NOTES:

1. JUNCTION BOX SUPPORT SHOWN IS TYPICAL. ELECTRICAL CONTRACTOR SHALL DETERMINE MOST APPROPRIATE MEANS FOR SUPPORTING JUNCTION BOX TO STRUCTURE ABOVE.
2. SPEAKER SHALL BE MOUNTED TO CEILING STRUCTURE USING MANUFACTURER RECOMMENDED MOUNTING HARDWARE. SPEAKER SHALL NOT RELY ON THE CONDUIT FOR SUPPORT.
3. PROVIDE A PULL STRING IN ALL CONDUITS.

4 INTERIOR CEILING MOUNTED SPEAKER DETAIL (INACCESSIBLE CEILING)
NTS



DETAIL NOTES:
1. COORDINATE MOUNTING WITH ELCTRICAL AND ARCHITECT PRIOR TO INSTALLATION. FOLLOW ALL MANUFACTURER MOUNTING INSTRUCTIONS.
2. REFER TO PLANS FOR LOCATIONS AND TYPES OF CAMERAS.

1 SURFACE MOUNTED CEILING CAMERA DETAIL.
NTS

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY

USER NAME		DESIGNED BY	JF	REVISED	
		DRAWN BY	JF	REVISED	
PLOT SCALE	As indicated	CHECKED BY	JF	REVISED	
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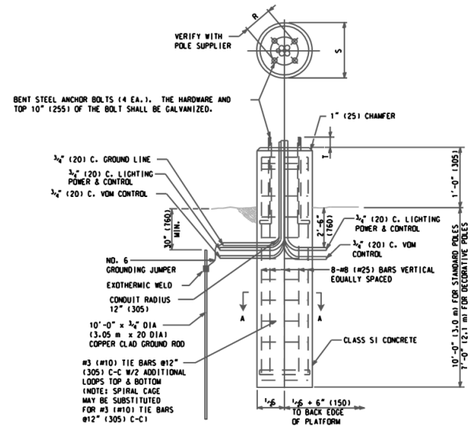
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

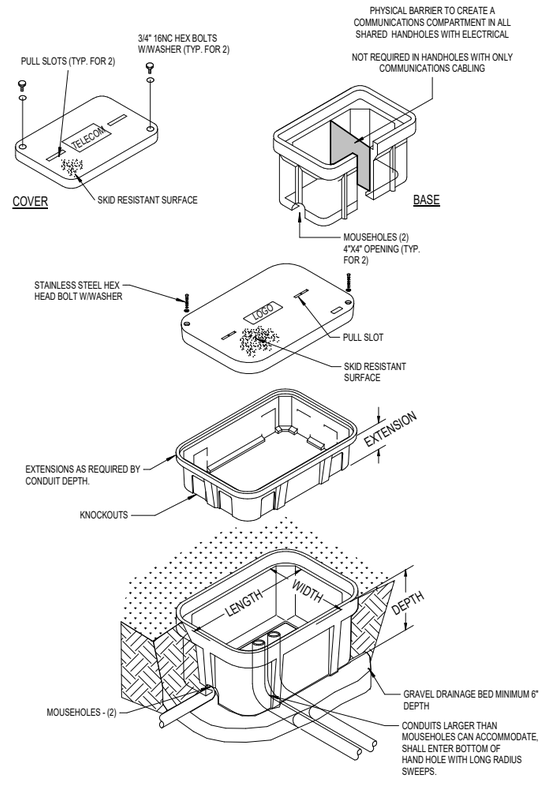
CLARENDON HILLS
DOWNTOWN REVITILIZATION
SCALE: As indicated | SHEET | OF
STA. | TO STA.

BUILDING
TS.600 TECHNOLOGY DETAILS - STRUCTURED CABLING

F.A.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	72
		CONTRACT NO.	61G62	
	ILLINOIS	FED. AID PROJECT		

