

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 97709

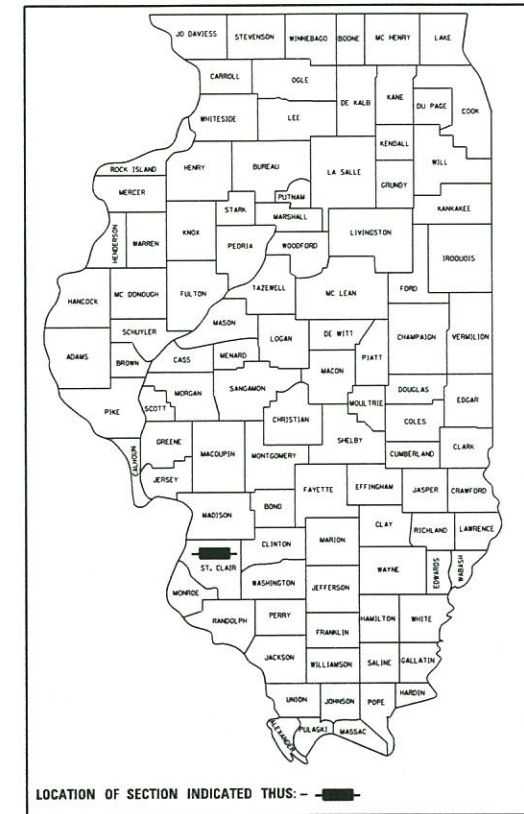
**PLANS FOR PROPOSED
 LOCAL AGENCY PROJECT**

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, COMMITMENTS, HIGHWAY STANDARDS
- 3-5 SUMMARY OF QUANTITIES
- 6-7 TYPICAL SECTIONS
- 8 SCHEDULE OF QUANTITIES
- 9 ALIGNMENT, CONTROL POINTS, AND BENCHMARKS
- 10-11 PLAN
- 12 PROFILE
- 13 INTERSECTION DETAILS
- 14-17 TRAFFIC SIGNAL DETAILS
- 18-19 SOIL BORINGS
- 20-24 DETAILS
- 25-29 CROSS SECTIONS

FOR HIGHWAY STANDARDS
 SEE SHEET 2

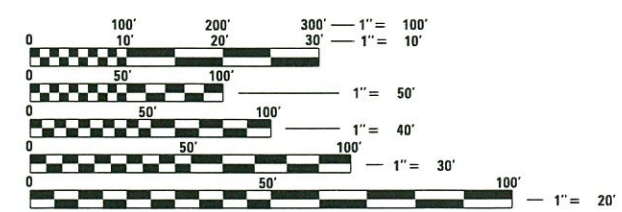
**CMAQ FUNDS
 FAU ROUTE 9167 (UNION HILL RD)
 FAU ROUTE 9163 (LONGACRE DR)
 SECTION 12-00038-01-TL
 PROJECT NO. RSYP (172)
 CITY OF FAIRVIEW HEIGHTS, ILLINOIS
 ST. CLAIR COUNTY
 JOB NO. C-98-349-12**



FUNCTIONAL CLASSIFICATION

LONGACRE DRIVE - MAJOR COLLECTOR
 UNION HILL ROAD - MAJOR COLLECTOR

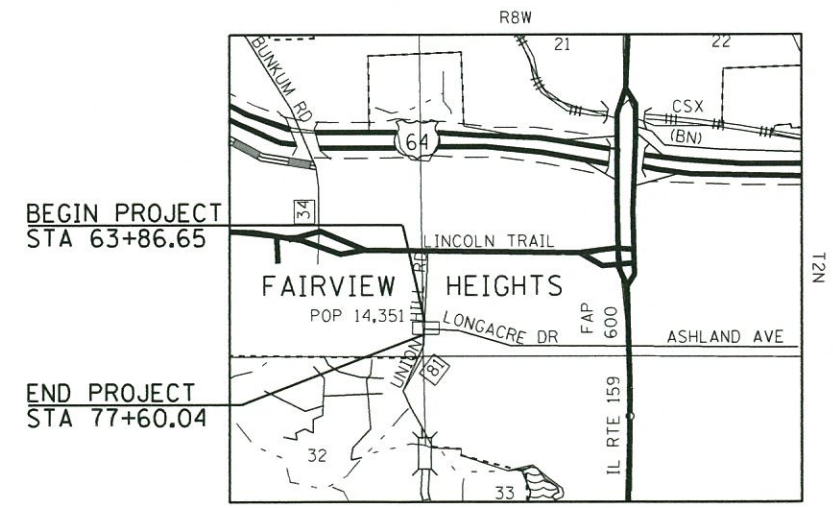
2019 ADT
 LONGACRE DRIVE - 4,800, 0% TRUCKS
 UNION HILL ROAD - 9,150, 0% TRUCKS
 2039 ADT
 LONGACRE DRIVE - 7,400, 0% TRUCKS
 UNION HILL ROAD - 13,400, 0% TRUCKS



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 EXCAVATORS
 1-800-892-0123 OR 811

CONTRACT NO. 97709



LOCATION MAP

GROSS LENGTH OF PROJECT = 1,373,390 FEET (0.260 MILES) - ALONG UNION HILL ROAD
 NET LENGTH OF PROJECT = 1,373,390 FEET (0.260 MILES)

PLANS PREPARED BY



604 Pierce Boulevard, Suite 300 • O'Fallon, Illinois 62269
 Phone: (618) 622-3040
 Illinois Professional Design Firm No. 184-000435
 License Expires 4/30/2019



Larry D. Anderson 8/22/19
 LARRY D. ANDERSON, P.E.
 License Expires 11/30/2019

FAIRVIEW HEIGHTS
 Crossroads of Prosperity

City of Fairview Heights, Illinois
 10025 Bunkum Road
 Fairview Heights, Illinois 62208
 Phone: (618) 489-2000
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 www.fairviewheightscity.com

APPROVED *[Signature]* 8/22/19
 MAYOR, CITY OF FAIRVIEW HEIGHTS, ILLINOIS

PASSED *[Signature]* September 13, 2019
 DISTRICT 8 ENGINEER OF LOCAL ROAD & STREETS

RELEASING FOR BID
 BASED ON LIMITED
 REVIEW *[Signature]* September 13, 2019
 REGION 5 ENGINEER

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 OF THE STATE OF ILLINOIS**

GENERAL NOTES

- EXISTING UNDERGROUND AND ABOVE-GRADE FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED ON THESE CONTRACT DOCUMENTS BASED UPON THE INFORMATION AND SURVEYS AVAILABLE AT THE TIME OF DRAWING PREPARATION. THE LOCATION OF THESE FEATURES MUST, THEREFORE, BE CONSIDERED APPROXIMATE ONLY. IN ADDITION, THERE MAY BE OTHER FACILITIES, STRUCTURES, AND UTILITIES WHICH DID NOT EXIST (OR THE EXISTENCE OF WHICH WAS NOT KNOWN) AT THE TIME OF DRAWING PREPARATION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR(S) TO HAVE ALL EXISTING FACILITIES, STRUCTURES, AND UTILITIES LOCATED IN THE FIELD PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY; AND TO PROTECT ALL SUCH EXISTING FEATURES (EXCEPT THOSE SPECIFICALLY NOTED FOR REMOVAL OR DEMOLITION) DURING CONSTRUCTION.
- TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED. THE ENGINEER SHALL BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.
- FORMS FOR COMBINATION CONCRETE CURB AND GUTTER, CONCRETE GUTTER TYPE B, CONCRETE CURB TYPE B, SHALL BE OF METAL ONLY, EXCEPT THAT WOOD FORMS MAY BE USED ON SHORT RADIUS CURVES.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- BEFORE ORDERING STORM SEWERS, CATCH BASINS, PIPE CULVERTS, PIPE DRAINS, MANHOLES, INLETS, AND BOX CULVERTS, THE CONTRACTOR SHALL CONTACT THE ENGINEER AS TO THE EXACT LENGTH AND QUANTITY REQUIRED.
- CONNECTING OF NEW OR EXISTING PIPE DRAINS TO NEW OR EXISTING DRAINAGE STRUCTURES SHALL BE MADE IN A MANNER WHICH RESULTS IN A NEAT AND WATERTIGHT JOINT. WHEN PLACES THROUGH THE WALL OF DRAINAGE STRUCTURE PIPE DRAINS SHALL BE PLACED OR CUT FLUSH WITH THE FACE OF THE WALL AND DRESSED WITH MORTAR TO PROVIDE A SMOOTH, ROUNDED, OR BEVELED EDGE. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE PIPE DRAINS AND DRAINAGE STRUCTURES INVOLVED.
- ALL DRAINAGE STRUCTURES SHALL BE DELIVERED TO THE PROJECT SITE WITHOUT SILT, DEBRIS, OR OTHER SUCH OBSTRUCTIONS AT THE TIME OF FINAL INSPECTION. THE CLEANING OF THESE DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS INVOLVED.
- ANY EXCAVATION OR DROP OFF OF MORE THAN 3" AT THE EDGE OF PAVEMENT SHALL BE PROTECTED WITH EXTENDED LEG BARRICADES AND APPROPRIATE LIGHTS.
- ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

- *AMEREN ILLINOIS (AERIAL ELECTRIC)
- *AMEREN ILLINOIS (NATURAL GAS)
- *CHARTER COMMUNICATIONS, INC. (CABLE)
- *AT&T, INC. (TELEPHONE)

CITY OF FAIRVIEW HEIGHTS

MEMBERS OF J.U.L.I.E. (800) 892-0123 OR 811 ARE INDICATED BY *.
NON-MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- THE THICKNESS OF HOT-MIX ASPHALT SURFACE MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED. OVERNIGHT DROP-OFFS WILL NOT BE PERMITTED NEXT TO AN OPEN LANE OF TRAFFIC.
- NO OVERNIGHT LANE CLOSURES WILL BE PERMITTED.
- PROPERTY LINES AND/OR EXISTING ROW SHOWN ARE APPROXIMATE.
- THE RESIDENT ENGINEER SHALL VERIFY THE EXISTENCE OF HIGHWAY LIGHTING AND/OR INTELLIGENT TRANSPORTATION SYSTEMS (I.T.S.) UTILITIES WITHIN THE PROJECT LIMITS. IF HIGHWAY LIGHTING AND/OR I.T.S. EXISTS WITHIN THE PROJECT LIMITS, AND IF THESE ITEMS REQUIRE LOCATING, THE CONTRACTOR SHALL BE DIRECTED TO DO SO ACCORDING TO SECTION 803 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.
- ALL ELEVATIONS REFER TO THE NAVD 88 DATUM.
- FACTORS FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

HOT-MIX ASPHALT SURFACE COURSE	0.056 TON/SQ YD/IN
AGGREGATE (SURFACE, BASE, & BACKFILL)	2.05 TON/CU YD
BITUMINOUS MATERIALS:	
-TACK COAT FOR BITUMINOUS CONCRETE:	
-ON PCC WIDENIG	0.05 LB/SQ FT
TEMPORARY EROSION CONTROL SEEDING	100 LB/ACRE
NITROGEN FERTILIZER NUTRIENT	90 LB/ACRE
PHOSPHORUS FERTILIZER NUTRIENT	90 LB/ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LB/ACRE

**COMMITMENTS
NONE**

**HIGHWAY
STANDARDS**

000001-07	720006-04
001001-02	720011-01
001006	720016-04
280001-07	729001-01
424001-11	780001-05
602406-10	781001-04
602701-02	805001-01
604066-02	814001-03
606001-07	814006-02
701001-02	857001-01
701006-05	873001-02
701301-04	876001-04
701501-06	877001-07
701701-10	878001-10
701801-06	880006-01

MIX DESIGNS	
MIXTURE USES(S):	HOT-MIX ASPHALT SURFACE COURSE
AC/PG:	PG 64-22
RAP% (MAX):	SEE SPEC
DESIGN AIR VOIDS:	4.0% @ Ndes = 70
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5
FRICITION AGGREGATE	MIXTURE "D"

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 PEN TABLE = PLOTDRYS
 PLOT DRIVER = PLOTDRYS

FILE NAME = E:\NCS4PDF\3054\8432_4\97709-Plans-002.dgn	USER NAME = PWICS*	DESIGNED -	REVISED -	 WWW.HORNERSHIFRIN.COM	 Crossroads of Prosperity	GENERAL NOTES, COMMITMENTS, & HIGHWAY STANDARDS			LONGACRE/UNION HILL TRAFFIC SIGNAL		TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -	REVISED -			SECTION 12-00038-01-TL			30	2		
PLOT DATE = 9/9/2019 2:23:51 PM	DATE -	REVISED -	REVISED -			CONTRACT NO. 97709						
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SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
CODE NO	ITEM	UNIT	TOTAL	20% CITY 80% FEDERAL TRAFFIC SIGNALS	
				0021	URBAN
20200100	EARTH EXCAVATION	CU YD	60	60	
25000110	SEEDING, CLASS 1A	ACRE	0.25	0.25	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	3	3	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	3	3	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	3	3	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.1	0.1	
25100630	EROSION CONTROL BLANKET	SQ YD	84	84	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	2	2	
31100500	SUBBASE GRANULAR MATERIAL, TYPE A 6"	SQ YD	66	66	
35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SQ YD	47	47	
40200500	AGGREGATE SURFACE COURSE, TYPE A 6"	SQ YD	17	17	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	31	31	
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	7	7	
42101300	PROTECTIVE COAT	SQ YD	136	136	
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	64	64	

