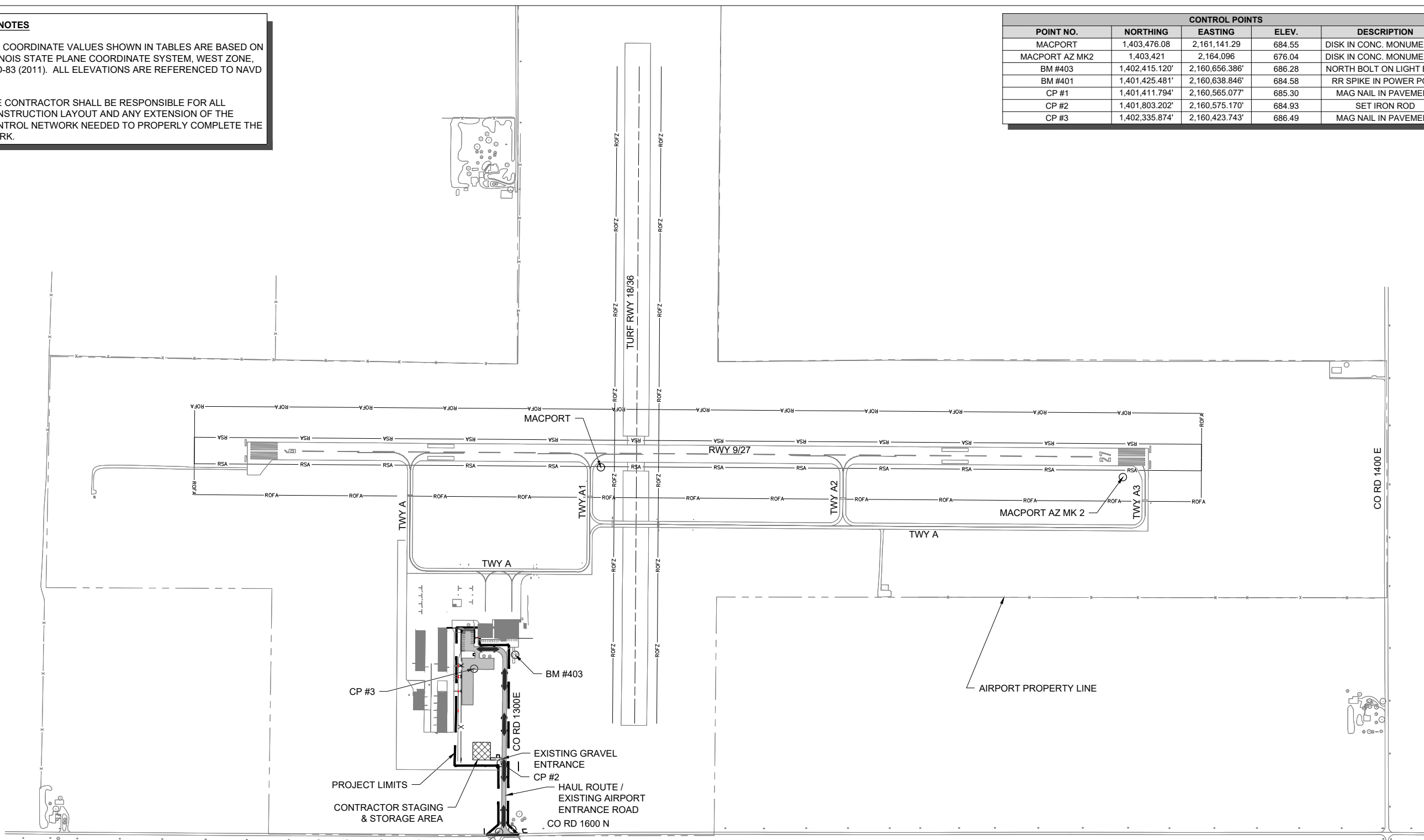




SURVEY NOTES

- ALL COORDINATE VALUES SHOWN IN TABLES ARE BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD-83 (2011). ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND ANY EXTENSION OF THE CONTROL NETWORK NEEDED TO PROPERLY COMPLETE THE WORK.

CONTROL POINTS				
POINT NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
MACPORT	1,403,476.08	2,161,141.29	684.55	DISK IN CONC. MONUMENT
MACPORT AZ MK2	1,403,421	2,164,096	676.04	DISK IN CONC. MONUMENT
BM #403	1,402,415.120'	2,160,656.386'	686.28	NORTH BOLT ON LIGHT BASE
BM #401	1,401,425.481'	2,160,638.846'	684.58	RR SPIKE IN POWER POLE
CP #1	1,401,411.794'	2,160,565.077'	685.30	MAG NAIL IN PAVEMENT
CP #2	1,401,803.202'	2,160,575.170'	684.93	SET IRON ROD
CP #3	1,402,335.874'	2,160,423.743'	686.49	MAG NAIL IN PAVEMENT



REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
PROJECT NO: 22A0125
CAD FILE: G-103-SOW.DWG
DESIGN BY: JP 8/14/23
DRAWN BY: JP 8/14/23
REVIEWED BY: LDH 11/2/23

SHEET TITLE

SCOPE OF WORK

SCOPE OF WORK

- PROJECT CONSISTS OF 2" DEPTH ASPHALT MILLING, HMA OVERLAY, HMA PATCHING, HMA CRACK SEALING, WATERBORNE MARKING, SHOULDER ADJUSTMENT, SEEDING, MULCHING, FENCE AND GATE REMOVAL AND INSTALLATION.

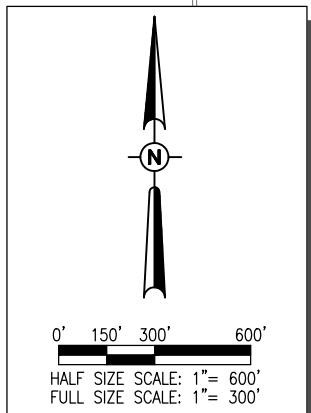
GENERAL

- MACOMB MUNICIPAL AIRPORT IS A NON-TOWER CONTROLLED, GENERAL AVIATION AIRPORT COMPRISED OF ONE PAVED RUNWAY (RUNWAY 9/27) AND ONE TURF RUNWAY (RUNWAY 18/36).
- NO AIRFIELD PAVEMENT CLOSURES WILL BE NECESSARY.

AIRFIELD SAFETY

- AIRFIELD SAFETY SHALL BE HELD PARAMOUNT AT ALL TIMES. ANY INDIVIDUALS RESPONSIBLE FOR INCURSIONS OR POTENTIAL INCURSIONS WITH AIR TRAFFIC DUE TO NON-COMPLIANCE WITH REQUIREMENTS SET FORTH IN THESE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND FAA ADVISORY CIRCULAR 150/5370-2 (CURRENT EDITION) WILL BE SUBJECT TO AN IMMEDIATE SUSPENSION OF DRIVING PRIVILEGES ON THE AIRPORT OR A COMPLETE RESTRICTION FROM ENTERING THE AIR OPERATIONS AREA ALTOGETHER. THE AIRPORT MANAGER OR RESIDENT ENGINEER/TECHNICIAN MAY STOP THE WORK AT ANY TIME THEY BELIEVE AIRFIELD SAFETY IS BEING COMPROMISED.
- AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES.