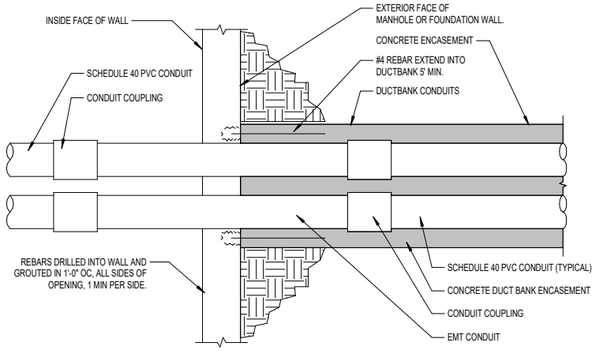


4 METRA PLATFORM LIGHTPOLE FOUNDATION AND CONDUIT DETAIL MINIMUM REQUIREMENTS (FOR REFERENCE)
SCALE: NTS



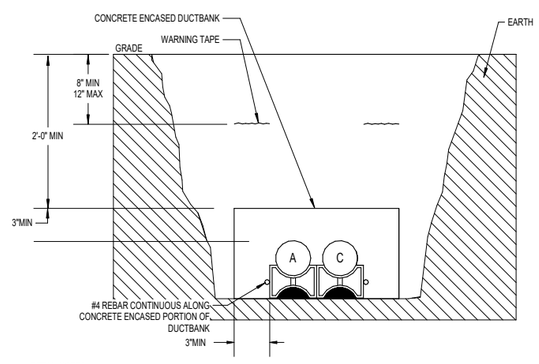
DETAIL NOTES:
1. HAND HOLE DETAIL ONLT PROVIDED FOR COORDINATION WITH ELECTRICAL.
2. REFER TO ELECTRICAL DRAWING ES.100 DETAIL #2 FOR HAND HOLE DIMENSIONS.
3. REFER TO DIVISION 26 SPECIFICATIONS FOR ALL HAND HOLES.
4. COORDINATE DEPTH OF HAND HOLES WITH EXISTING CONDITIONS IN THE FIELD.
5. CONTRACTOR SHALL PROVIDE EXTENSION BOXES AS REQUIRED.

1 TYPICAL SITE HAND HOLE
NTS



DETAIL NOTES:
1. REFER TO THE TECHNOLOGY SITE PLAN AND DUCT BANK DETAILS FOR THE EXACT CONDUIT CONFIGURATION ENTERING THE FOUNDATION WALL.
2. COORDINATE CONDUIT PENETRATION THROUGH FOUNDATION WALL WITH THE STRUCTURAL PLANS AND ENGINEER PRIOR TO INSTALLATION.
3. CONDUIT DUCT BANK SHALL BE CONCRETE ENCASED AT EXTERIOR OF FOUNDATION WALL FOR A MINIMUM OF 6'-0". CONDUIT PASSING THROUGH FOUNDATION WALL SHALL BE EMT. EMT CONDUIT SHALL CONTINUE A MINIMUM OF 6'-0" INTO BUILDING BEFORE TRANSITIONING TO PVC CONDUIT.

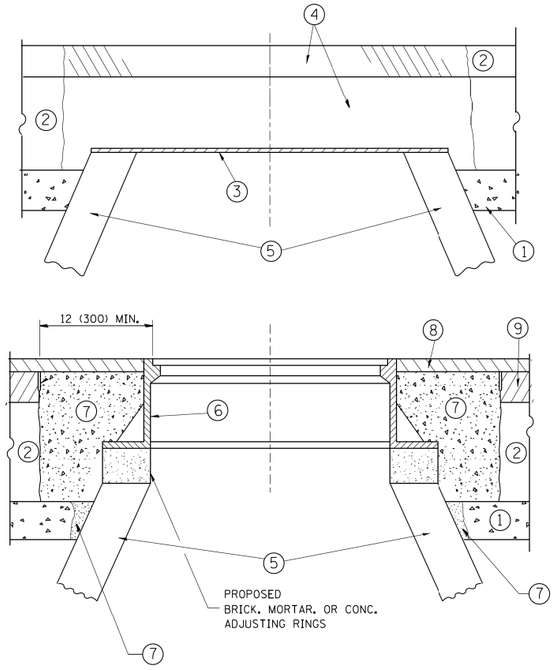
3 CONDUIT DUCTBANK TERMINATION AT FOUNDATION WALL DETAIL.
NTS



DETAIL NOTES:
1. BACK-FILLING, COMPACTING, AND RESURFACING SHALL BE DONE BY THE CONTRACTOR IN STRICT ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATIONS.
2. PROVIDE PLASTIC DUCT SPACERS TO MAINTAIN CONDUIT SEPARATION IN DUCT BANK.
3. CONCRETE ENCASEMENT SHALL ONLY BE REQUIRED WITHIN 6-0" OF BUILDING FOUNDATIONS AND AT SWEEPING ELBOWS INTO TELECOMMUNICATION ROOMS. CONCRETE ENCASED DUCTBANK SHALL BE CONSTRUCTED OF 2500 PSI MINIMUM CONCRETE.