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
CODE NO	ITEM	UNIT	TOTAL	20% CITY 80% FEDERAL TRAFFIC SIGNALS	
				0021	URBAN
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	655	655	
42400800	DETECTABLE WARNINGS	SQ FT	40	40	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	13	13	
44000600	SIDEWALK REMOVAL	SQ FT	231	231	
50900805	PEDESTRIAN RAILING	FOOT	72	72	
52200700	PRECAST MODULAR RETAINING WALL	SQ FT	704	704	
60224030	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 15 FRAME AND LID	EACH	1	1	
60500040	REMOVING MANHOLES	EACH	1	1	
60600605	CONCRETE CURB, TYPE B	FOOT	201	201	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1	
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1	
70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	35	35	

Δ SPECIALTY ITEMS

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PEN TABLE = #PENBL#
PLOT DRIVER = #PLOTDR#

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
CODE NO	ITEM	UNIT	TOTAL	20% CITY 80% FEDERAL	
				TRAFFIC SIGNALS 0021 URBAN	
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	10889	10889
	70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	416	416
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	70	70
Δ	72000100	SIGN PANEL - TYPE 1	SQ FT	54.25	54.25
Δ	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	61.00	61.00
Δ	72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	5.00	5.00
Δ	72900200	METAL POST - TYPE B	FOOT	56	56
Δ	78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	35	35
Δ	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	10889	10889
Δ	78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	416	416
Δ	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	70	70
Δ	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	69	69
Δ	80500100	SERVICE INSTALLATION, TYPE A	EACH	1	1
Δ	81028160	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3/4" DIA.	FOOT	15	15
Δ	81028170	UNDERGROUND CONDUIT, GALVANIZED STEEL, 1" DIA.	FOOT	24	24

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
CODE NO	ITEM	UNIT	TOTAL	20% CITY 80% FEDERAL	
				TRAFFIC SIGNALS 0021 URBAN	
Δ	81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	73	73
Δ	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	52	52
Δ	81028310	UNDERGROUND CONDUIT, PVC, 3/4" DIA.	FOOT	182	182
Δ	81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	235	235
Δ	81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	10	10
Δ	81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	22	22
Δ	81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	14	14
Δ	81028380	UNDERGROUND CONDUIT, PVC, 3 1/2" DIA.	FOOT	34	34
Δ	81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	30	30
Δ	81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	6	6
Δ	81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1	1
Δ	85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1	1
Δ	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	206	206
Δ	87301235	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 4C	FOOT	220	220
Δ	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	959	959

Δ SPECIALTY ITEMS

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PLOT DRIVER = #PLTDV5A

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
CODE NO	ITEM	UNIT	TOTAL	20% CITY 80% FEDERAL	
				TRAFFIC SIGNALS 0021 URBAN	
Δ 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	776	776	
Δ 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1138	1138	
Δ 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	390	390	
Δ 87501100	TRAFFIC SIGNAL POST, 15 FT.	EACH	1	1	
Δ 87700115	STEEL MAST ARM ASSEMBLY AND POLE, 15 FT.	EACH	1	1	
Δ 87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1	1	
Δ 87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1	1	
Δ 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	3	3	
Δ 87800150	CONCRETE FOUNDATION, TYPE C	FOOT	3	3	
Δ 87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45	45	
Δ 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3	3	
Δ 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5	5	
Δ 88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1	1	
Δ 88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1	1	
Δ 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2	

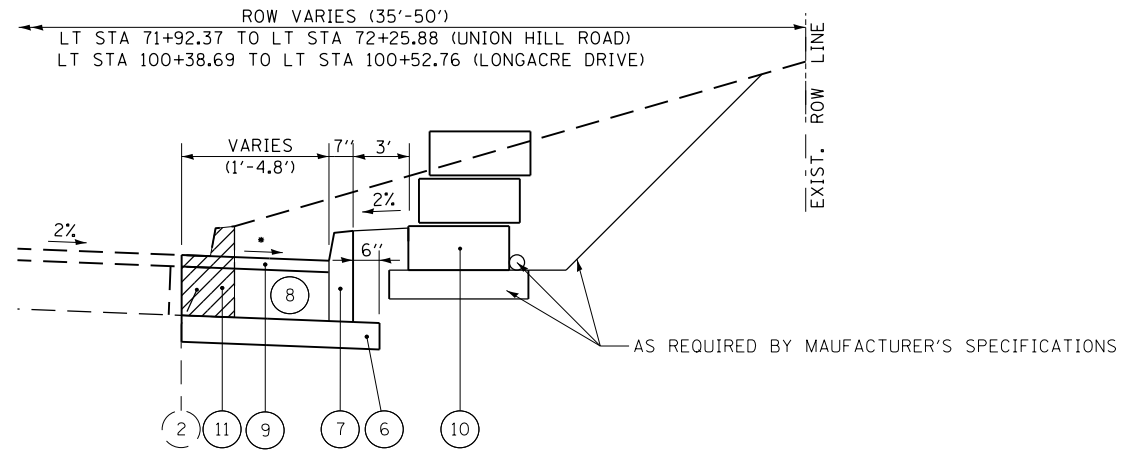
SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
CODE NO	ITEM	UNIT	TOTAL	20% CITY 80% FEDERAL	
				TRAFFIC SIGNALS 0021 URBAN	
Δ 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	2	
Δ 88102740	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	1	1	
Δ 88102748	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, POST MOUNTED	EACH	1	1	
Δ 88200100	TRAFFIC SIGNAL BACKPLATE	EACH	6	6	
Δ 88600100	DETECTOR LOOP, TYPE I	FOOT	980	980	
Δ 88800100	PEDESTRIAN PUSH-BUTTON	EACH	2	2	
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1320	1320	
X4400500	COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)	FOOT	156	156	
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	20	20	
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	4185	4185	

Δ SPECIALTY ITEMS

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PLOT CENTER = BENTON

NOTES:

- 1 PROPOSED P.C.C. SIDEWALK AND SIDEWALK REMOVAL ENDS RT. STA. 100+60.69 (LONGACRE DRIVE)
- 2 TYPICAL SECTIONS ARE SHOWN PERPENDICULAR FROM THE BACK OF THE EXISTING CURB

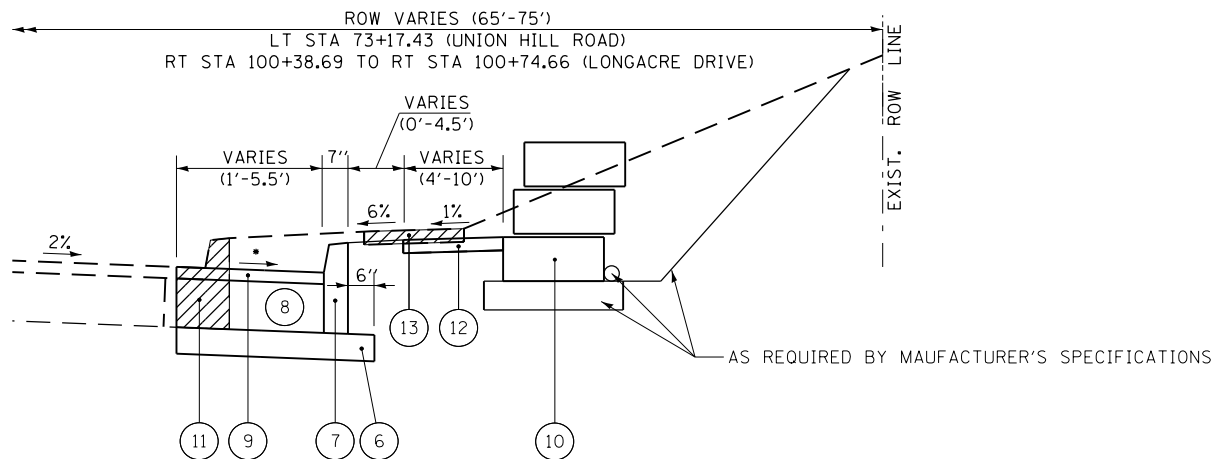


PROPOSED TYPICAL SECTION - PAVEMENT WIDENING

TO BE USED: LT STATION 71+92.37 (UNION HILL ROAD)
 TO RT STATION 100+52.75 (LONGACRE DRIVE)
 • VARIES 1.8% TO 6.5%

LEGEND

- 1 EXISTING 8" PCC PAVEMENT
- 2 EXISTING CONCRETE CURB & GUTTER
- 3 EXISTING HMA RESURFACING 3"
- 4 EXISTING PAVEMENT MARKING TO BE REMOVED
- 5 EXISTING P.C.C. SIDEWALK
- 6 PROPOSED SUBBASE GRANULAR MATERIAL, TYPE A 6"
- 7 PROPOSED CONCRETE CURB, TYPE B
- 8 PROPOSED PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"
- 9 PROPOSED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, 2"
- 10 PROPOSED PRECAST MODULAR RETAINING WALL
- 11 PROPOSED COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)
- 12 PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH.
- 13 PROPOSED SIDEWALK REMOVAL



PROPOSED TYPICAL SECTION - PAVEMENT WIDENING

TO BE USED: LT STATION 73+15.77 (UNION HILL ROAD)
 TO LT STATION 100+74.66 (LONGACRE DRIVE)
 • VARIES 0.8% TO 4.5%

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 PLOT DRIVER = #PLOTDRY\$

FILE NAME = E:\NCS4PDF\3055\8432.2\97709-Plans-006.dgn	USER NAME = PWICS*	DESIGNED -	REVISED -	 WWW.HORNERSHIFRIN.COM	 Crossroads of Prosperity	PROPOSED TYPICAL SECTIONS		LONGACRE/UNION HILL TRAFFIC SIGNAL		TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -	30					7			
PLOT DATE = 9/9/2019 2:24:19 PM	DATE -	REVISED -	SECTION 12-00038-01-TL								
						SCALE: NTS	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	CONTRACT NO. 97709		

SEEDING						
LOCATION	SEEDING, CLASS 1 A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASIAM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	TEMPORARY EROSION CONTROL SEEDING
	ACRE	POUND	POUND	POUND	TON	POUND
UNION HILL ROAD						
71+92.37 TO 72+43.91 LT	0.005	0.9	0.90	0.90	0.02	0.50
LONGACRE DRIVE						
100+14.70 TO 100+74.92 RT	0.008	0.9	0.9	0.9	0.02	0.80
100+41.47 TO 100+74.95 RT	0.005	0.9	0.9	0.9	0.02	0.50
TOTAL						
	0.02	2.70	2.70	2.70	0.06	1.80
PAY						
	0.25	3	3	3	0.1	2

EROSION CONTROL	
LOCATION	EROSION CONTROL BLANKET SQ YD
UNION HILL ROAD	
71+92.37 TO 72+43.91	22
LONGACRE DRIVE	
100+14.70 TO 100+74.92	36
100+41.47 TO 100+74.95	26
TOTAL	
	84

PAVING									
STATION	SUBBASE GRANULAR MATERIAL, TYPE A 6"	AGGREGATE SURFACE COURSE, TYPE A 6"	BITUMINOUS MATERIALS (TACK COAT)	HMA SURFACE COURSE, MIX "D", N70	PCC BASE COURSE WIDENING 10"	PCC DRIVEWAY PAVEMENT, 6 INCH	PCC SIDEWALK, 4 INCH	PROTECTIVE COAT	DETECTABLE WARNINGS
	SQ YD	SQ YD	POUND	TON	SQ YD	SQ YD	SQ FT	SQ YD	SQ FT
UNION HILL ROAD									
71+92.37 TO 72+45.41 LT	29		9	2	20				
72+70.72 TO 72+84.20 RT						64	47	5	
72+71.52 TO 73+08.34 RT								64	
72+75.00 TO 73+16.00 LT	37		12	3	27				
72+84.78 TO 73+15.22 LT							498	55	20
72+88.46 TO 73+06.75 RT		7							
73+01.40 TO 73+21.55 LT			5	1					
73+03.46 TO 73+19.63 RT							110	12	20
73+03.84 TO 73+24.09 RT			5	1					
73+03.89 TO 73+11.92 RT		10							
TOTAL									
	66	17	31	7	47	64	655	136	40