EXISTING	PROPOSED	LEGEND
— RSA —		RUNWAY SAFETY AREA (RSA)
— ROFA —		RUNWAY OBJECT FREE AREA (ROFA)
— ROFZ —		RUNWAY OBSTACLE FREE ZONE (ROFZ)
	[Symbol]	PROJECT LIMITS
	[Symbol]	STAGING AREA
	[Symbol]	TEMPORARY HAUL ROUTE / ACCESS ROUTE (AR150540)

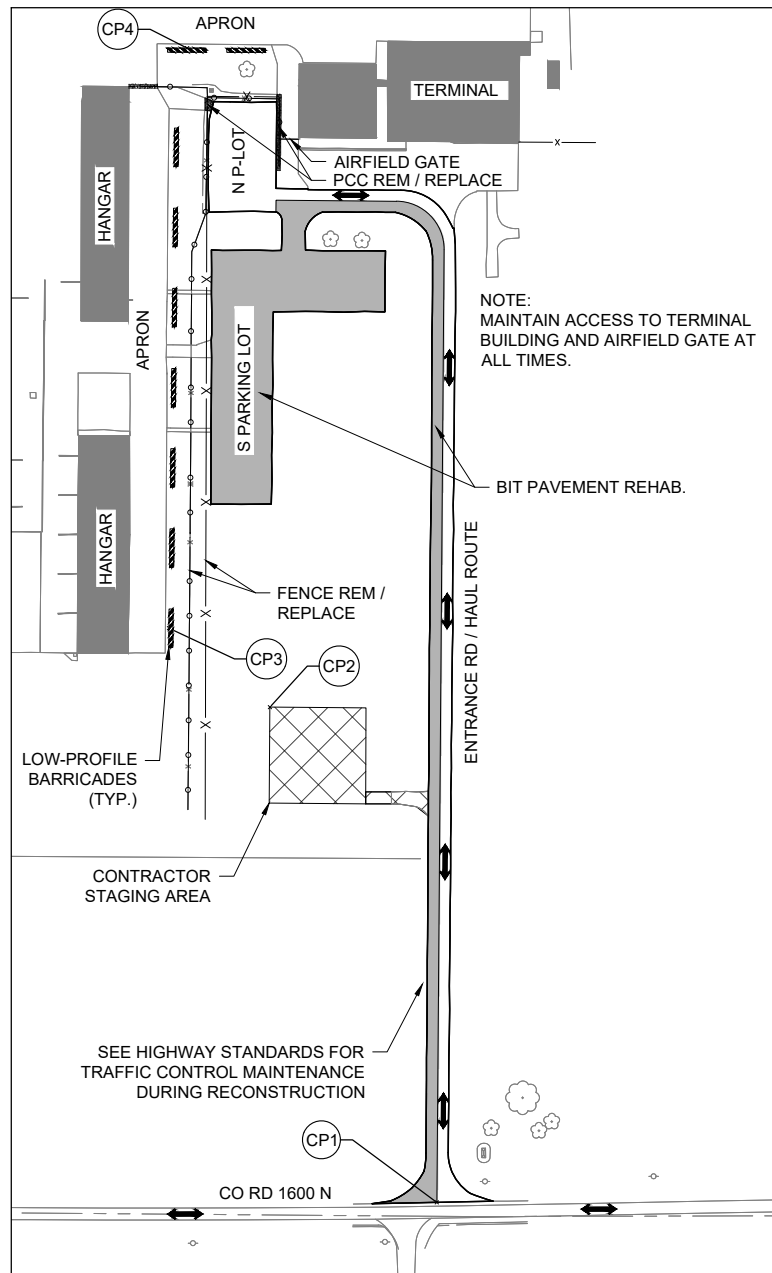


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CRITICAL POINTS							
POINT NO.	PHASE	DESCRIPTION	LAT.	LONG.	GND ELEV. (MSL)	MAX EQUIP. HEIGHT (FT)	TOP ELEV. GND + EQUIP HEIGHT (MSL)
1	1,2,3	HAUL ROUTE	N040° 30' 49.5946"	W090° 39' 20.8336"	685.6	25	710.6
2	1,2,3	STAGING AREA	N040° 30' 54.6819"	W090° 39' 23.1216"	685.9	25	710.9
3	1,2	LOW-PROFILE BARRICADE	N040° 30' 55.4892"	W090° 39' 24.4887"	686.4	3	689.4
4	1,2	LOW-PROFILE BARRICADE	N040° 31' 01.4597"	W090° 39' 24.2876"	687.6	3	690.6

EXISTING	PROPOSED	LEGEND
		PROPOSED WORK AREA
		STAGING AREA (AR150520)
		LOW PROFILE BARRICADE (AR150530)
		TEMPORARY HAUL ROUTE / ACCESS ROUTE
		SAFETY CRITICAL POINT



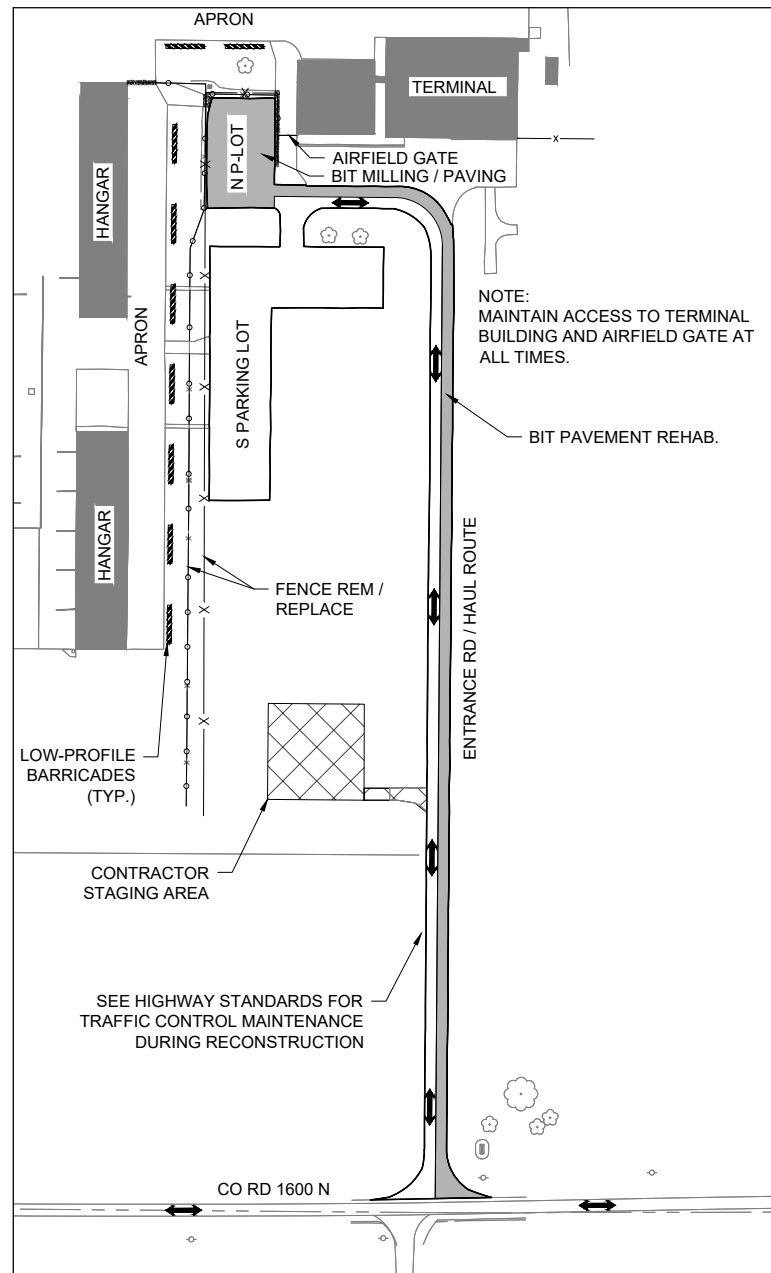
PHASE 1

WORK TO BE COMPLETED

- MILLING, PATCHING, PAVING, PCC PAVEMENT REMOVAL, PCC SIDEWALK, FENCING REMOVAL/REPLACEMENT.