2 CONDUIT TRENCH DETAIL.
NTS

LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY	USER NAME		DESIGNED BY	JF	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CLARENDON HILLS DOWNTOWN REVITILIZATION	BUILDING TS.601 TECHNOLOGY DETAILS - STRUCTURED CABLING	F.A.RTE. 1003	SECTION 16-00045-01-MS	COUNTY DUPAGE	TOTAL SHEETS 79	SHEET NO. 73
			DRAWN BY	JF	REVISED						CONTRACT NO. 61G62		
	PLOT SCALE	As indicated	CHECKED BY	JF	REVISED		SCALE: As indicated SHEET OF	STA. TO STA.			ILLINOIS	FED. AID PROJECT	
	PLOT DATE	05/15/20	DATE OF ISSUE	05/15/20	REVISED								



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

1. SUB-BASE GRANULAR MATERIAL
2. EXISTING PAVEMENT
3. 36 (900) DIAMETER METAL PLATE
4. PROPOSED CRUSHED STONE AND HMA SURFACE MIX
5. EXISTING STRUCTURE
6. FRAME AND LID (SEE NOTES)
7. CLASS PP-1* CONCRETE
8. PROPOSED HMA SURFACE COURSE
9. PROPOSED HMA BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = c:\pw_work\pwidot\bauerdl\d0108315\bd08.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - R. WIEDEMAN 05-14-04
		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 1968.5000 ' / m	CHECKED -	REVISED - R. BORO 03-09-11
	PLOT DATE = 12/6/2011	DATE - 10-25-94	REVISED - R. BORO 12-06-11

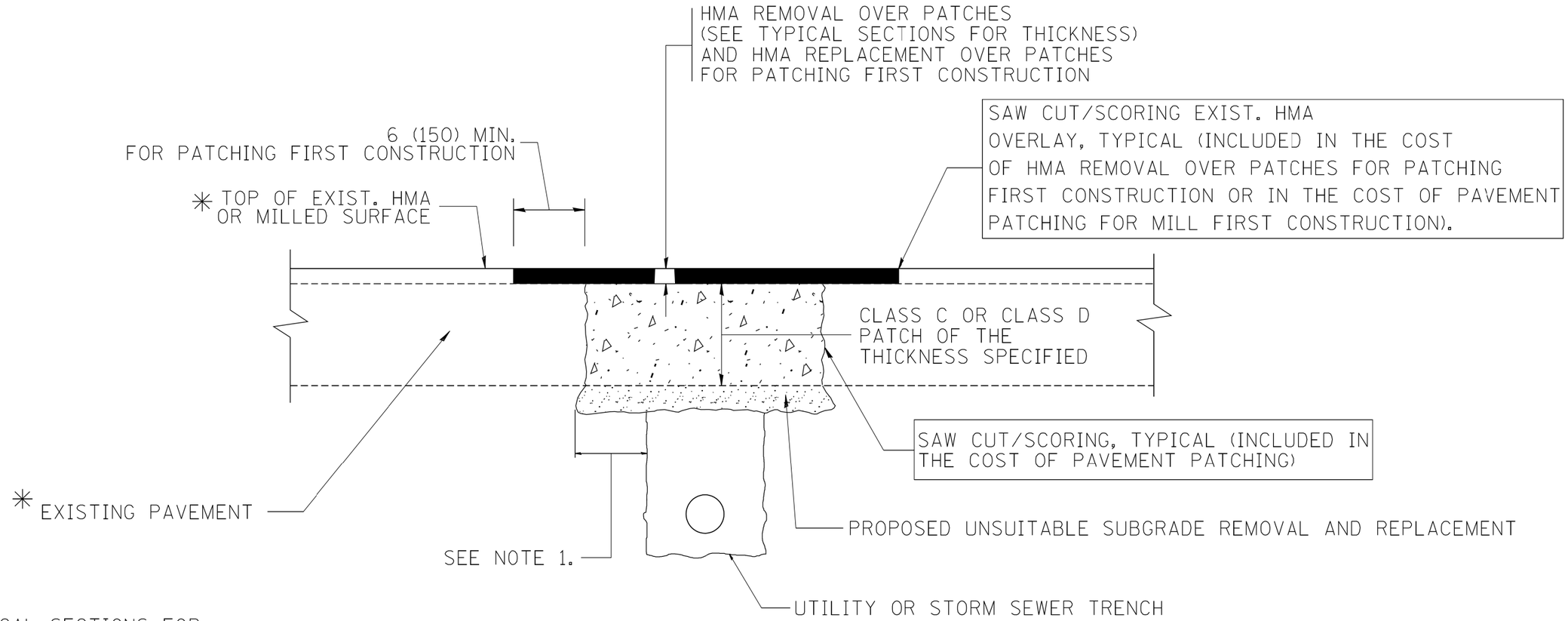
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	74
	BD600-03 (BD-8)	CONTRACT NO.61G62		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