PAVEMENT MARKING / MARKERS																
STATION	PAINT PAVEMENT MARKING -					TEMPORARY PAVEMENT MARKING -					PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	RAISED REFLECTIVE PAVEMENT MARKER			
	LINE 4"		LINE 12"		LINE 24"	LINE 4"		LINE 12"		LINE 24"			WHITE	WHITE	AMBER	CRYSTAL
	YELLOW	WHITE	YELLOW	WHITE	WHITE	YELLOW	WHITE	YELLOW	WHITE	WHITE	WHITE	WHITE	SQ FT	SQ FT	EACH	EACH
UNION HILL ROAD																
63+86.65 TO 72+38.85 LT															22	
63+86.65 TO 72+38.85 LT/RT	2826		218			2826		218							15	
65+08.91 TO 72+38.85 RT		5555		91			5555		91						8	
67+71.65 TO 69+46.65 RT		44					44									
69+46.65 TO 72+38.85 RT		292					292									11
69+74.54 TO 72+38.85 RT/RT											8.8	8.8				
70+94.07 TO 72+38.85 RT/RT											8.8	8.8				
72+13.94 TO 72+38.85 RT/RT											8.8	8.8				
72+37.85 TO 72+38.85 RT					23					23						
72+99.65 TO 72+38.85 RT					8					8						
73+22.75 TO 77+60.28 RT		431							431							
73+22.75 TO 77+60.28 LT/RT	1644					1644										
73+22.75 TO 73+75.04 LT		53			23		53			23						2
73+48.37 TO 73+75.04 LT/RT											8.8	8.8				
73+75.02 TO 75+50.97 LT		44					44									
73+75.04 TO 77+00.02 LT/RT			107					107								5
75+50.97 TO 77+60.04 LT																6
LONGACRE DRIVE																
100+46.17 TO 100+74.66 LT					16					16						
SUB TOTAL																
	4470	6419	325	91	70	4470	6419	325	91	70	35	35	56	13		
TOTAL																
	10889		416	70		10889		416	70		35	35	69			

PAVEMENT MARKING REMOVAL		
STATION	PAVEMENT MARKING REMOVAL - WATER BLASTING SQ FT	TEMPORARY PAVEMENT MARKING REMOVAL SQ FT
UNION HILL ROAD		
63+86.65 TO 72+21.53 LT	557	
63+86.65 TO 72+38.85 LT/RT		933
64+06.65 TO 69+27.83 LT/RT		218
65+08.91 TO 72+38.85 RT		1833
65+21.91 TO 67+51.60 RT		91
65+91.03 TO 71+74.30 RT	201	
67+71.65 TO 69+46.65 RT		15
69+46.65 TO 72+38.85 RT		96
69+74.54 TO 72+38.85 RT/RT		9
70+94.07 TO 72+38.85 RT/RT		9
72+13.94 TO 72+38.85 RT/RT		9
72+22.12 TO 72+22.22 LT/RT	41	
72+37.85 TO 72+38.85 RT		46
72+89.55 TO 0+00.00 LT/RT	47	
72+93.99 TO 0+00.00 LT/RT	43	
72+99.65 TO 72+38.85 RT		16
73+07.07 TO 73+08.19 LT	26	
73+07.50 TO 77+60.28 RT	65	
73+08.19 TO 77+60.04 LT	302	
73+22.75 TO 77+60.28 RT		142
73+22.75 TO 77+60.28 LT/RT		543
73+22.75 TO 73+75.02 LT		17
73+23.76 TO 73+75.02 LT		46
73+48.37 TO 73+75.02 LT/RT		9
73+75.02 TO 75+50.97 LT		15
74+17.24 TO 77+00.02 LT/RT		107
LONGACRE DRIVE		
72+44.08 TO 72+60.74 LT/RT	35	0
72+60.27 TO 72+59.75 RT	3	0
100+46.17 TO 100+74.66 LT		32
TOTAL		
	1320	4186

MISCELLANEOUS				
STATION	PRECAST MODULAR RETAINING WALL SQ FT	PEDESTRIAN RAILING FOOT	MANHOLES, TYPE A, 6"-DIAMETER, TYPE 15 FRAME AND LID EACH	CONCRETE CURB, TYPE B FOOT
UNION HILL ROAD				
71+92.37 TO 72+41.05 LT	396	40		
71+92.37 TO 72+44.46 LT				71
72+17.43 TO 72+38.85 LT			1	
72+70.96 TO 73+22.60 RT				51
72+86.66 TO 73+14.91 LT	308	32		
LONGACRE DRIVE				
100+10.92 TO 100+74.66 RT				79
TOTAL				
	704	72	1	201

EARTHWORK	
LOCATION	EARTH EXCAVATION CY
UNION HILL ROAD	60
TOTAL	
	60

SIGN REMOVAL				
LOCATION	TYPE	LEGEND	REMOVE SIGN PANEL TYPE 1	RELOCATE SIGN PANEL TYPE 1
			SQ FT	SQ FT
UNION HILL ROAD				
69+34.01 21' RT	W3-1a	STOP AHEAD	6.25	
72+23.84 20' RT	R1-1	STOP	6.25	
72+52.85 27' RT	W1-8R	CHEVRON ALIGNMENT	3.00	
72+60.29 27' RT	W1-7	TWO DIRECTION LARGE ARROW	8.00	
72+67.87 27' RT	W1-8L	CHEVRON ALIGNMENT	3.00	
73+06.01 22' LT	R1-1	STOP	6.25	
73+06.01 22' LT		TWO - "UNION HILL ROAD"	5.25	
74+23.06 23' RT		TWO - "LONGACRE DRIVE"	4.50	
74+23.06 23' RT		"DO NOT PASS ON RIGHT"	6.25	
75+11.78 20' LT	W3-1	STOP AHEAD	6.25	
77+58.04 22' LT	W14-3	NO PASSING ZONE		5
LONGACRE DRIVE				
100+38.10 23' LT	R1-1	STOP	6.25	
TOTAL				
			61	5

SIGNING				
STATION	TYPE	LEGEND	SIGN PANEL TYPE 1	METAL POST TYPE B
			SQ FT	FOOT
UNION HILL ROAD				
69+34.01 21' RT	W3-3	SIGNAL AHEAD	6.25	14.6
75+11.78 20' RT	W3-3	SIGNAL AHEAD	6.25	13.6
77+58.04 22' LT	W14-3	NO PASSING ZONE		13.9
LONGACRE DRIVE				
365 LONGACRE DR RT	W3-3	SIGNAL AHEAD	6.25	13.6
FROM TRAFFIC SIGNAL SCHEDULE				
			35.50	
TOTAL				
			54.25	56

REMOVAL ITEMS					
STATION	DRIVEWAY PAVEMENT REMOVAL	SIDEWALK REMOVAL	COMB. CURB AND GUTTER REMOVAL (SPECIAL)	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	REMOVING MANHOLES
	SQ YD	SQ FT	FOOT	SQ YD	EACH
UNION HILL ROAD					
71+92.37 TO 72+44.46 LT			73		
72+17.53 TO 72+38.85 LT					1
72+70.72 TO 73+00.67 RT	13	31			
73+01.40 TO 73+21.55 LT			9		
73+03.84 TO 73+24.09 RT			11		
LONGACRE DRIVE					
100+10.91 TO 100+74.66 RT			83		
100+19.59 TO 100+74.94 RT		200			
TOTAL					
	13	231	156	20	1

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 PLOT DRIVER = 8/15/2019 10:55:58 AM

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 CHECKED -
 DATE -

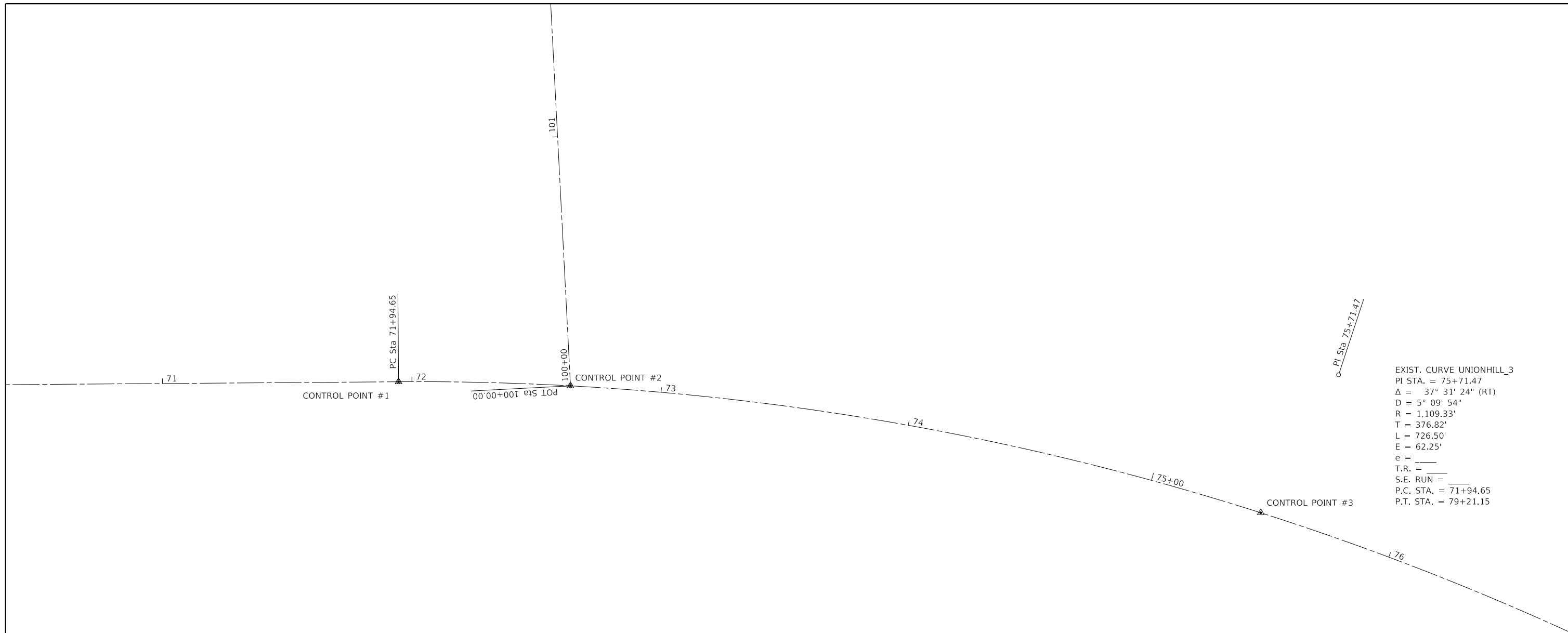
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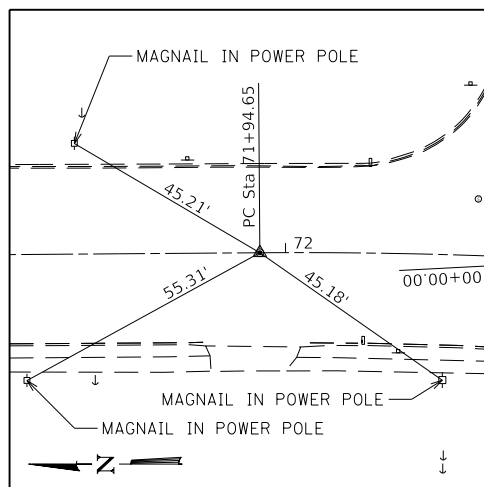
SCHEDULES
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LONGACRE/UNION HILL TRAFFIC SIGNAL
 SECTION 12-00038-01-TL
 CONTRACT NO. 97709

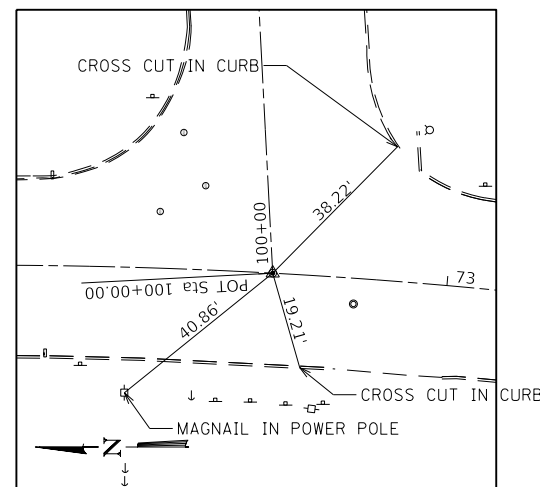
TOTAL SHEETS 30 SHEET NO. 8



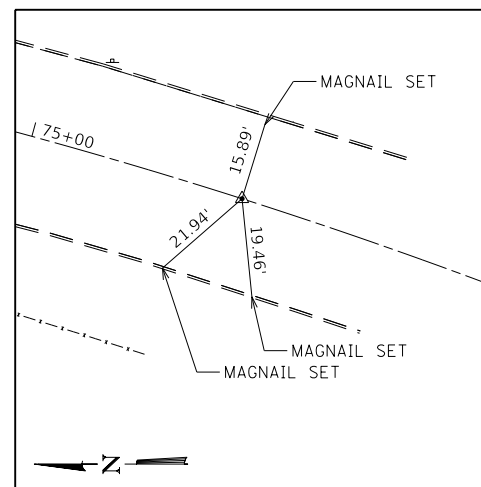
EXIST. CURVE UNIONHILL_3
 PI STA. = 75+71.47
 $\Delta = 37^\circ 31' 24''$ (RT)
 $D = 5^\circ 09' 54''$
 $R = 1,109.33'$
 $T = 376.82'$
 $L = 726.50'$
 $E = 62.25'$
 $e = \underline{\hspace{1cm}}$
 T.R. = $\underline{\hspace{1cm}}$
 S.E. RUN = $\underline{\hspace{1cm}}$
 P.C. STA. = 71+94.65
 P.T. STA. = 79+21.15