AIRFIELD CLOSURES AND CHANGES

- NO AIRFIELD CLOSURES NECESSARY.
- LOW PROFILE BARRICADES SHALL BE IN PLACE ALONG AIRFIELD PAVEMENT EDGE DURING FENCE REMOVAL/REPLACEMENT.



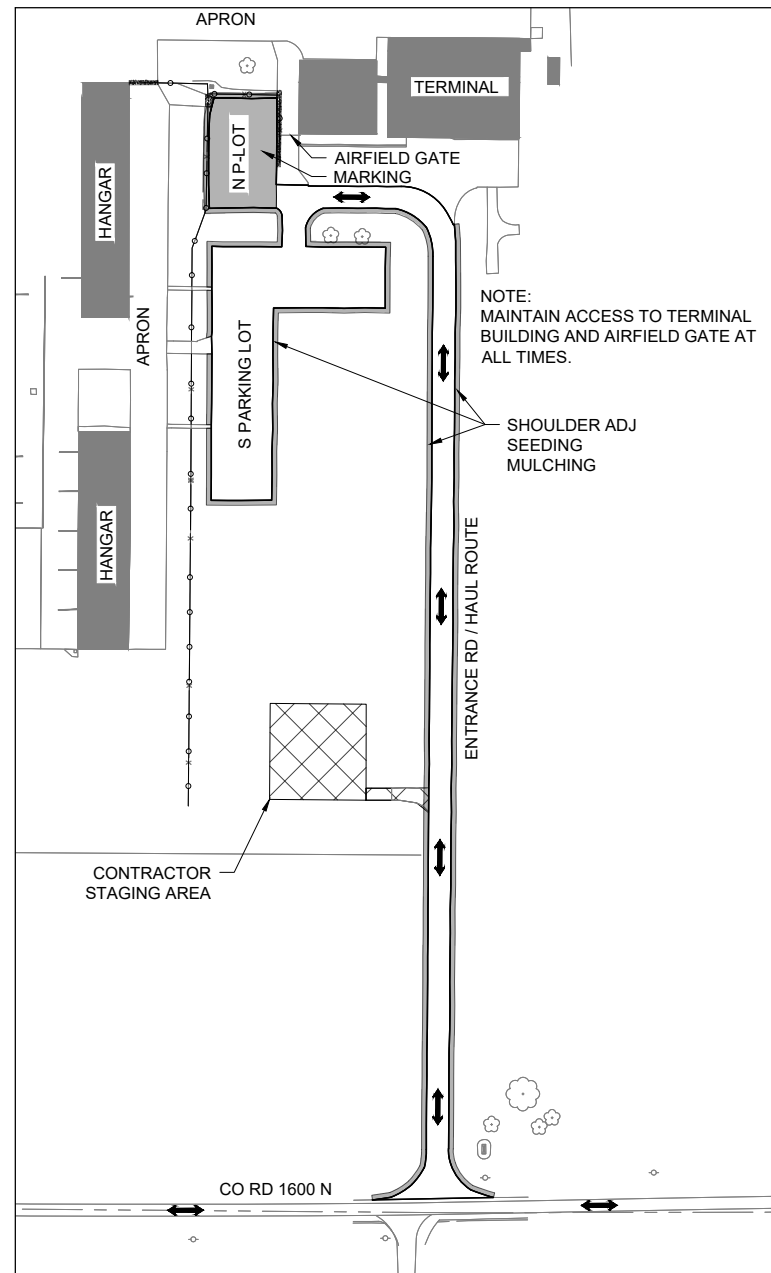
PHASE 2

WORK TO BE COMPLETED

- MILLING, PATCHING, PAVING, FENCING REMOVAL/REPLACEMENT.

AIRFIELD CLOSURES AND CHANGES

- NO AIRFIELD CLOSURES NECESSARY.
- LOW PROFILE BARRICADES SHALL BE IN PLACE ALONG AIRFIELD PAVEMENT EDGE DURING FENCE REMOVAL/REPLACEMENT.



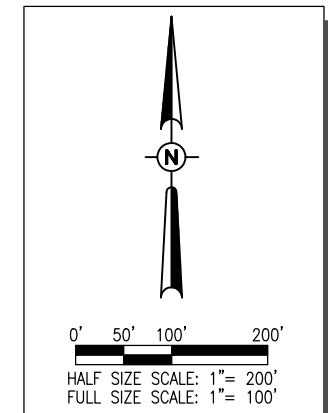
PHASE 3

WORK TO BE COMPLETED

- MARKING, SHOULDER ADJUSTMENT, SEEDING, AND MULCHING.

AIRFIELD CLOSURES AND CHANGES

- NO AIRFIELD CLOSURES NECESSARY.



REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
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DESIGN BY: JP 8/14/23
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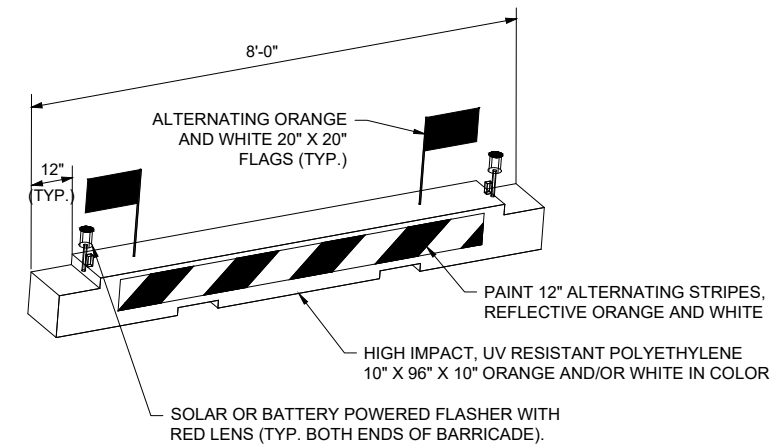
SHEET TITLE