bd08.dgn 12/6/2011 10:53:13 AM User:bauerdl



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4½ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. BORO 01-01-07					1003	16-00045-01-MS	DUPAGE	79	75
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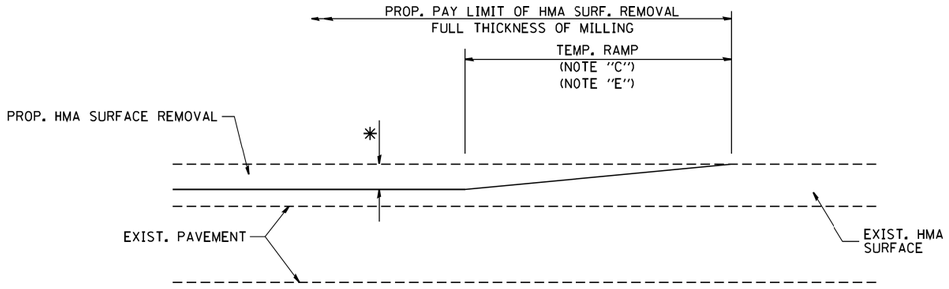
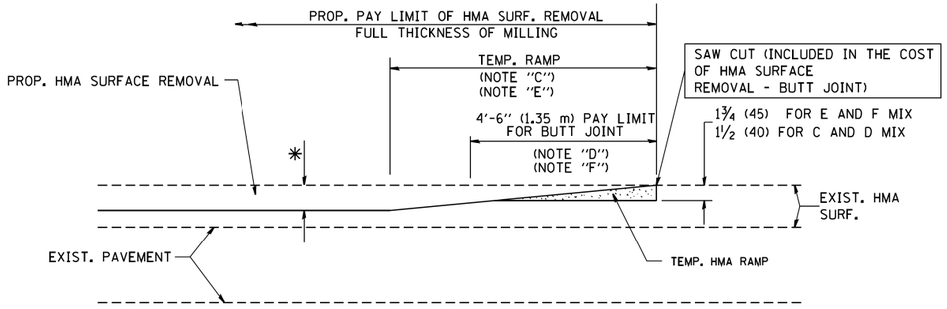
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