CONTROL POINT #1
 MAGNAIL SET
 STA 71+94.65 0.00'
 N 699238.78
 E 2343223.05
 ELEV. 571.26



CONTROL POINT #2
 MAGNAIL SET
 STA 72+63.60 0.00'
 N 699169.86
 E 234221.42
 ELEV. 566.23



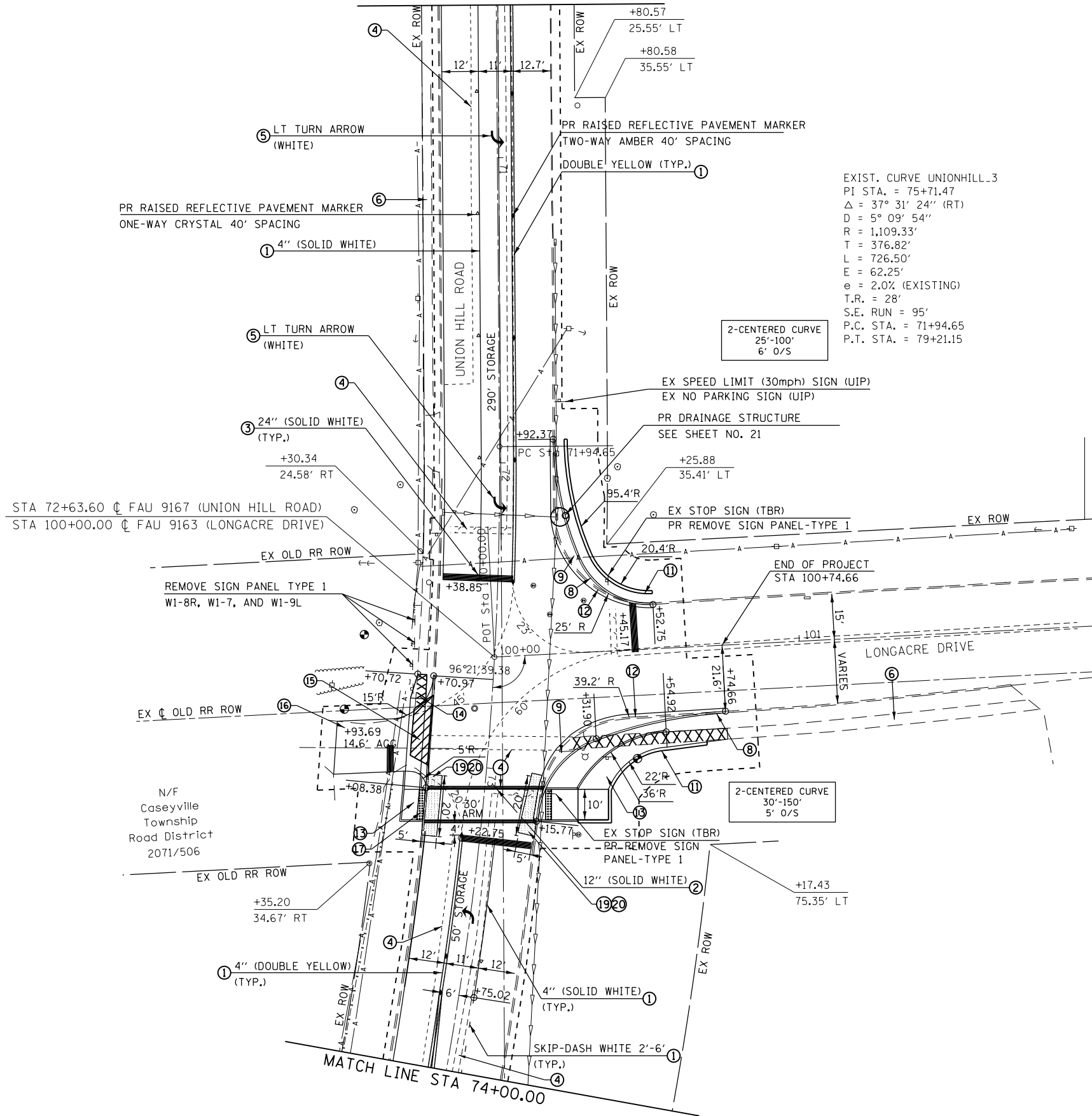
CONTROL POINT #3
 MAGNAIL SET
 STA 75+45.69 0.00'
 N 698893.17
 E 2343170.52
 ELEV. 545.28



LAST SAVED = PLASTEREDDATE\$
 PEN TABLE = PRINT\$
 PLOT DRIVER = PLOTDRYS\$

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PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	REVISED -			SECTION 12-00038-01-TL		30	9		
PLOT DATE = 9/9/2019 2:23:55 PM	DATE -	REVISED -	REVISED -			CONTRACT NO. 97709					
						SCALE: 1" = 20'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		

MATCH LINE STA 70+50.00



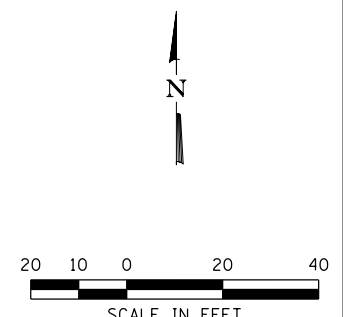
LEGEND

- 1 PROPOSED PAINT PAVEMENT MARKING-LINE, 4"
- 2 PROPOSED PAINT PAVEMENT MARKING-LINE, 12"
- 3 PROPOSED PAINT PAVEMENT MARKING-LINE, 24"
- 4 PROPOSED PAVEMENT MARKING REMOVAL-WATER BLASTING
- 5 PROPOSED PAINT PAVEMENT MARKING-LETTERS AND SYMBOLS
- 6 EXISTING P.C.C. SIDEWALK
- 7 PROPOSED SUBBASE GRANULAR MATERIAL, TYPE A 6"
- 8 PROPOSED CONCRETE CURB, TYPE B
- 9 PROPOSED PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"
- 10 PROPOSED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, 2"
- 11 PROPOSED PRECAST MODULAR RETAINING WALL
- 12 PROPOSED COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)
- 13 PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH.
- 14 PROPOSED SIDEWALK REMOVAL
- 15 PROPOSED DRIVEWAY PAVEMENT REMOVAL
- 16 PROPOSED PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6"
- 17 PROPOSED DETECTABLE WARNING
- 18 PROPOSED RAISED REFLECTIVE PAVEMENT MARKERS
- 19 PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
- 20 PROPOSED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, VARIES 0" TO 2"

EXIST. CURVE UNIONHILL.3
 PI STA. = 75+71.47
 $\Delta = 37^\circ 31' 24''$ (RT)
 $D = 5^\circ 09' 54''$
 $R = 1,109.33'$
 $T = 376.82'$
 $L = 726.50'$
 $E = 62.25'$
 $e = 2.0\%$ (EXISTING)
 $T.R. = 28'$
 $S.E. RUN = 95'$
 $P.C. STA. = 71+94.65$
 $P.T. STA. = 79+21.15$

2-CENTERED CURVE
 25'-100'
 6' O/S

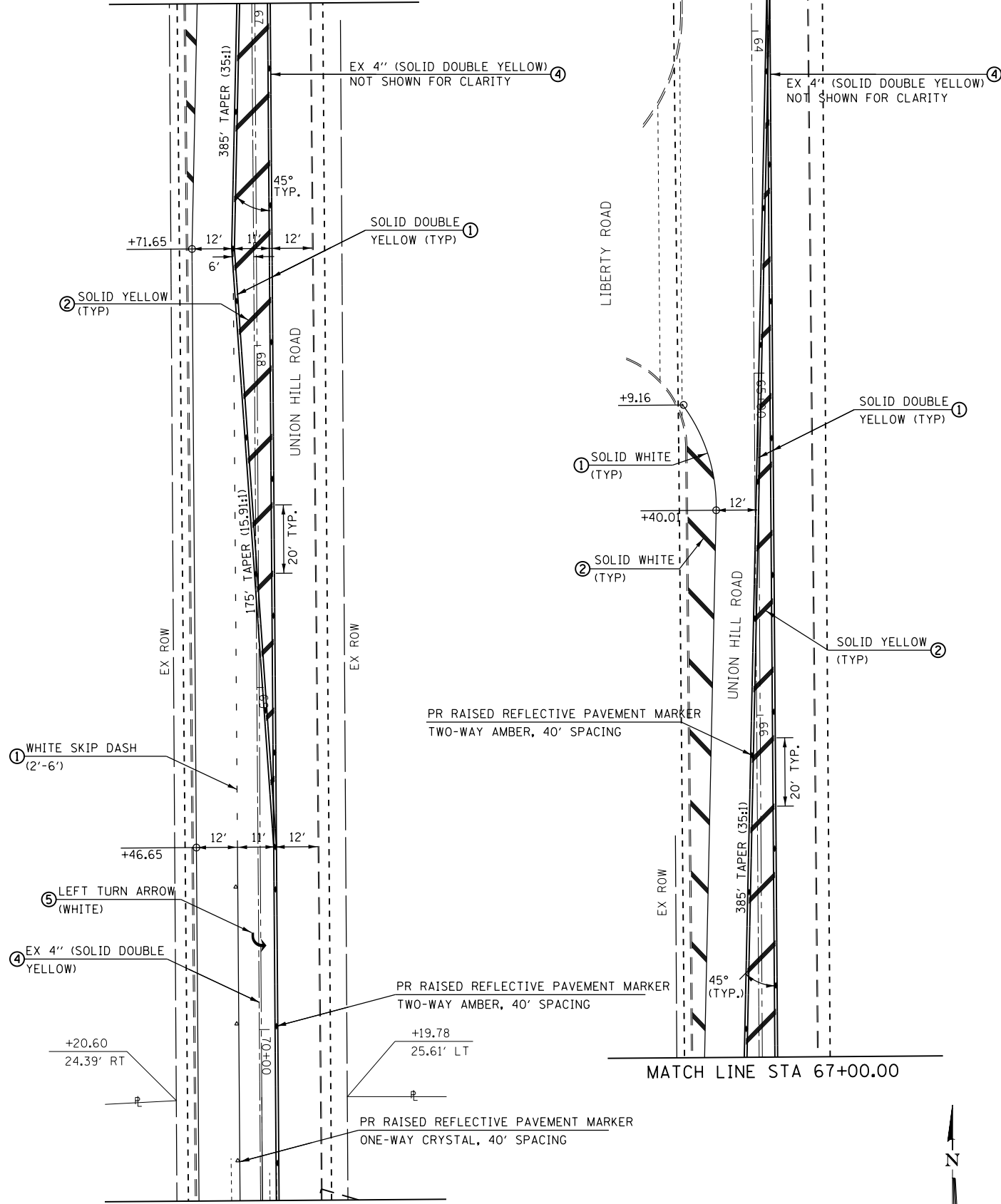
2-CENTERED CURVE
 30'-150'
 5' O/S



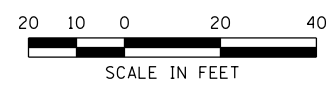
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PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	REVISED -			SCALE: 1"=20'	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.	30	10	
PLOT DATE = 9/9/2019 2:23:59 PM	DATE -	REVISED -	REVISED -			SECTION 12-00038-01-TL						
								CONTRACT NO. 97709				