SAFETY PLAN

SAFETY NOTES

- ALL PROVISIONS OF THE LATEST EDITION OF FAA ADVISORY CIRCULAR AC 150/5370-2 (CURRENT EDITION), "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", APPLY TO THIS CONTRACT, EXCEPT AS MODIFIED BY THIS SAFETY PLAN. ANY MODIFICATIONS TO THIS PLAN MUST BE APPROVED BY THE FAA AND THE AIRPORT.
- THE CONTRACTORS SHALL MINIMIZE DISRUPTION OF STANDARD OPERATING PROCEDURES FOR AERONAUTICAL ACTIVITY BY REMAINING WITHIN THE PRESCRIBED STAGING, CONSTRUCTION, AND PHASING AREAS PRESENTED ON THE CONSTRUCTION SAFETY AND PHASING PLAN SHEETS.
- NO UNAUTHORIZED PERSONNEL SHALL ENTER ANY AREA OF THE AIRPORT THAT COULD POTENTIALLY BE HAZARDOUS. THE AIRPORT MANAGER RESERVES THE RIGHT TO SUSPEND OPERATIONS IN ORDER TO MAINTAIN SAFETY AT THE AIRPORT.
- PRIOR TO ACCESSING THE AIRFIELD, ANY DESIGNATED CONTRACTOR OR SUBCONTRACTOR EMPLOYEES WHO WILL BE OPERATING OR ESCORTING A VEHICLE ON AN ACTIVE AREA OF THE AIRFIELD MUST BE FAMILIAR WITH THE "FAA GUIDE TO GROUND VEHICLE OPERATIONS", AND KEEP A HARD COPY IN THE VEHICLE FOR REFERENCE. THE GUIDE CAN BE FOUND AT: https://www.faa.gov/airports/runway_safety/media/Ground_Vehicle_Guide_Proof_Final.pdf
- NO CONSTRUCTION VEHICLES SHALL BE DRIVEN ACROSS ANY ACTIVE (OPEN) AIRFIELD PAVEMENT AREA WITHOUT AN APPROPRIATE ESCORT. CONSTRUCTION EQUIPMENT OR CONSTRUCTION ACTIVITY WILL NOT BE PERMITTED WITHIN 250' OF RWY 9/27 AND/OR 125' OF RWY 18/36 (DISTANCES MEASURED FROM ACTIVE CENTERLINES) UNLESS CLOSED OR OTHERWISE NOTED. CONSTRUCTION EQUIPMENT OR CONSTRUCTION ACTIVITY WILL ALSO NOT BE PERMITTED WITHIN 65.5' OF ANY ACTIVE AIRPORT TAXIWAY CENTERLINE OR APRON UNLESS OTHERWISE NOTED.
- CONTRACTOR EQUIPMENT, VEHICLES, AND PROJECT MATERIALS SHALL BE STORED AT THE STAGING AREA SHOWN ON THE PLAN VIEW, EXCEPT AS OTHERWISE PROVIDED FOR AT THE PRE-CONSTRUCTION CONFERENCE.
- ALL CONSTRUCTION EQUIPMENT OPERATING IN THE PRESCRIBED CONSTRUCTION AREA IS REQUIRED TO DISPLAY A CHECKERBOARD FLAG PROPERLY LOCATED OR A ROTATING BEACON (STROBE) AS SPECIFIED IN AC 150/5210-5, "PAINTING, MARKING, AND LIGHTING OF VEHICLES USED ON AN AIRPORT" LATEST EDITION.
- NO CONSTRUCTION MATERIAL STOCKPILES SHALL BE LOCATED WITHIN 250' OF ANY ACTIVE RUNWAY, WITHIN 65.5' OF ANY OTHER ACTIVE AIRPORT OPERATIONS AREA, OR PENETRATE A PART 77 IMAGINARY SURFACE (PROVIDED BY THE RESIDENT ENGINEER/TECHNICIAN) EXTENDING OUT AND UPWARDS FROM ALL SIDES OF AN ACTIVE RUNWAY.
- CLOSED AIRFIELD PHASING AREAS, OPEN TRENCHES, AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH LIGHTED BARRICADES WITH STEADY BURNING OR FLASHING RED LIGHTS AS SPECIFIED IN 150/5370-2, "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION", LATEST EDITION. LIGHTED BARRICADES MUST BE NO TALLER THAN 18" (EXCLUSIVE OF SUPPLEMENTARY LIGHTS AND FLAGS) ON THE TAXIWAYS AND COMPLY WITH ADVISORY CIRCULAR 150/5370-2, LATEST EDITION. CONTRACTOR SHALL NIGHT CHECK BARRICADES DAILY FOR PROPER OPERATION.
- OPEN TRENCHES, EXCAVATIONS, AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHOULD BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED WITH FLASHING RED LIGHTS DURING HOURS OF RESTRICTED VISIBILITY AND/OR DARKNESS.
- NO CONSTRUCTION EQUIPMENT GREATER THAN 25' TALL WILL BE PERMITTED ON THE AIRPORT WITHOUT THE APPROVAL OF THE AIRPORT MANAGER AND ADDITIONAL AIRSPACE APPROVAL BY THE FAA. AIRSPACE APPROVALS REQUIRE CONSIDERABLE LEAD TIME AND SHOULD BE REQUESTED WELL IN ADVANCE.
- NO OPEN FLAME WELDING OR TORCH CUTTING OPERATION IS PERMITTED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS ARE PROVIDED AND HAVE BEEN APPROVED BY THE AIRPORT MANAGER NO FLARE POTS ARE ALLOWED ON THE PROJECT.
- SOIL, DEBRIS, AND LOOSE MATERIAL DROPPED OR TRUCKED ONTO AIRPORT ROADS, TAXIWAYS, AND SOD SURFACES, OR WHICH CAN BE BLOWN ONTO SUCH SURFACES, SHALL BE IMMEDIATELY SWEEPED, PICKED UP AND REMOVED, OR PLACED INTO CLOSED CONTAINERS. ANY DAMAGE TO AIRPORT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE OWNER.
- CONTRACTOR SHALL TAKE MEASURES TO AVOID TRACKING BITUMINOUS TACK COAT ASSOCIATED WITH PAVING PROJECTS ONTO ADJACENT PAVEMENT AREAS, ESPECIALLY GROOVED RUNWAY PAVEMENTS, UNLESS SUFFICIENT PROTECTION HAS BEEN APPLIED. HEAVY TRACKING OR DAMAGE TO ADJACENT PAVEMENTS AND GROOVED SURFACES MAY BE CAUSE FOR STOPPING THE WORK UNTIL ACCEPTABLE PROTECTION OR CHANGE IN WORK METHODS HAS BEEN PROVIDED.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAINTAINING AIRPORT LIGHTING AND NAVIGATIONAL ELECTRICAL SYSTEMS DURING CONSTRUCTION. A CONTACT PERSON AND TELEPHONE NUMBER FOR 24 HOUR EMERGENCY IMMEDIATE REPAIR SHALL BE SUBMITTED TO THE AIRPORT MANAGER AND RESIDENT ENGINEER/TECHNICIAN. HAUL ROUTES CROSSING PAVEMENT, DRAINAGE, MISCELLANEOUS STRUCTURES AND/OR AIRFIELD CABLES SHALL BE PROTECTED FROM DAMAGE.
- ALL AIRCRAFT AND AIRPORT OPERATIONS HAVE THE RIGHT-OF-WAY. CONTRACTOR TO YIELD TO VEHICLES AND REMAIN CLEAR AT ALL TIMES.
- CONTRACTOR SHALL PLACE, SECURE, AND MAINTAIN LIGHTED BARRICADES AND CLOSURE CROSSES WHEN A RUNWAY/TAXIWAY/APRON IS CLOSED OR AS REQUIRED BY THE PLANS AND DESIGNATED BY THE RESIDENT ENGINEER/TECHNICIAN.
- CONTRACTOR SHALL MARK HAZARDOUS AREA WITH STEADY-BURNING OR FLASHING RED LIGHTS DURING PERIODS OF LOW VISIBILITY AS REQUIRED.