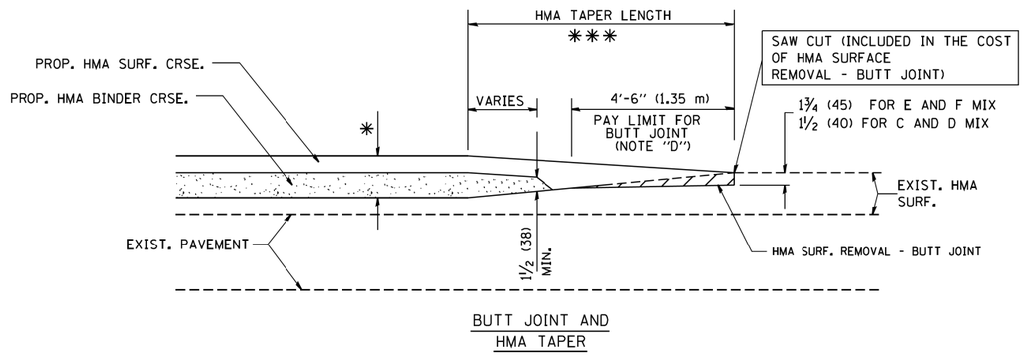


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

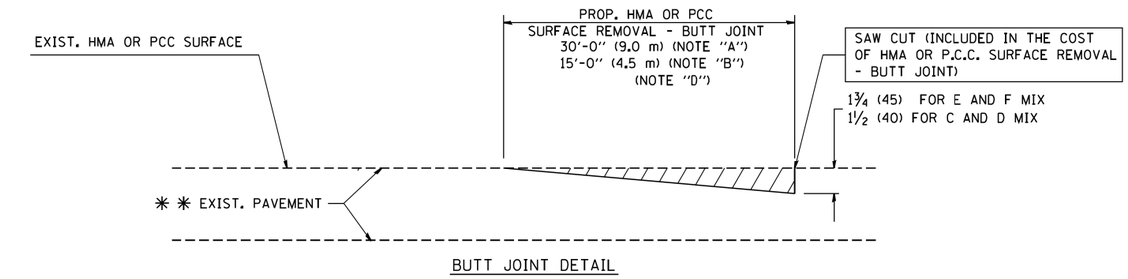
OPTION 2

TYPICAL TEMPORARY RAMP

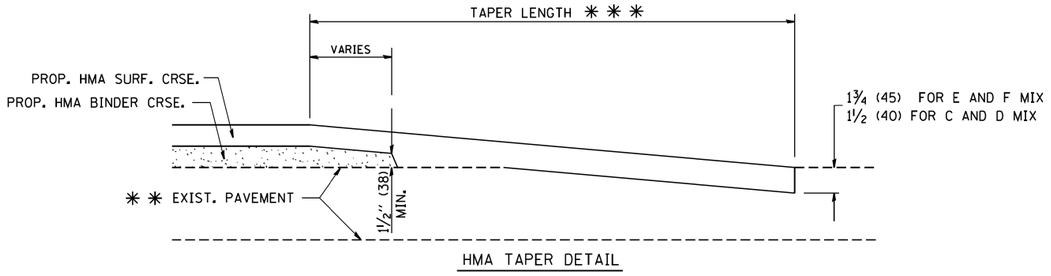


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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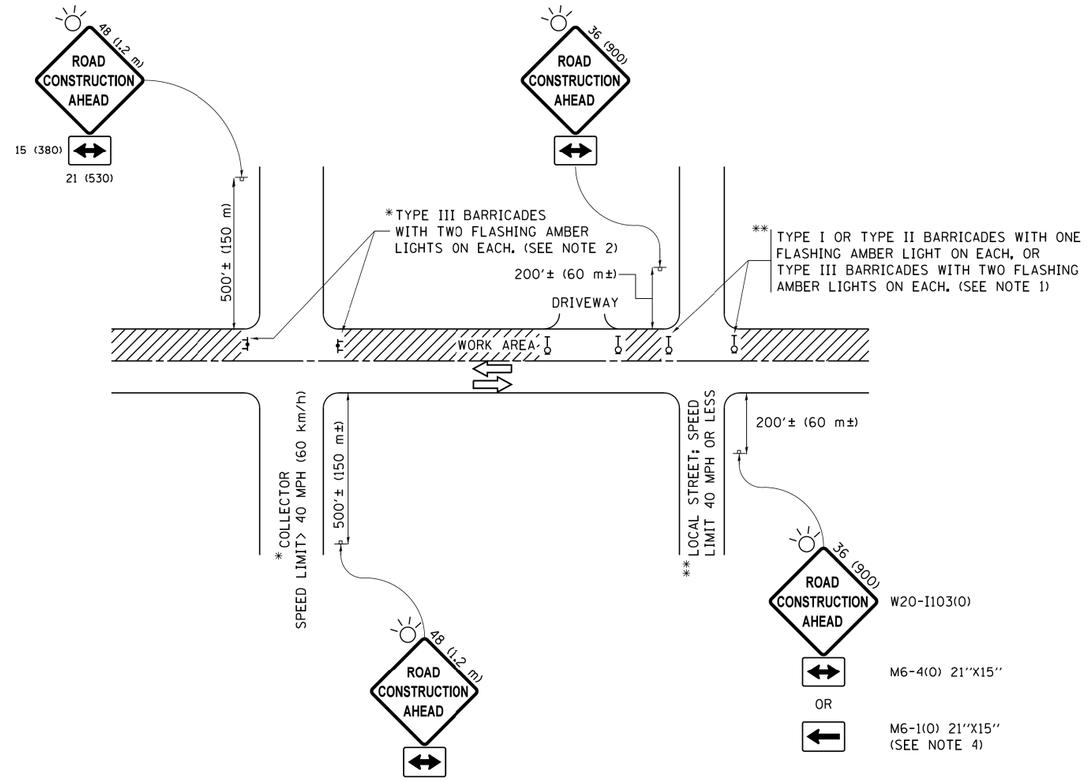
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	76
	BD400-05 BD32	CONTRACT NO.61G62		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE ''ROAD CONSTRUCTION AHEAD'' SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE ''ROAD CONSTRUCTION AHEAD'' SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\$\DRAWN\CADData\CADsheets\tc10.dgn	USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
		DRAWN	REVISED -T. RAMMACHER 01-06-00
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
Default	PLOT DATE = 9/15/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	77
	TC-10	CONTRACT NO.61G62		
	ILLINOIS FED. AID PROJECT			