MATCH LINE STA 67+00.00



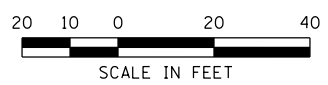
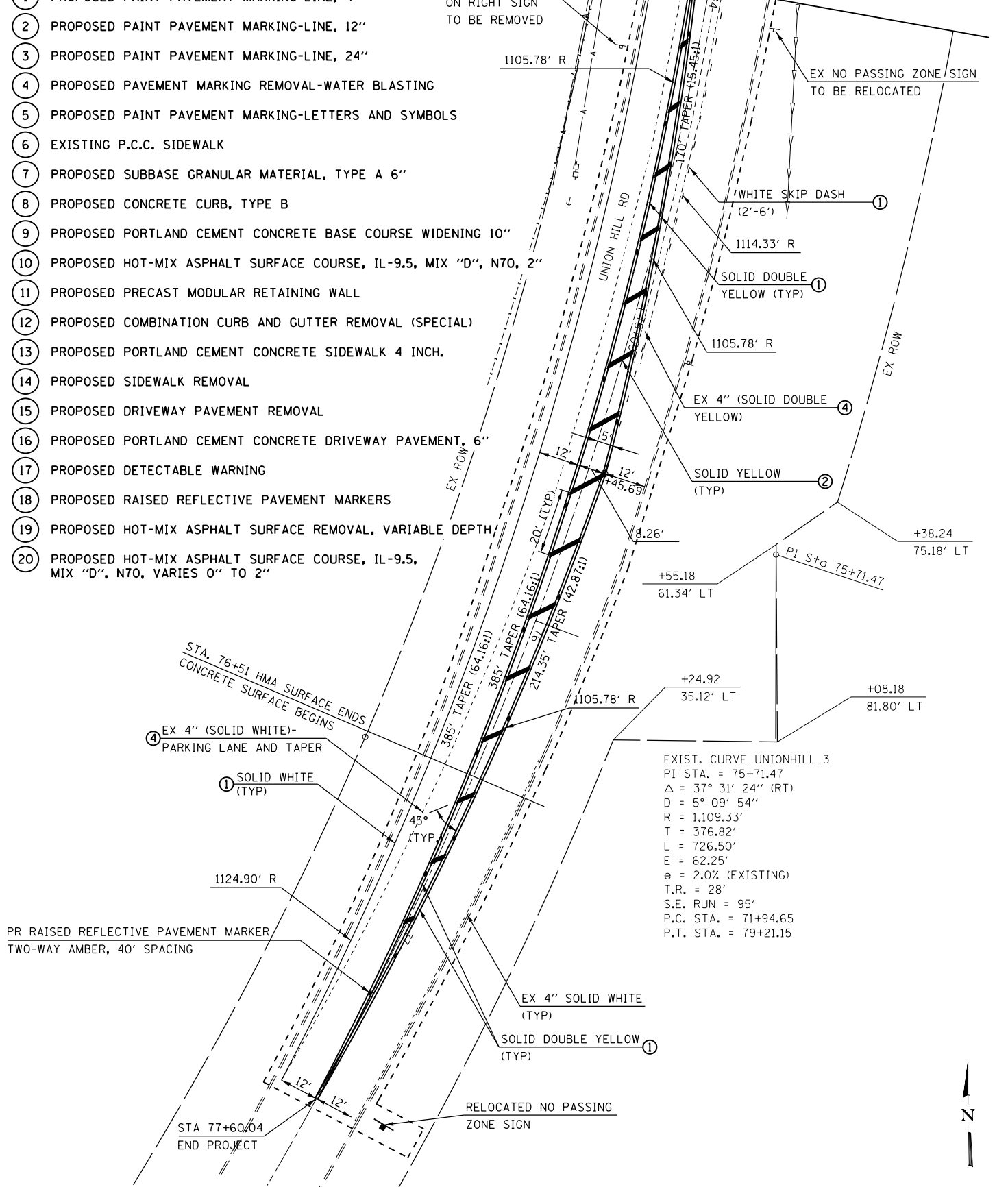
MATCH LINE STA 70+50.00



LEGEND

- ① PROPOSED PAINT PAVEMENT MARKING-LINE, 4"
- ② PROPOSED PAINT PAVEMENT MARKING-LINE, 12"
- ③ PROPOSED PAINT PAVEMENT MARKING-LINE, 24"
- ④ PROPOSED PAVEMENT MARKING REMOVAL-WATER BLASTING
- ⑤ PROPOSED PAINT PAVEMENT MARKING-LETTERS AND SYMBOLS
- ⑥ EXISTING P.C.C. SIDEWALK
- ⑦ PROPOSED SUBBASE GRANULAR MATERIAL, TYPE A 6"
- ⑧ PROPOSED CONCRETE CURB, TYPE B
- ⑨ PROPOSED PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"
- ⑩ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, 2"
- ⑪ PROPOSED PRECAST MODULAR RETAINING WALL
- ⑫ PROPOSED COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)
- ⑬ PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH.
- ⑭ PROPOSED SIDEWALK REMOVAL
- ⑮ PROPOSED DRIVEWAY PAVEMENT REMOVAL
- ⑯ PROPOSED PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6"
- ⑰ PROPOSED DETECTABLE WARNING
- ⑱ PROPOSED RAISED REFLECTIVE PAVEMENT MARKERS
- ⑲ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
- ⑳ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70, VARIES 0" TO 2"

MATCH LINE STA 74+00.00



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USER NAME = PWICS*

PLOT SCALE = 40.0000' / in.

PLOT DATE = 9/9/2019 2:24:01 PM

DESIGNED -

DRAWN -

CHECKED -

DATE -

REVISED -

REVISED -

REVISED -

REVISED -



PLAN

SCALE: 1"=20'

SHEET NO. 2 OF 2 SHEETS

STA. TO STA.

LONGACRE/UNION HILL TRAFFIC SIGNAL

SECTION 12-00038-01-TL

CONTRACT NO. 97709

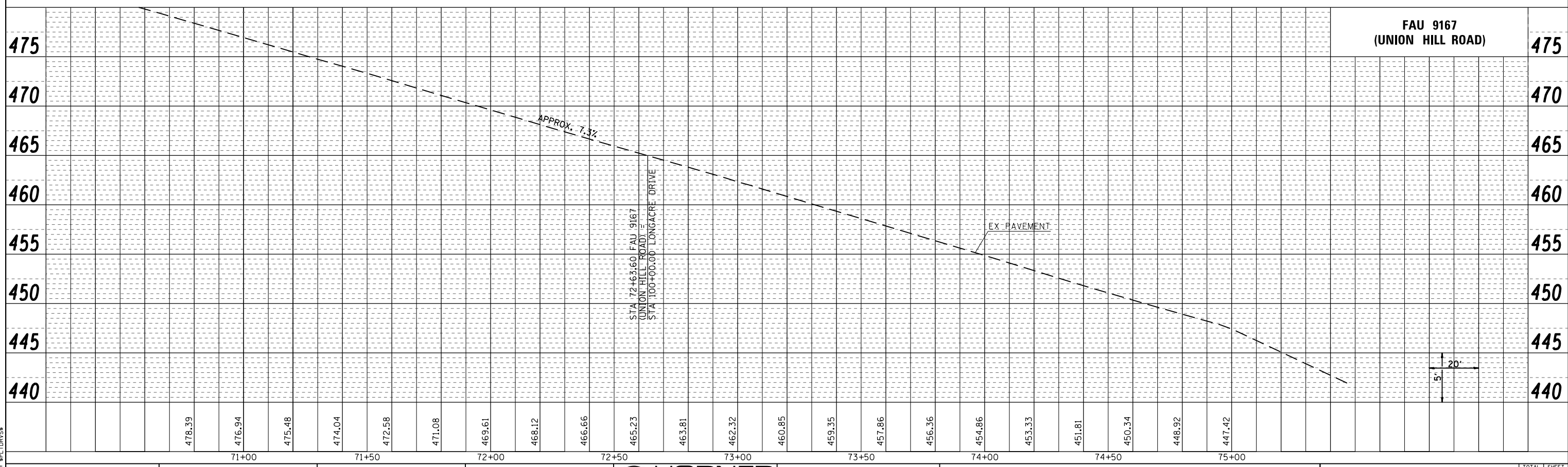
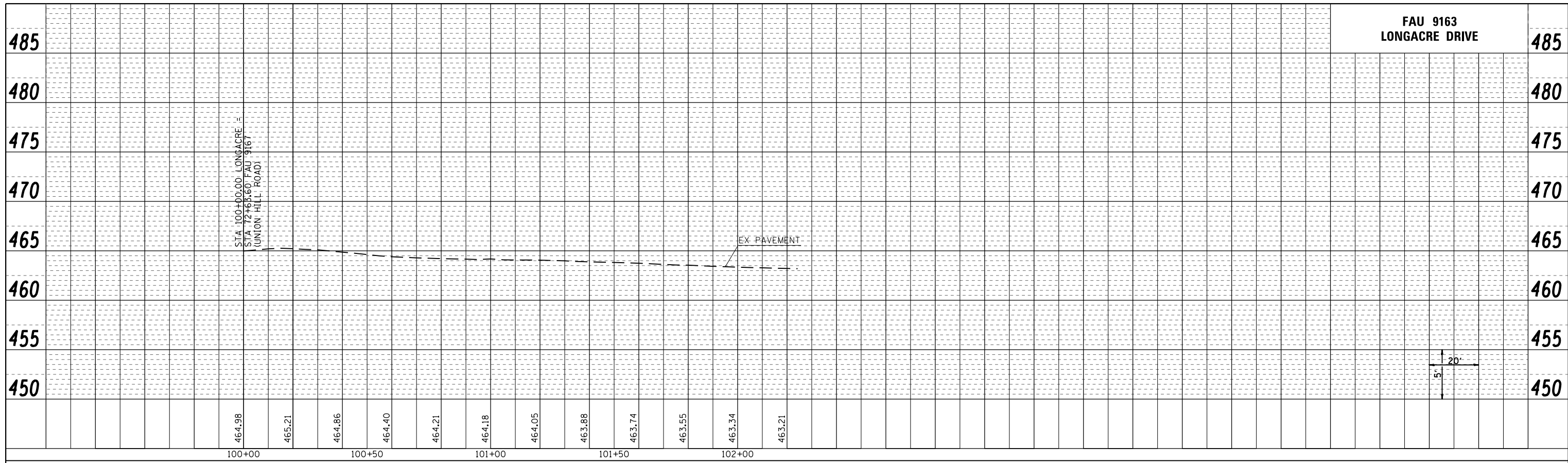
TOTAL SHEETS 30

SHEET NO. 11

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
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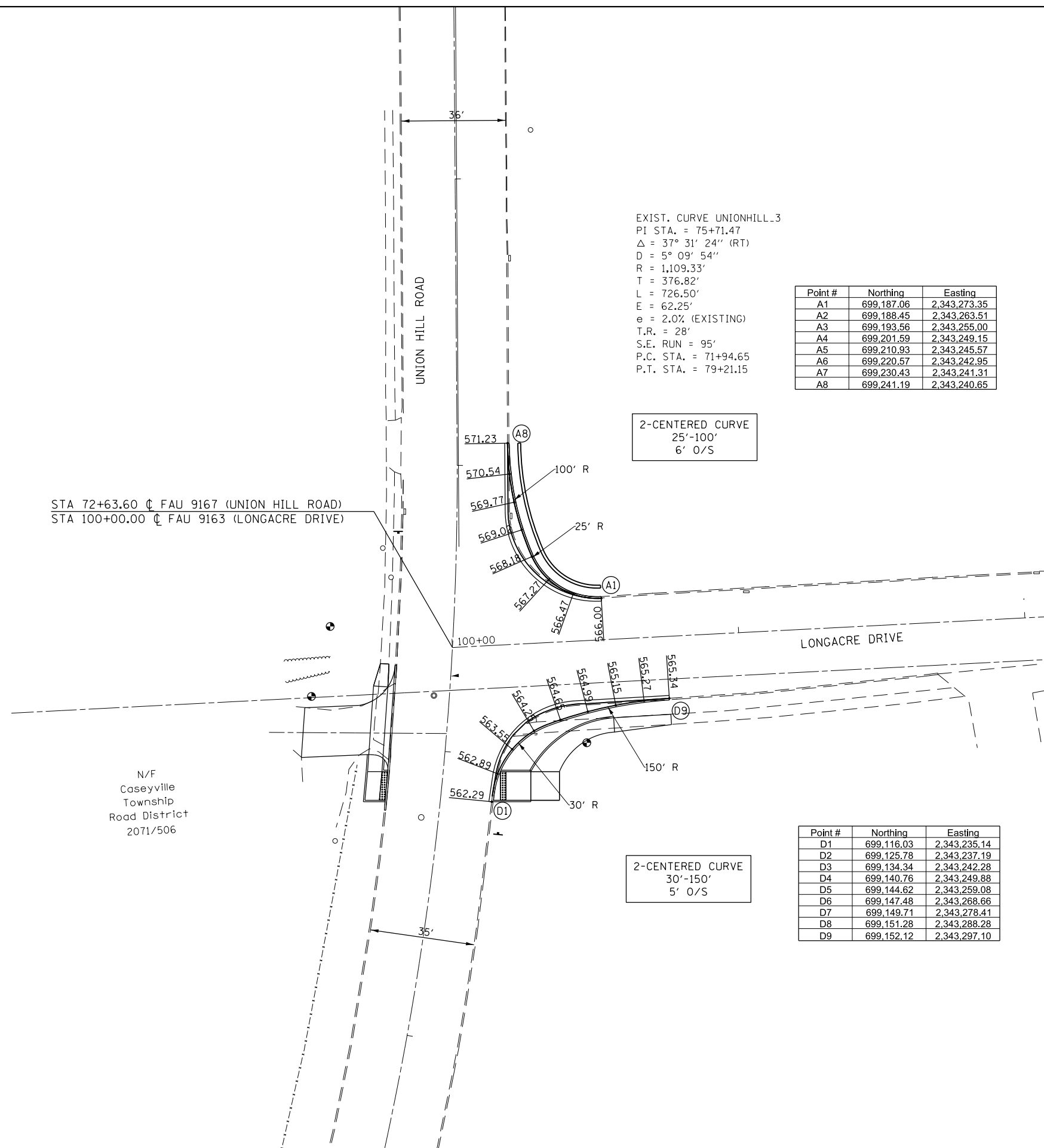
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	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		
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 PLOT DRIVER = BPNBLS*