- THE CONTRACTOR SHALL PERIODICALLY PERFORM ONSITE INSPECTIONS THROUGHOUT THE DURATION OF THE PROJECT WITH THE IMMEDIATE REMEDY OF ANY DIFFERENCES, WHETHER CAUSED BY NEGLIGENCE, OVERSIGHT, OR PROJECT SCOPE CHANGE.
- CONTRACTOR SHALL MOVE MAINTENANCE OF TRAFFIC COMPONENTS AT THE WRITTEN DIRECTION OF THE RESIDENT ENGINEER/TECHNICIAN AT NO ADDITIONAL COST.
- CONTRACTOR SHALL NOT REMOVE THE BARRICADES WITHOUT THE APPROVAL BY THE RESIDENT ENGINEER/TECHNICIAN.
- CONTRACTOR SHALL MAINTAIN FLASHERS, SIGNS AND/OR BARRICADES AS REQUIRED BY THE PLANS, CITY OR COUNTY REGULATIONS OR CONTRACTOR ACTIVITIES. CONTRACTOR SHALL OBTAIN ANY AND ALL REQUIRED LOCAL PERMITS UNLESS SPECIFIED OTHERWISE.
- THE CONTRACTOR SHALL UTILIZE WATER AND/OR CHEMICALS APPROVED BY THE RESIDENT ENGINEER/TECHNICIAN AS NECESSARY TO CONTROL DUST.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING MEASURES TO CONTROL OR AVOID CREATING ATTRACTANTS TO WILDLIFE. MEASURES MAY INCLUDE CONTINUOUSLY REMOVING ANY WASTE OR LOOSE MATERIALS, PLACEMENT OF MATERIALS IN APPROPRIATE STORAGE CONTAINERS, PROPERLY MAINTAINING FENCES AND GATES TO PREVENT ACCESS, AND PREVENTING PONDING OF WATER THROUGHOUT THE SITE.
- UNLESS SPECIFIED OTHERWISE, COST FOR SAFETY, STAGING, AND TRAFFIC MAINTENANCE ITEMS SHALL BE PAID UNDER ITEM AR150530. SEPARATE PAYMENT SHALL NOT BE MADE.
- THE CONTRACTOR SHALL HAVE THE SAFETY PLAN COMPLIANCE DOCUMENT (SPCD), AS DETAILED IN THE SPECIAL PROVISIONS, SUBMITTED AND APPROVED PRIOR TO BEING ISSUED "NOTICE TO PROCEED".
- ALL PAVEMENT CLOSURES SHALL BE COORDINATED WITH AIRPORT MANAGEMENT A MINIMUM OF 7 DAYS BEFORE THE DESIRED CLOSING TIME TO ALLOW FOR THE PROPER COORDINATION. AIRPORT MANAGEMENT HAS COMPLETE AUTHORITY IN DETERMINING WHEN THE RUNWAY/TAXIWAY MAY BE CLOSED.



LOW PROFILE AIRCRAFT BARRICADE DETAIL

BARRICADE NOTES

- ALL CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE ILLINOIS SUPPLEMENT (LATEST EDITION) AND THE FAA ADVISORY CIRCULARS (LATEST EDITION) UNLESS NOTED OTHERWISE. THE FAA OR MORE STRINGENT SPECIFICATIONS SHALL GOVERN.
- BARRICADES SHALL BE INTERLOCKED END TO END OVER THE LENGTH OF THE PAVEMENT WHERE PROTECTING OPEN RUNWAYS, AND SPACED END TO END A MAXIMUM OF 4 FEET IN OTHER ALL OTHER AREAS. BARRICADES ARE TO BE SET BACK FROM THE ACTIVE RUNWAY OR TAXIWAY CENTERLINE THE DISTANCE AS SHOWN ON THE PLANS.
- CONSTRUCTION RED WARNING LIGHT: THESE ARE PORTABLE, LENS DIRECTED, ENCLOSED LIGHTS. THE COLOR OF THE LIGHT EMITTED SHALL BE RED. THEY MAY BE USED IN EITHER A STEADY BURN (TYPE C) OR LOW INTENSITY FLASHING MODE (TYPE A) UNLESS NOTED OTHERWISE.
- THE LIGHTING SHALL BE MAINTAINED IN OPERATION DURING THE HOURS OF DARKNESS BETWEEN 1/2 HOUR AFTER SUNSET AND 1/2 HOUR BEFORE SUNRISE AND WHEN CONDITIONS EXIST WHICH TEND TO OBSCURE VISION.
- BARRICADES SHALL BE SECURED TO THE GROUND BY APPROVED METHODS TO PREVENT MOVEMENT BY PROP WASH, JET BLAST OR OTHER WIND CURRENTS.
- THE ONLY COLOR COMBINATION ON BARRICADES IS ORANGE AND WHITE. THE ORANGE STRIPES SHALL BE ENCAPSULATED LENS REFLECTIVE SHEETING. THE WHITE STRIPES SHALL BE EITHER ENCAPSULATED OR ENCLOSED LENS REFLECTIVE SHEETING AND MUST BE IN ACCEPTABLE CONDITION.
- COST FOR PROVIDING, PLACING, MAINTAINING, RELOCATING AND REMOVING BARRICADES SHALL BE PAID UNDER ITEM AR150530

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MACOMB MUNICIPAL AIRPORT
16190 East 1300th Street
Macomb, Illinois 61455
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Fax: 309.836.7721

**REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES**

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
PROJECT NO: 22A0125
CAD FILE: G-104-CSPP.DWG
DESIGN BY: JP 8/14/23
DRAWN BY: JP 8/14/23
REVIEWED BY: LDH 11/2/23