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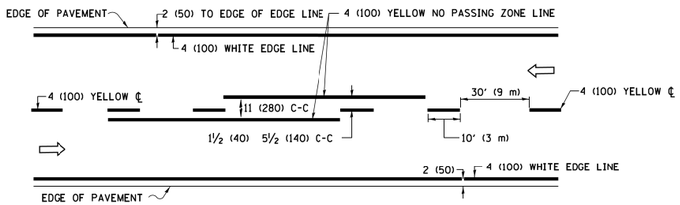
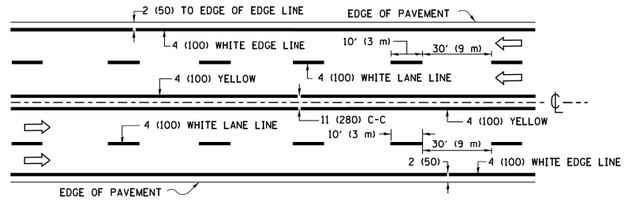
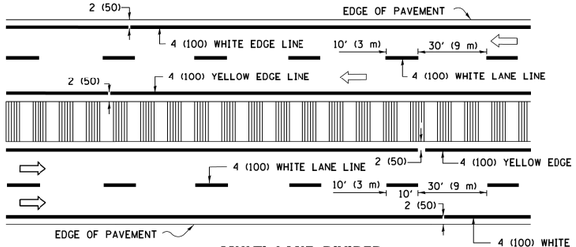


2–LANE ROADWAY

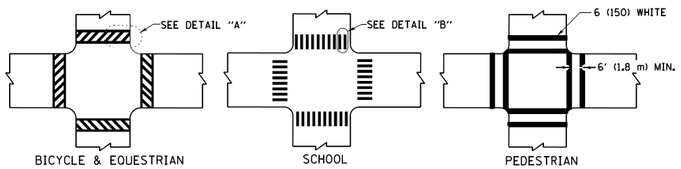


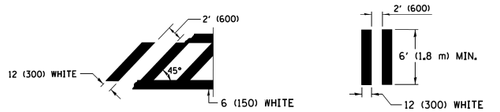
MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

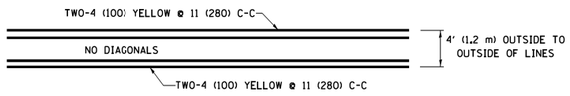




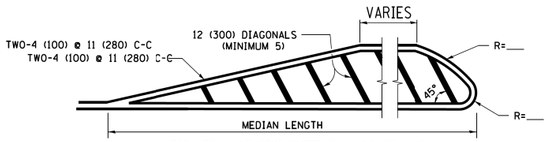
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



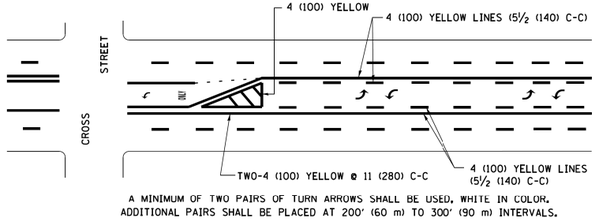
4' (1.2 m) WIDE MEDIANS ONLY



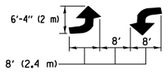
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

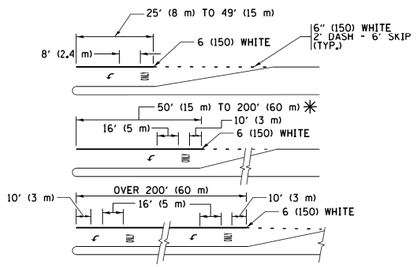


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

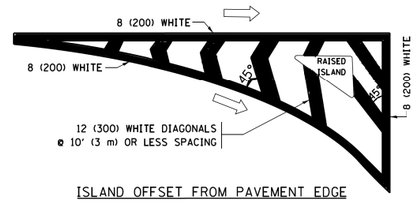


FULL SIZE LETTERS 8' (2,4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1,5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1,9 m^2)

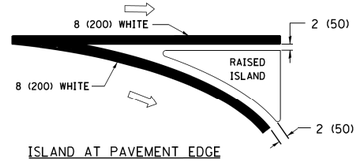
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