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PLOT SCALE = 40.0000' / in.	DRAWN -	REVISIED -	30					12	
PLOT DATE = 9/9/2019 2:24:02 PM	CHECKED -	REVISIED -	SECTION 12-00038-01-TL						
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.							CONTRACT NO. 97709		

NOTE:
TRANSITION PROPOSED CURB IN 5'
TO MARCH EXISTING CURB



EXIST. CURVE UNIONHILL_3
 PI STA. = 75+71.47
 Δ = 37° 31' 24" (RT)
 D = 5° 09' 54"
 R = 1,109.33'
 T = 376.82'
 L = 726.50'
 E = 62.25'
 e = 2.0% (EXISTING)
 T.R. = 28'
 S.E. RUN = 95'
 P.C. STA. = 71+94.65
 P.T. STA. = 79+21.15

Point #	Northing	Easting
A1	699,187.06	2,343,273.35
A2	699,188.45	2,343,263.51
A3	699,193.56	2,343,255.00
A4	699,201.59	2,343,249.15
A5	699,210.93	2,343,245.57
A6	699,220.57	2,343,242.95
A7	699,230.43	2,343,241.31
A8	699,241.19	2,343,240.65

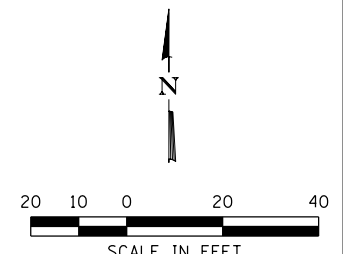
2-CENTERED CURVE
 25'-100'
 6' O/S

Point #	Northing	Easting
D1	699,116.03	2,343,235.14
D2	699,125.78	2,343,237.19
D3	699,134.34	2,343,242.28
D4	699,140.76	2,343,249.88
D5	699,144.62	2,343,259.08
D6	699,147.48	2,343,268.66
D7	699,149.71	2,343,278.41
D8	699,151.28	2,343,288.28
D9	699,152.12	2,343,297.10

2-CENTERED CURVE
 30'-150'
 5' O/S

STA 72+63.60 ∇ FAU 9167 (UNION HILL ROAD)
 STA 100+00.00 ∇ FAU 9163 (LONGACRE DRIVE)

N/F
 Caseyville
 Township
 Road District
 2071/506



LAST SAVED = ALASTENEDDATE\$
 PEN TABLE = #PENTBL\$
 PLOT DRIVER = #PLTDVRS\$

FILE NAME =	USER NAME = PWICS*	DESIGNED -	REVISED -
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	PLOT DATE = 9/9/2019 2:23:58 PM	DATE -	REVISED -

HORNER SHIFRIN
 WWW.HORNERSHIFRIN.COM

FAIRVIEW HEIGHTS
 Crossroads of Property

INTERSECTION DETAILS
 SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

LONGACRE/UNION HILL TRAFFIC SIGNAL
 SECTION 12-00038-01-TL
 CONTRACT NO. 97709

TOTAL SHEETS	SHEET NO.
30	13

ELECTRICAL GENERAL NOTES

- ALL VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL HAVE 12" L.E.D. SECTIONS. ALL MOUNTING HARDWARE, SIGNAL POSTS, AND BASES SHALL BE UNPAINTED ALUMINUM. ALL BOLTS, SCREWS, NUTS AND WASHERS SHALL BE STAINLESS STEEL. ANTI-SEIZE PASTE COMPOUND SHALL BE USED ON ALL MOUNTING HARDWARE FIELD CONNECTIONS.
- BACKPLATES SHALL BE ABS PLASTIC.
- THE LOCATION OF MAST ARM SUPPORTS SHALL BE APPROVED BY THE ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED. MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT OR 2 FEET FROM THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. IN CURBED SECTIONS, THE MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM THE FACE OF THE CURB. THESE DISTANCES ARE TO THE NEAR FACE OF THE MAST ARM POLE. ALL MAST ARMS AND POLES SHALL BE GALVANIZED.
- ACTUAL DEPTHS OF THE CONCRETE FOUNDATIONS FOR THE MAST ARM SUPPORT POLES AND SIGNAL POSTS

UNION HILL ROAD
AND LONGACRE DRIVE

NE CORNER - 42' ARM: 15'-0" DEEP
NW CORNER - 15' ARM: 15'-0" DEEP
SE CORNER - 15' POST: 3'-0" DEEP
SW CORNER - 30' ARM: 15'-0" DEEP

THESE DEPTHS ARE DETERMINED FROM THE SOIL BORING DATA.

- ALL TRAFFIC SIGNAL CABLES SHALL BE #14 AWG STRANDED COPPER UNLESS OTHERWISE SPECIFIED.
- THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT.
- DETECTOR LOOP LEAD-IN SPLICES SHALL BE MADE IN A HANDHOLE PER ARTICLE 873.03 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD DRAWING 886001. CONDUCTORS SHALL BE SPLICED IN A RIGID MOLD. ROSIN-CORE SOLDER SHALL BE USED.
- CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
- ALL HANDHOLES SHALL BE CAST-IN-PLACE PORTLAND CEMENT CONCRETE (PER ARTICLE 814.03(A)). THE CAST IN PLACE LEGEND IN THE COVER SHALL BE "TRAFFIC SIGNALS". SLOPE HANDHOLE COVERS TO MATCH PROPOSED GRADE ELEVATIONS.
- ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THE VARIOUS TRAFFIC SIGNAL INSTALLATION. AGENCIES KNOWN TO HAVE UNDERGROUND FACILITIES WITHIN THE LIMITS OF THIS IMPROVEMENT ARE THE FOLLOWING: MEMBER OF J.U.L.I.E. PHONE (800) 892-0123 ARE INDICATED BY * (CALL ONE WEEK BEFORE YOU PLAN TO DIG).
 - AMEREN IP (ELECTRIC)
 - AMEREN CIPS (GAS)
 - CHARTER COMMUNICATIONS (CABLE)
 - CLEARWAVE (CABLE)
 - FRONTIER COMMUNICATIONS (CABLE)
 - CITY OF FAIRVIEW HEIGHTS (STORM SEWER)
- ALL INDUCTIVE LOOP DETECTORS SUPPLIED FOR THIS PROJECT SHALL HAVE THE CAPACITY OF OPERATING WITH BOTH DELAY AND EXTENSION MODES ACTIVE, IF A TIME SETTING IS PROGRAMMED. THEY SHALL BE RACK MOUNTED.
- A 1/4" NYLON PULL ROPE SHALL BE FURNISHED AND INSTALLED IN ALL SIGNAL CONDUITS, THIS WORK SHALL BE INCLUDED WITH THE CONDUIT PAY ITEM.

STANDARDS

- 720001
- 720016
- 805001
- 814001
- 814006
- 857001
- 873001
- 876001
- 877001
- 878001
- 880006
- 886001
- 886006

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS
FOR UNION HILL ROAD AND LONGACRE DRIVE

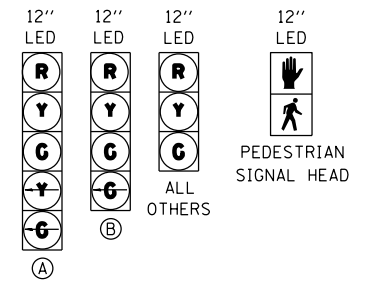
LOOP	PHASE (Ø)	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (L _H)	CALCULATED RESISTANCE OHMS (R)
1. WB THRU CD	8	6'X50' (Ø)	3-6-3	819.4	2.35
2. NB LT CD	5	6'X50' (Ø)	3-6-3	816.0	2.27
3. NB THRU CD A	2	6'X50' (Ø)	3-6-3	813.5	2.21
4. NB CCO A	2	6'X6'	7	335.4	2.19
5. EB THRU CD	4	6'X10' (Ø)	3-6-3	199.9	0.71
6. SB LT CD	6	6'X50' (Ø)	3-6-3	805.2	2.03
7. SB THRU CD A	1	6'X50' (Ø)	3-6-3	802.8	1.97
8. SB CCO A	6	6'X6'	6	306.7	1.54

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

LAST SAVED = #LASTENHEDDATE\$
PEN TABLE = #PEN\$
PLOT DRIVER = #PLOTDRVS\$

FILE NAME = E:\NCS4PDF\3054\8432_9\97709-Plans-015.dgn	USER NAME = PWICS*	DESIGNED -	REVISED -	 WWW.HORNERSHIFRIN.COM	 Crossroads of Prosperity	TRAFFIC SIGNAL DETAILS		LONGACRE/UNION HILL TRAFFIC SIGNAL		TOTAL SHEETS	SHEET NO.
PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	30							15	
PLOT DATE = 9/9/2019 2:23:53 PM	DATE -	REVISED -	SCALE: NTS			SHEET NO. 2 OF 4 SHEETS	STA.	TO STA.	SECTION 12-00038-01-TL		
							CONTRACT NO. 97709				

SEQUENCE OF OPERATION								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT	↙	↑	↘	→	↗	↓	↖	←
CONCURRENT MOVEMENT PERMITTED	5 OR 6	5 OR 6	8	7	1 OR 2	1 OR 2	4	3
PEDESTRIAN MOVEMENT		P8				P2		



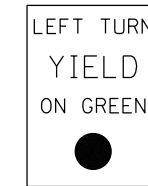
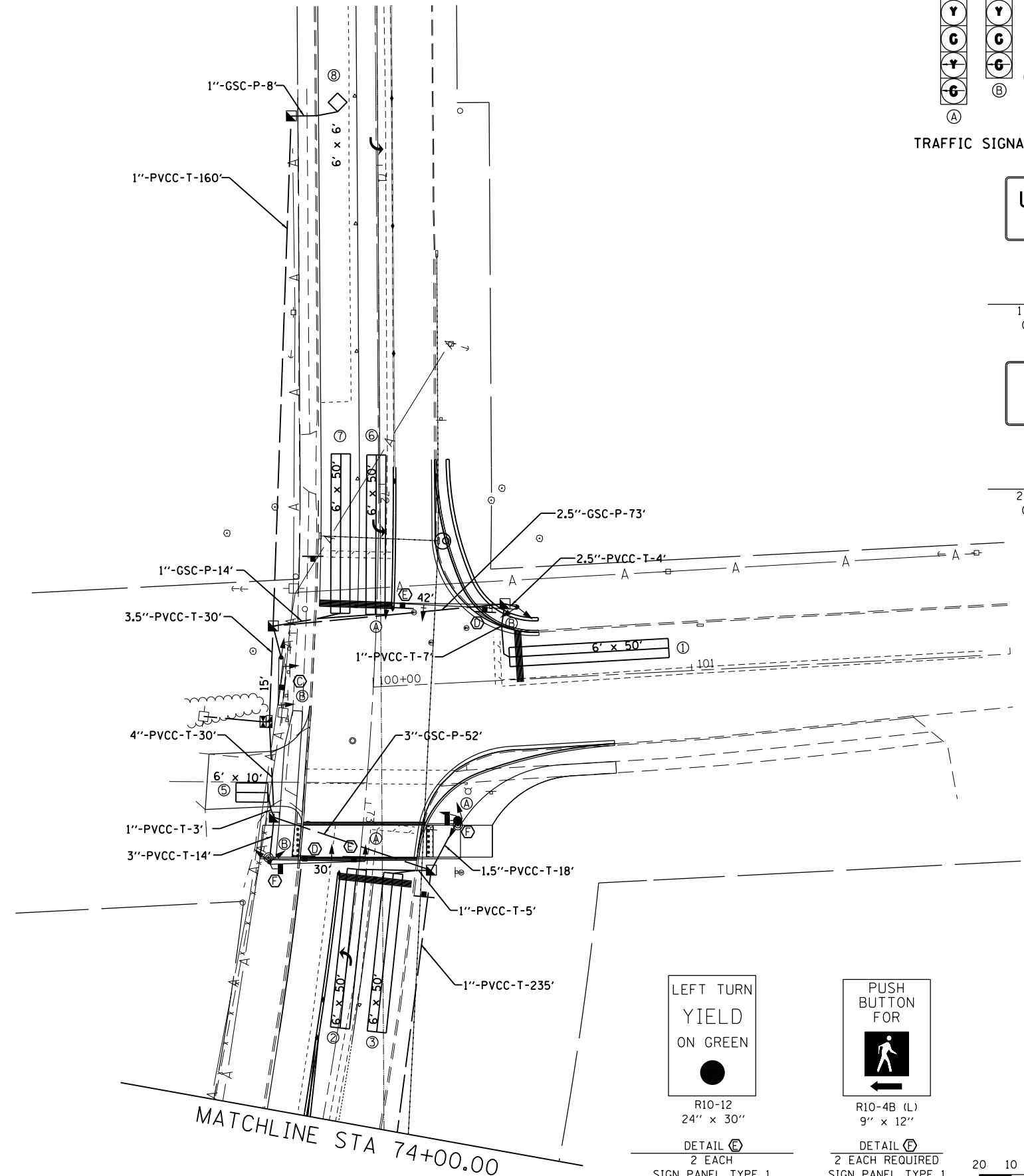
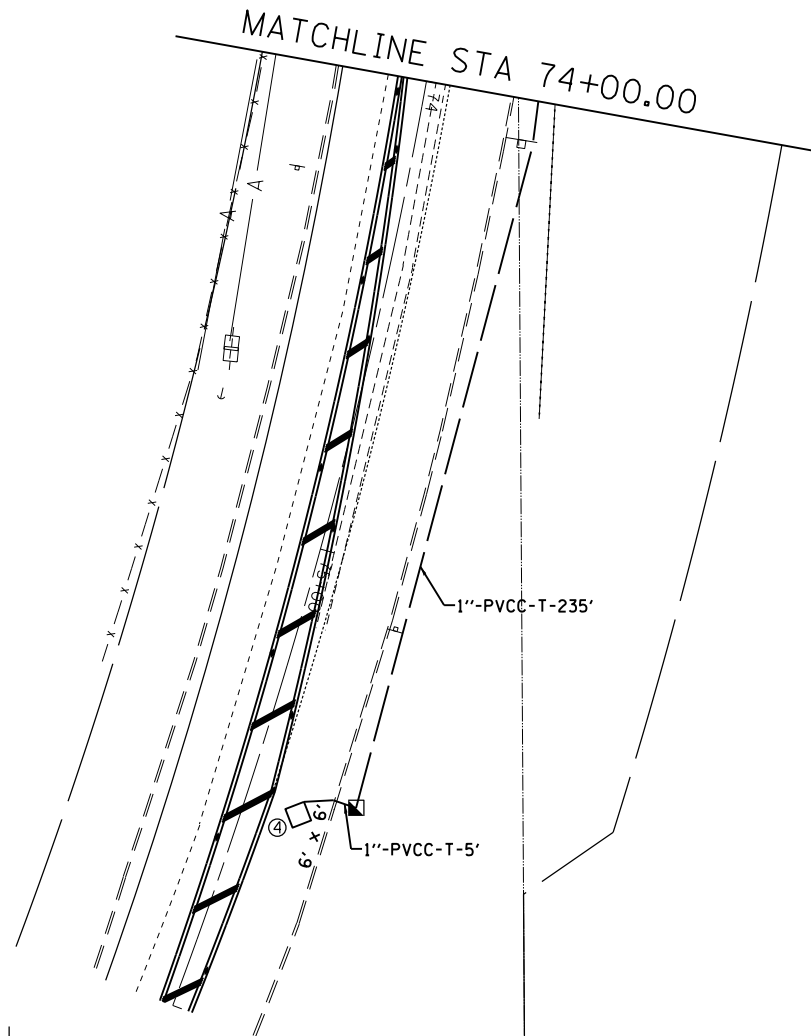
TRAFFIC SIGNAL FACES