SHEET TITLE

**SAFETY PLAN NOTES
& DETAILS**



SITE DETAILS

AREA OF CONSTRUCTION SITE: 2.50 ACRES
AREA OF SOIL DISTURBANCE: 0.62 ACRES

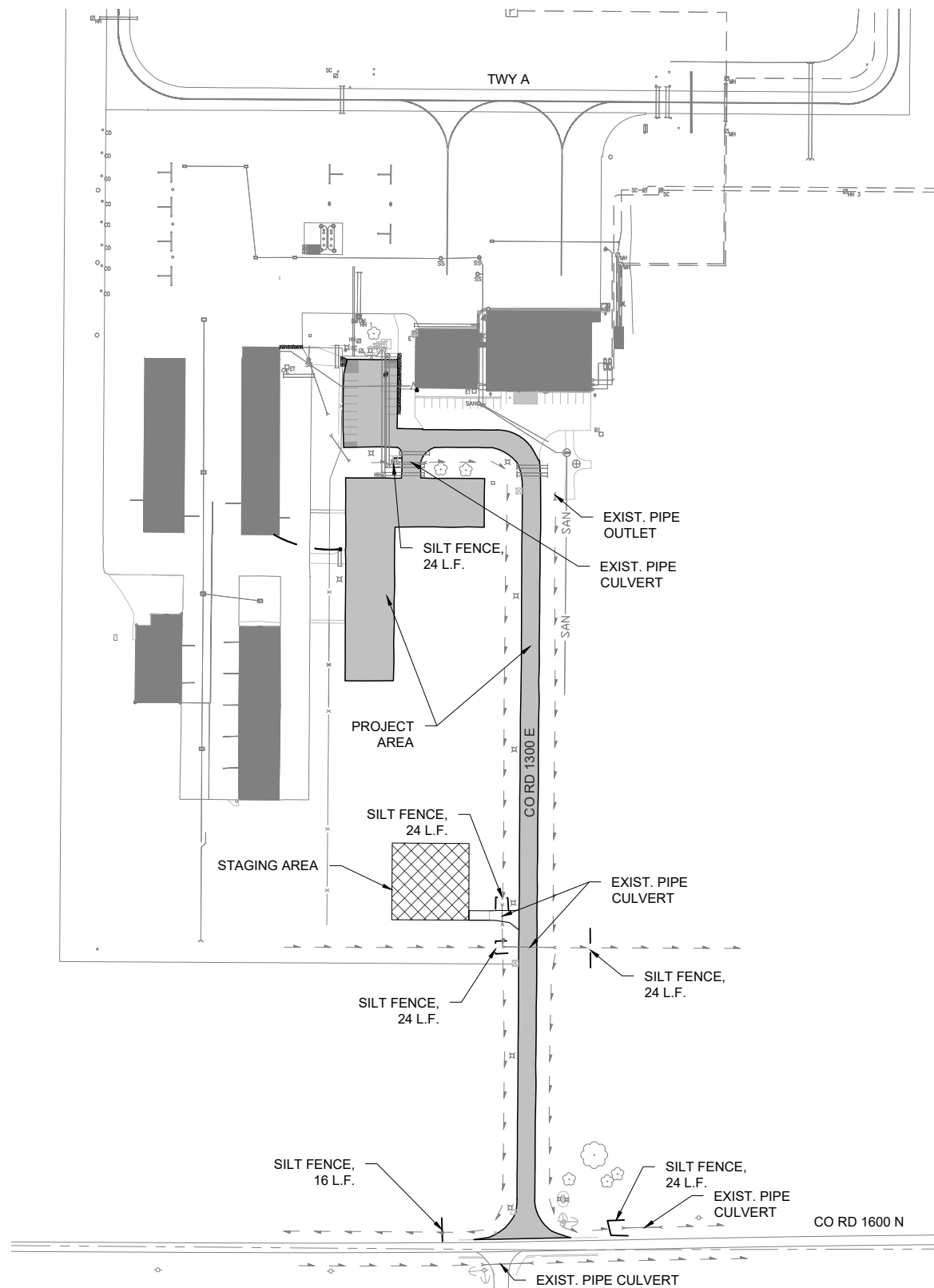
SITE INFORMATION

SOIL INFORMATION: 43A - IPAVA SILT LOAM, 0 - 2 PERCENT SLOPES.

NOTE: PROPOSED WORK ONLY INCLUDES AREAS 5-FT OFF PAVEMENT EDGE IN PREVIOUSLY DISTURBED SOIL.

EROSION HAZARD: NONE/SLIGHT

RECEIVING WATERS: UNNAMED TRIBUTARY OF FARMERS FORK (HUC12 - 071300100301)



CONTRACTOR'S CERTIFICATION STATEMENT

THIS CERTIFICATION STATEMENT IS A PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR THE PROJECT DESCRIBED BELOW IN ACCORDANCE WITH NPDES PERMIT NO. ILR10 ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

PROJECT INFORMATION:

AIRPORT: _____ PROJECT: _____

PROJECT NO: _____ COUNTY: _____

CONTRACT NUMBER: _____

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE: _____ DATE: _____

PRINTED NAME: _____ TITLE: _____

NAME OF FIRM: _____

STREET ADDRESS: _____

CITY, STATE, ZIP: _____

PHONE NUMBER: _____

THE INFORMATION WITHIN THIS BOX SHALL BE COMPLETED BY THE CONTRACTOR AFTER THE AWARD OF THE CONTRACT TO OBTAIN THE REQUIRED NPDES PERMIT FROM IEPA. COMPLETION OF THIS IS A CONTRACT REQUIREMENT.

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

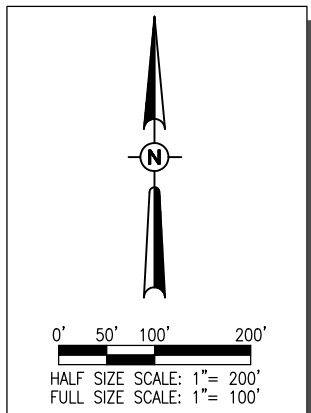
IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
PROJECT NO: 22A0125
CAD FILE: C-104-SWPPP.DWG
DESIGN BY: JP 8/14/23
DRAWN BY: JP 8/14/23
REVIEWED BY: LDH 11/2/23

SHEET TITLE

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)



SEDIMENTATION AND EROSION CONTROL NOTES:

- A. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- B. FOR THOSE DEVELOPMENTS THAT REQUIRE A DESIGNATED EROSION CONTROL INSPECTOR (DECI), INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
 - UPON COMPLETION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - AFTER EVERY SEVEN (7) CALENDAR DAYS OR STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
- C. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- D. A STABILIZED MAT OF CRUSHED STONE MEETING IDOT GRADATION CA-01 UNDERLAIN WITH FILTER FABRIC AND IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, OR OTHER APPROPRIATE MEASURE(S) AS APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT OF WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- E. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN.
- F. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE OR REDISTURBANCE.
- G. ALL STOCKPILES SHALL HAVE APPROPRIATE MEASURES TO PREVENT EROSION. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS OR WETLANDS AND DESIGNATED BUFFERS.
- H. SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH APPROPRIATE MEASURES AS APPROVED BY THE ENFORCEMENT OFFICER.
- I. APPROPRIATE EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN THE NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- J. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- K. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DISCHARGES SHALL BE ROUTED THROUGH AN APPROVED ANIONIC POLYMER DEWATERING SYSTEM OR A SIMILAR MEASURE AS APPROVED BY THE ENFORCEMENT OFFICER. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE ENFORCEMENT OFFICER, OR APPROVED REPRESENTATIVE, MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- L. IF INSTALLED SOIL EROSION AND SEDIMENT CONTROL MEASURES DO NOT MINIMIZE SEDIMENT LEAVING THE DEVELOPMENT SITE, ADDITIONAL MEASURES SUCH AS ANIONIC POLYMERS OR FILTRATION SYSTEMS MAY BE REQUIRED BY THE ENFORCEMENT OFFICER.
- M. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- N. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- O. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, ENFORCEMENT OFFICER, OR OTHER GOVERNING AGENCY.

STORM WATER POLLUTION PREVENTION NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT ALL PROVISIONS OF THE CONTRACT DOCUMENTS TO ASSURE THAT STORM WATER POLLUTION PREVENTION ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY MANNER. SEDIMENTATION MUST NOT BE TRANSPORTED OFF THE CONSTRUCTION SITE. PERMANENT DRAINAGE FEATURES AND VEGETATIVE MEASURES SHALL BE PROVIDED AS SOON AS POSSIBLE.

THE MAINTENANCE OF ALL STORM WATER POLLUTION PREVENTION MEASURES IS INCIDENTAL TO THE ASSOCIATED ITEM.