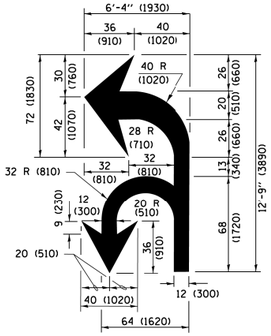


ISLAND OFFSET FROM PAVEMENT EDGE

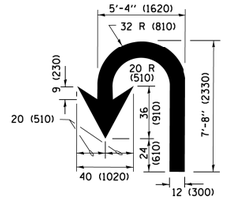


ISLAND AT PAVEMENT EDGE

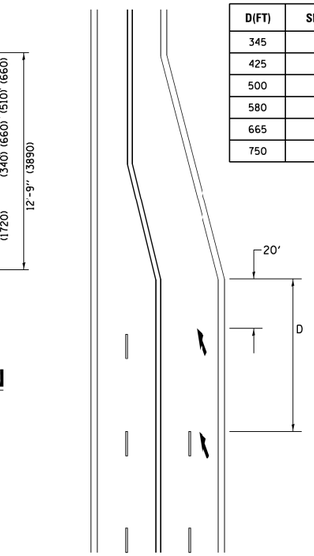
TYPICAL ISLAND MARKING



COMBINATION LEFT AND U–TURN



U–TURN



D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

LANE REDUCTION TRANSITION

✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 ⊄ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ⊄ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2,4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 ⊄ 4 (100) EACH DIRECTION 8' (2,4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ⊄ 6 (150) 12 (300) ⊄ 45° 12 (300) ⊄ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 ⊄ 4 (100) WITH 12 (300) DIAGONALS ⊄ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS ⊄ 45°	SOLID	WHITE	DIAGONALS: 15' (4,5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3,6 SQ. FT. (0,33 m^2) EACH "X"=54,0 SQ. FT. (5,0 m^2)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) ⊄ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

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		DRAWN -	REVISED - C. JUCIUS 07-01-13
Default	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - C. JUCIUS 12-21-15
	PLOT DATE = 6/23/2017	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	78
	TC–13	CONTRACT NO.61G62		
		ILLINOIS FED. AID PROJECT		

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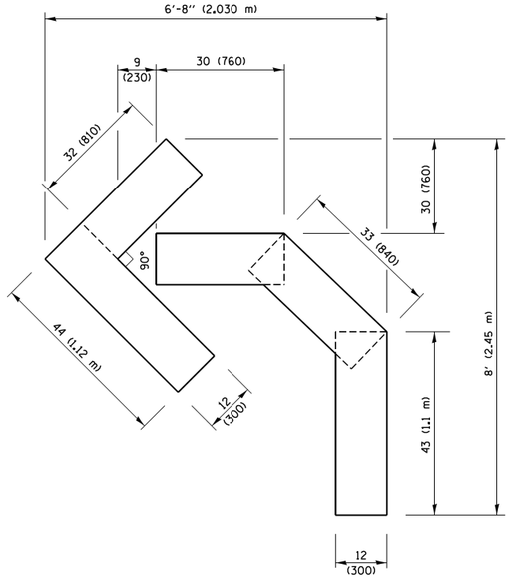
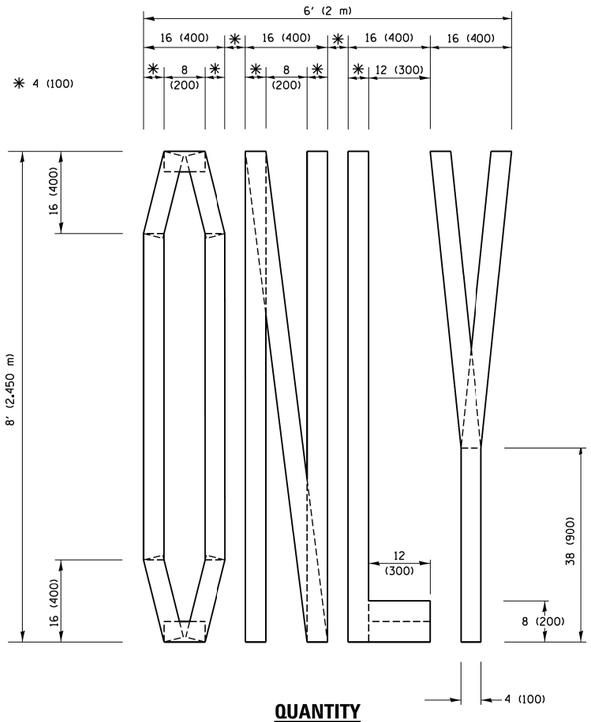