UNION HILL ROAD

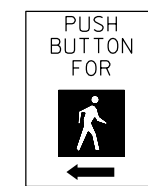
STD 720016
STYLE (e)
24" x 48"
DETAIL (C)
1 EACH REQUIRED
(NOT TO SCALE)

LONGACRE DRIVE

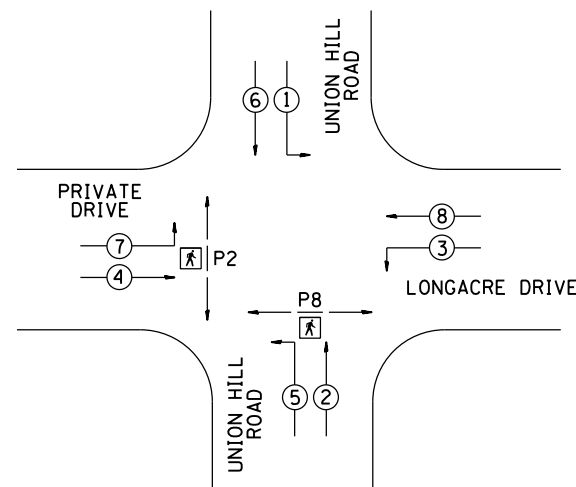
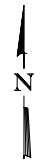
STD 720016
STYLE (e)
24" x 48"
DETAIL (D)
2 EACH REQUIRED
(NOT TO SCALE)



LEFT TURN
YIELD
ON GREEN
R10-12
24" x 30"
DETAIL (E)
2 EACH
SIGN PANEL TYPE 1
(NOT TO SCALE)



PUSH
BUTTON
FOR
R10-4B (L)
9" x 12"
DETAIL (E)
2 EACH REQUIRED
SIGN PANEL TYPE 1
(NOT TO SCALE)



PHASE DESIGNATION
DIAGRAM

LAST SAVED = PLASTEREDDATE\$
PEN TABLE = PENTRIBUS\$
PLOT DRIVER = #PLTRIVS\$

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USER NAME =	PWICS*
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PLOT DATE =	9/9/2019 2:23:58 PM

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -



TRAFFIC SIGNAL DETAILS

SCALE: 1" = 20' SHEET NO. 3 OF 4 SHEETS STA. TO STA.

LONGACRE/UNION HILL
TRAFFIC SIGNAL
SECTION 12-00038-01-TL
CONTRACT NO. 97709

TOTAL SHEETS	30
SHEET NO.	16

CABLE DIAGRAM LEGEND

- ELECTRIC CABLE IN CONDUIT
- S CABLE SPLICE (SEE GENERAL NOTES)
- 2/C INDICATES NUMBER OF CONDUCTORS IN CABLE
- CD CALL DELAY (SEE GENERAL NOTES)
- CCO CALL CARRY OVER (SEE GENERAL NOTES)
- #6 INDICATES AMERICAN WIRE GAUGE (AWG) SIZE 6 CONDUCTORS (SEE GENERAL NOTES)
- PROPOSED SERVICE INSTALLATION

UNION HILL ROAD



PRIVATE ENTRANCE

LONGACRE DRIVE

UNION HILL ROAD

LAST SAVED = #LASTENUPDATE#
 PEN TABLE = #PEN#
 PLOT DRIVER = #PLTDV#

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		DATE -	REVISED -

HORNER SHIFRIN

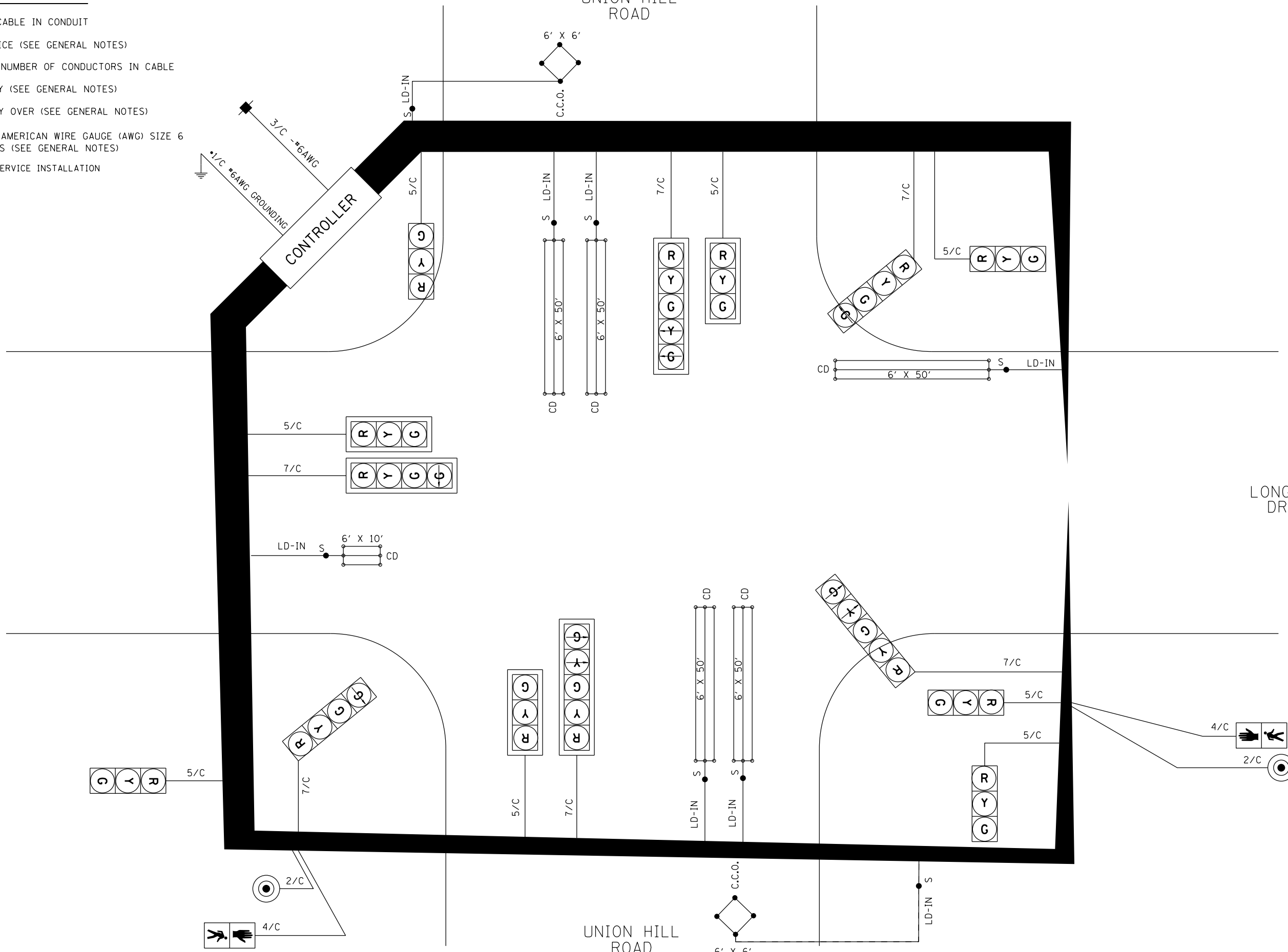
 WWW.HORNERSHIFRIN.COM

FAIRVIEW HEIGHTS

 Crossroads of Property

TRAFFIC SIGNAL DETAILS			
SCALE: NTS	SHEET NO. 4 OF 4 SHEETS	STA.	TO STA.

LONGACRE/UNION HILL TRAFFIC SIGNAL		TOTAL SHEETS	SHEET NO.
SECTION 12-00038-01-TL		30	17
CONTRACT NO. 97709			





Illinois Department
of Transportation

Division of Highways
SCI Engineering, Inc
Union Hill Road and
Longacre Drive

SOIL BORING LOG

Page 1 of 1

Date 10/01/04

ROUTE _____ DESCRIPTION Mast Arm Boring LOGGED BY JAC (SCI)

SECTION _____ LOCATION SE 1/4, SEC. 29, TWP. 2N, RNG. 8W

COUNTY St. Clair DRILLING METHOD CME 550 w/CFA HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____
BORING NO. B-3
Station 72+68.60
Offset 43.0 ft LT
Ground Surface Elev. 109.5 ft

DEPTH (ft)	BULGE (1/6")	UCS (tsf)	MOISTURE (%)
2			
4	1.7	25	
4	S/15		
2			
3	0.6	25	
4	B		
2			
3	0.8	28	
3	B		
2			
2	0.7	27	
2	B		
2			
2	0.9	26	
3	B		
2			
2	0.7	27	
3	B		

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter Dry ft
Upon Completion _____ ft
After Hrs. _____ ft

DEPTH (ft)	BULGE (1/6")	UCS (tsf)	MOISTURE (%)
TOPSOIL - 1 INCH			
SILTY CLAY: Brown, low plastic			
2			
4	1.7	25	
4	S/15		
2			
3	0.6	25	
4	B		
CLAYEY SILT: Grayish brown, low plastic			
2			
3	0.8	28	
3	B		
2			
2	0.7	27	
2	B		
2			
2	0.9	26	
3	B		
SILTY CLAY: Brown, low plastic			
2			
2	0.7	27	
3	B		
Boring terminated at 15 ft.			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

LAST SAVED = 10/1/04 10:00 AM
PEN TABLE = PEN101010
PLOT DRIVER = PLOT101010

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		DRAWN -	REVISED -
		CHECKED -	REVISED -
PLOT DATE = 9/9/2019 2:27:13 PM		DATE -	REVISED -