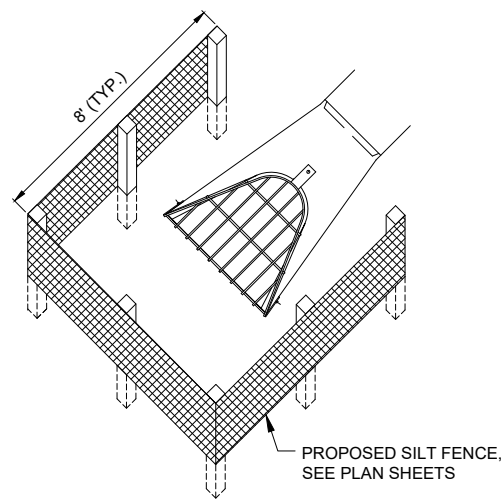
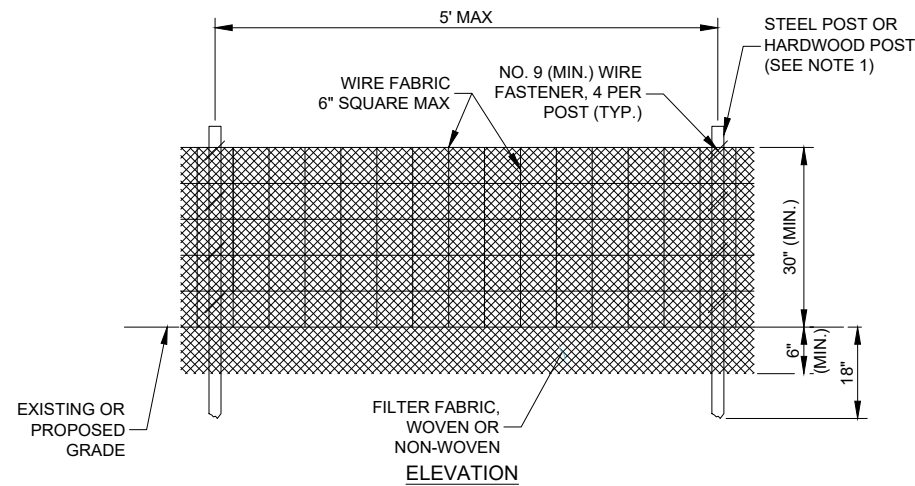
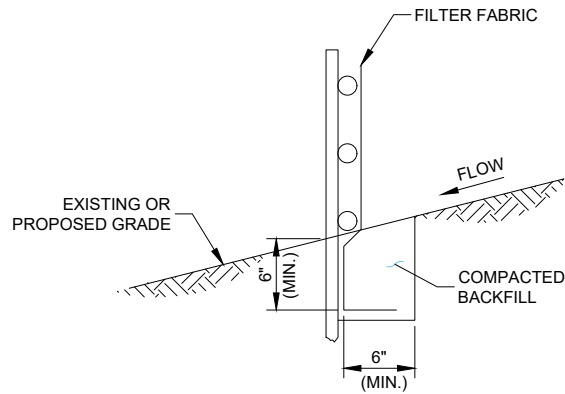
POLLUTION PREVENTION MEASURES

THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT AND MAINTAIN STORM WATER POLLUTION PREVENTION PRACTICES AND MEASURES PRIOR TO THE STRIPPING OF EXISTING VEGETATION WHEREVER POSSIBLE AND AS SOON AS CONSTRUCTION PERMITS IN OTHER AREAS. POLLUTION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THESE CONSTRUCTION PLANS, AND WITH STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE. THE CONTRACTOR SHALL ADJUST HIS OPERATIONS AND IMPLEMENT POLLUTION CONTROL MEASURES SO THAT NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE CONSTRUCTION SITE OTHER THAN THROUGH SEDIMENT TRAPS OR OTHER SUITABLE CONTROL MEASURES.

POLLUTION CONTROL ITEMS SHALL BE PROVIDED AS NOTED ON THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE STORM WATER POLLUTION PREVENTION DETAILS AND AS DIRECTED BY THE ENGINEER. THE LIMITS OF SUCH MEASURES SHALL BE STAKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH LIMITS MAY BE ADJUSTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL SITE CONDITIONS EXPERIENCED DURING CONSTRUCTION. ADDITIONAL COMPENSATION FOR MEASURES EXCEEDING THE PLAN QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.

THE CONTRACTOR IS TO MAINTAIN AND ADJUST, REPAIR OR REPLACE ALL POLLUTION PREVENTION MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. MAINTENANCE OF POLLUTION CONTROL MEASURES IS TO BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES ARE EXISTING ON SITE LOCATED AT DRAINAGE FACILITIES AND ALONG THE PROPERTY LINE.



NOTES:

1. FENCE POST SHALL BE EITHER STEEL "T" LINE POST OR HARDWOOD POST WITH A MINIMUM SECTIONAL AREA OF 2.0 SQUARE INCHES. A CARPENTER'S (NOMINAL) 2"x2" POST WILL MEET SPECIFICATIONS.
2. TOP AND BOTTOM WIRE OF WIRE FABRIC SHALL BE MINIMUM GAGE NO. 9. INTERMEDIATE WIRES OF THE WIRE FABRIC SHALL BE MINIMUM GAGE NO. 11.
3. WIRE FABRIC SHALL BE SECURELY FASTENED TO FENCE POSTS WITH NO. 9 GAGE WIRE MINIMUM. FOUR (4) FASTENERS PER POST REQUIRED.
4. FILTER FABRIC SHALL BE SECURELY FASTENED TO WIRE FABRIC AND POSTS WITH TIES OR STAPLES SPACED AT 12" APART AT THE TOP, MIDDLE AND BOTTOM.
5. WHEN TWO SECTIONS OF FILTER FABRIC MEET, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED AND ATTACHED TO THE WIRE FABRIC AT A POST.
6. FILTER FABRIC SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS WITH APPARENT OPENING SIZE (AOS) OF AT LEAST 40 FOR NONWOVEN AND WOVEN. THE FABRIC MUST MEET THE APPLICABLE STANDARDS OF AASHTO 288-00 (Article IV, Section B.1.j.1.f.i, AS AMENDED), OR EQUIVALENT.
7. A MAXIMUM OF 5 FEET IS USED FOR POST-TO-POST SPACING.
8. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
9. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
10. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. PERIODIC INSPECTION SHALL BE PERFORMED AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.
11. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN BULGES DEVELOP IN THE SILT FENCE.
12. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
13. FENCE POSTS SHALL BE REMOVED WHEN DIRECTED AT PROJECT END.
14. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.