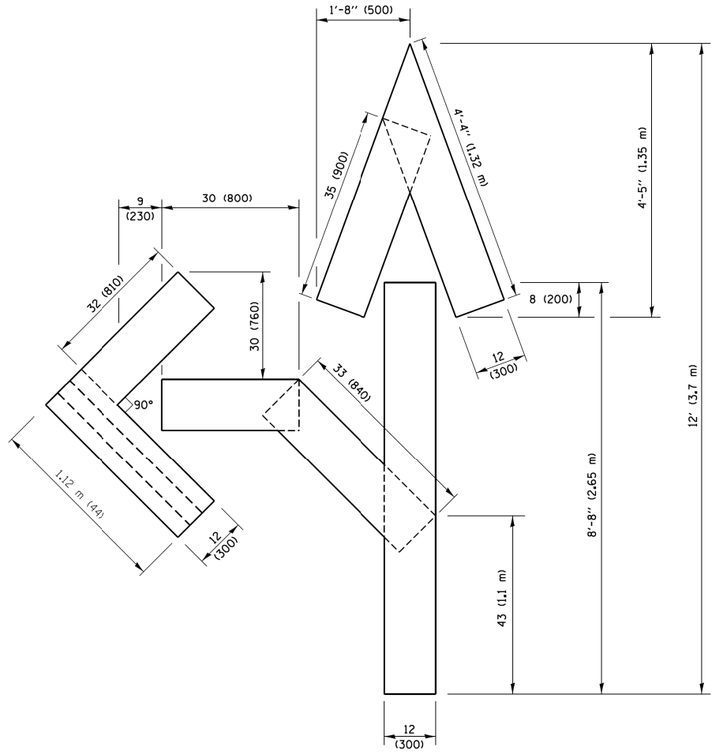
QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.41 sq. m)



QUANTITY

4 (100) LINE = 64.1 ft. (19.5 m)
21.4 sq. ft. (1.99 sq. m)

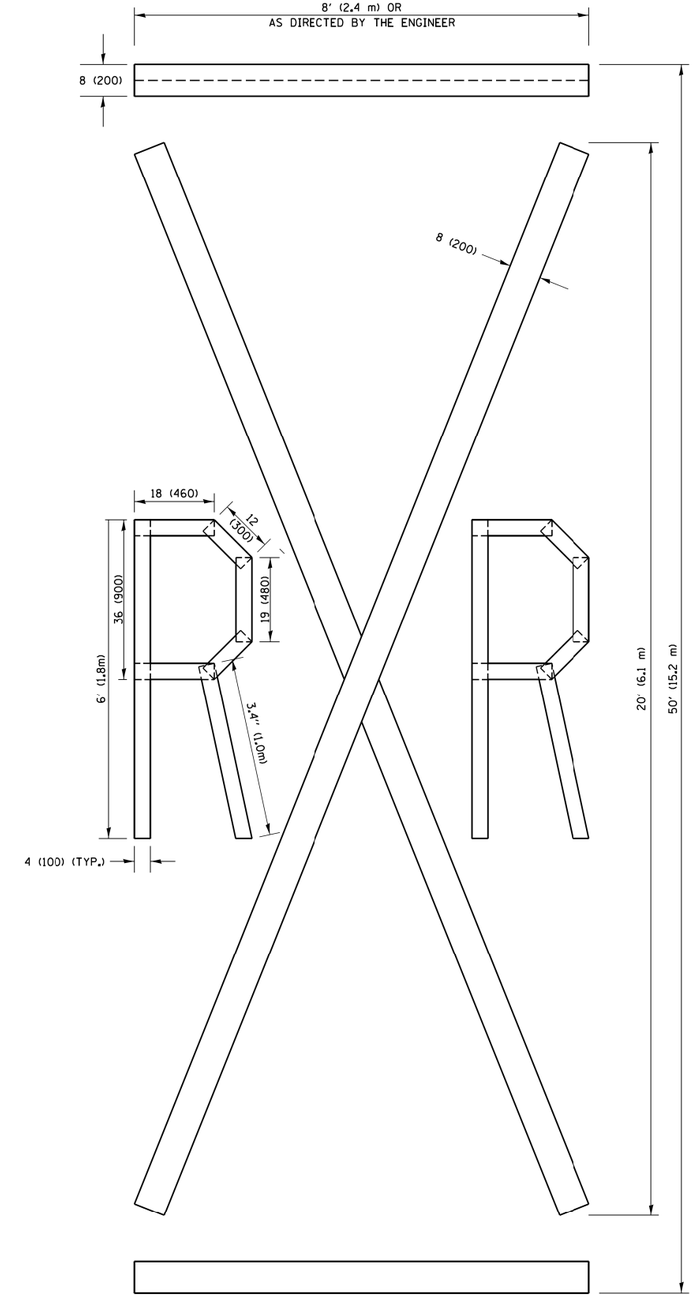


QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m)
27.5 sq. ft. (2.53 sq. m)

NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY

4 (100) LINE = 225.9 ft. (68.9 m)
75.3 sq. ft. (6.99 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

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	DRAWN \CADData\CADsheets\tc16.dgn		REVISED -E. GOMEZ 08-28-00
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -E. GOMEZ 08-28-00
	PLOT DATE = 9/15/2016	DATE - 09-18-94	REVISED -A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1003	16-00045-01-MS	DUPAGE	79	79
	TC-16	CONTRACT NO.61G62		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		