HORNER SHIFRIN
WWW.HORNERSHIFRIN.COM



SOIL BORINGS

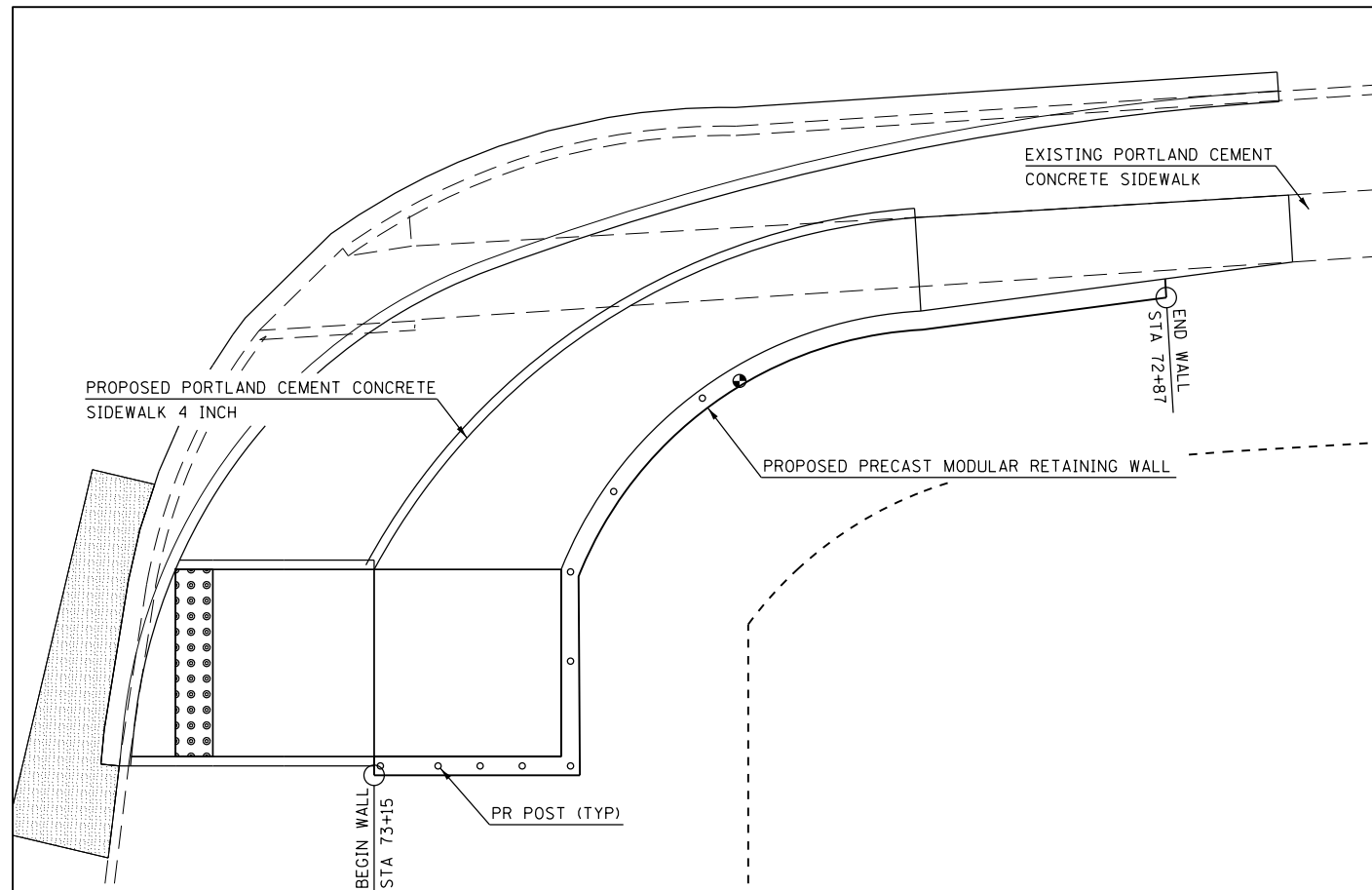
LONGACRE/UNION HILL
TRAFFIC SIGNAL

TOTAL SHEETS	SHEET NO.
30	19

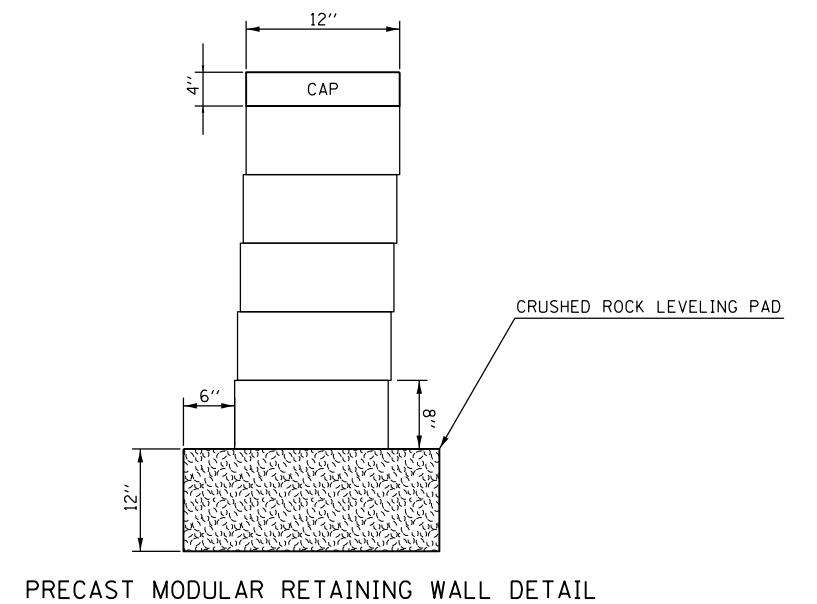
SECTION 12-00038-01-TL

CONTRACT NO. 97709

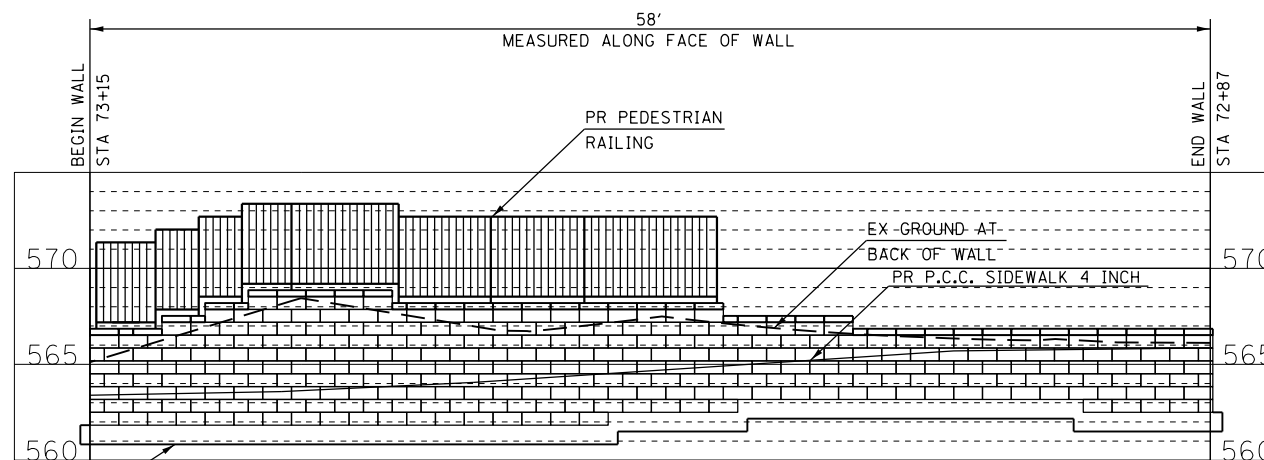
SCALE: NTS SHEET NO. 2 OF 2 SHEETS STA. TO STA.



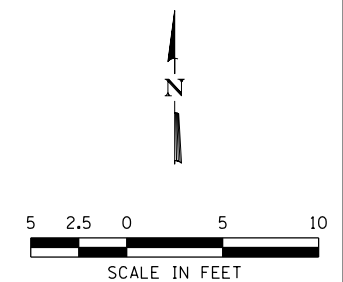
SOUTHEAST PRECAST MODULAR RETAINING WALL PLAN



PRECAST MODULAR RETAINING WALL DETAIL

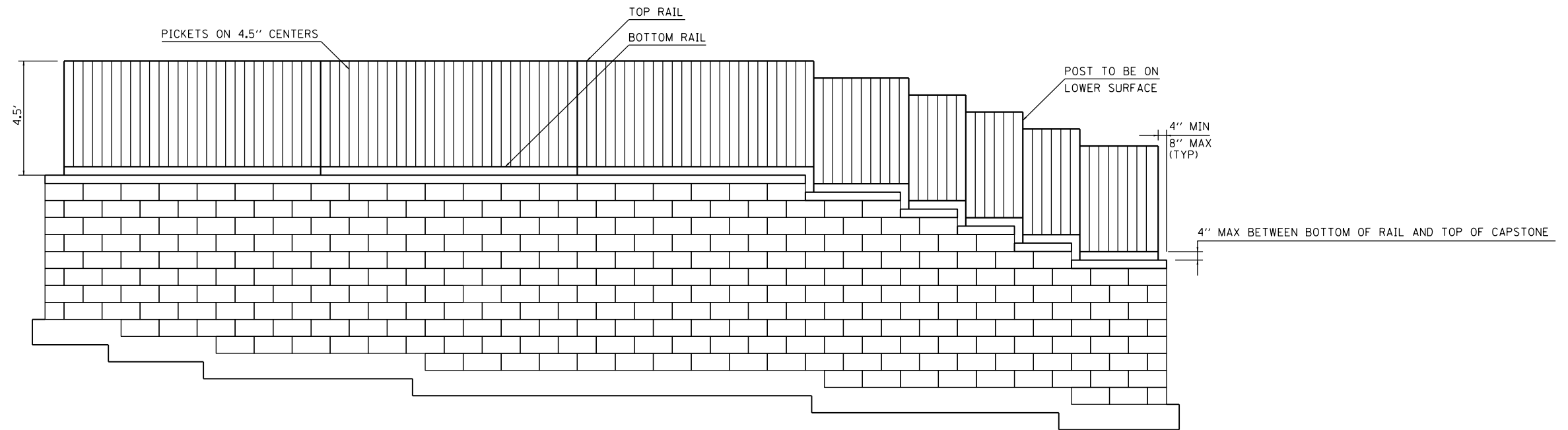


SOUTHEAST PRECAST MODULAR RETAINING WALL PROFILE
(ALONG FACE OF WALL)

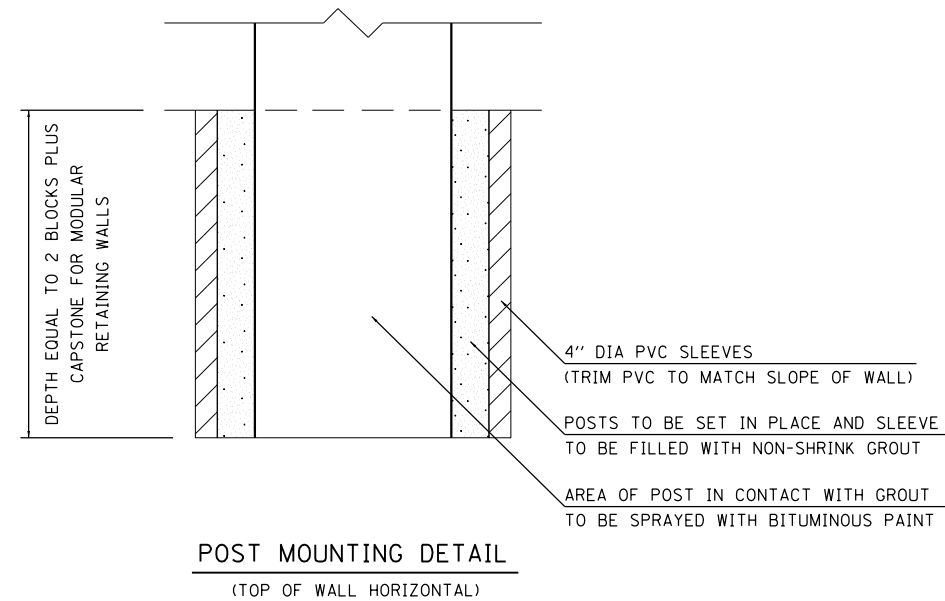


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PLOT SCALE = 10.0000' / in.	CHECKED -	REVISED -	REVISED -			SCALE: NTS	SHEET NO. 2 OF 3 SHEETS	STA.	TO STA.	30	23		
PLOT DATE = 9/9/2019 2:24:09 PM	DATE -	REVISED -	REVISED -			SECTION 12-00038-01-TL							
								CONTRACT NO. 97709					



ELEVATION OF PEDESTRIAN RAILING ON PRECAST MODULAR RETAINING WALL



POST MOUNTING DETAIL
(TOP OF WALL HORIZONTAL)

LAST SAVED = ALASTENEDDATE\$
 PLOT TABLE = #PRINT\$
 PLOT DRIVER = #PLTDVYS\$

FILE NAME =	USER NAME = PWICS*	DESIGNED -	REVISED -
E:\NCS4PDF\3054\8432.45\97709-Plans-024.dgn		DRAWN -	REVISED -
	PLOT SCALE = 10.0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 9/9/2019 2:24:00 PM	DATE -	REVISED -

HORNER SHIFRIN
 WWW.HORNERSHIFRIN.COM

FAIRVIEW HEIGHTS
 Crossroads of Prosperity

PRECAST MODULAR RETAINING WALL DETAIL			
SCALE: NTS	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.

LONGACRE/UNION HILL TRAFFIC SIGNAL		TOTAL SHEETS	SHEET NO.
SECTION 12-00038-01-TL		30	24
CONTRACT NO. 97709			