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REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

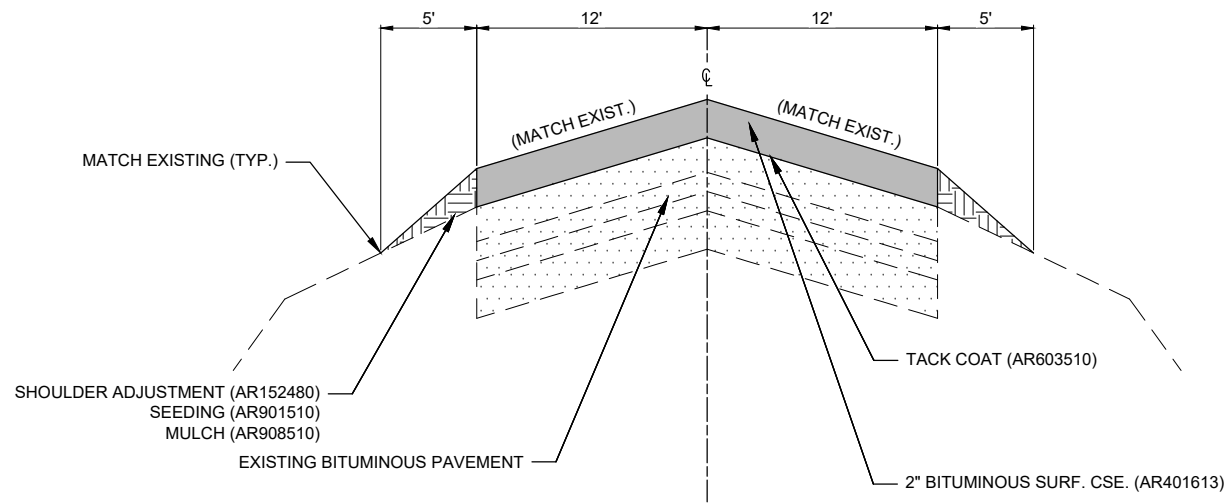
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Contract No.: MB035

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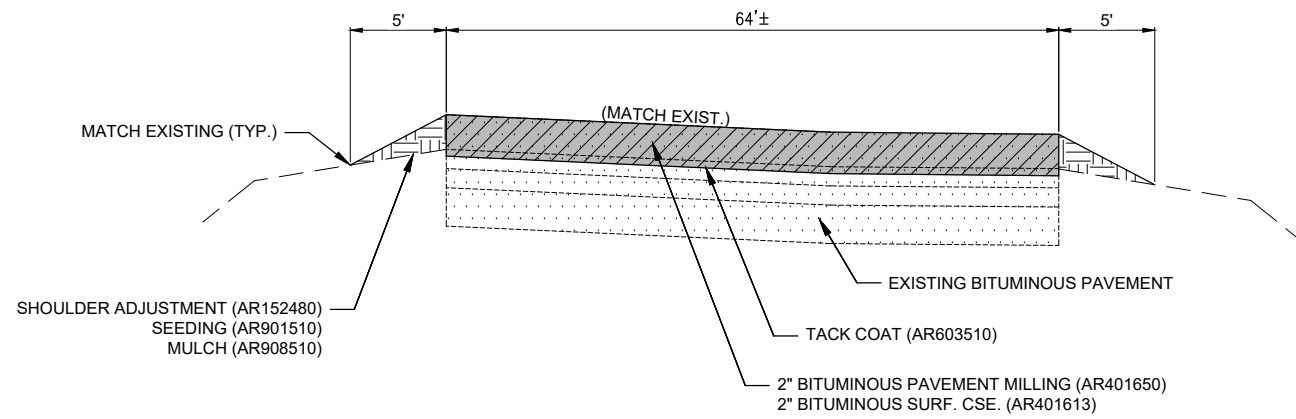
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PROJECT NO: 22A0125
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DESIGN BY: JP 8/14/23
DRAWN BY: JP 8/14/23
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SHEET TITLE

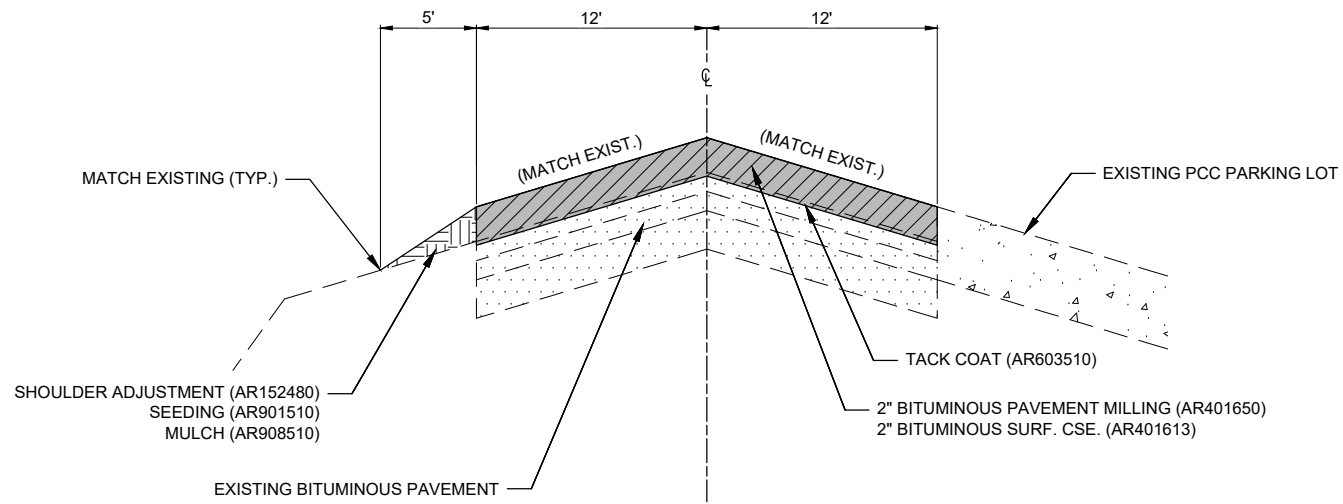
SWPPP NOTES &
DETAILS



TYPICAL SECTION A-A - ENTRANCE ROAD
NOT TO SCALE



TYPICAL SECTION C-C - PARKING LOT
NOT TO SCALE



TYPICAL SECTION B-B - ENTRANCE ROAD
NOT TO SCALE

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
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Contract No.: MB035

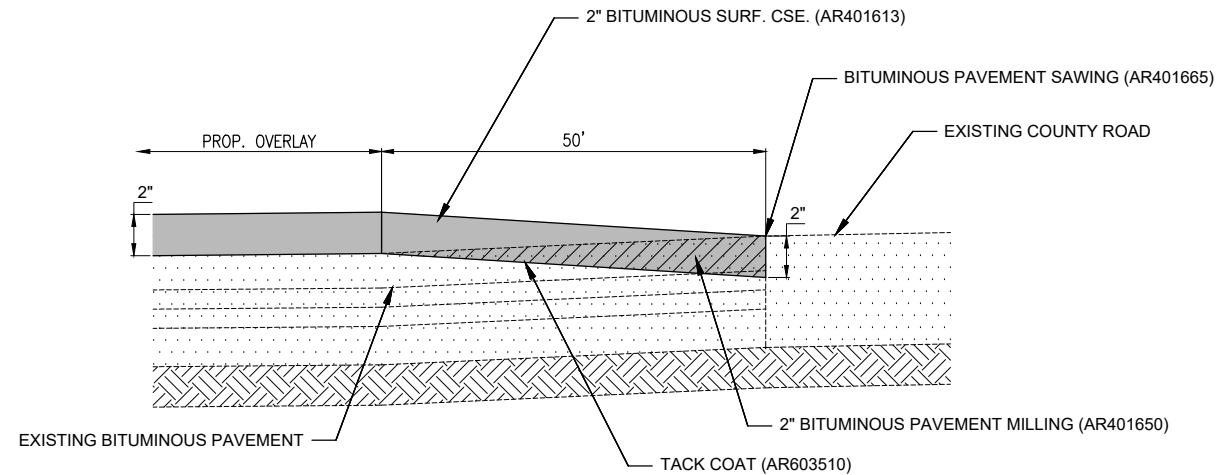
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		DES	DWN	REV

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REVIEWED BY: LDH 11/2/23

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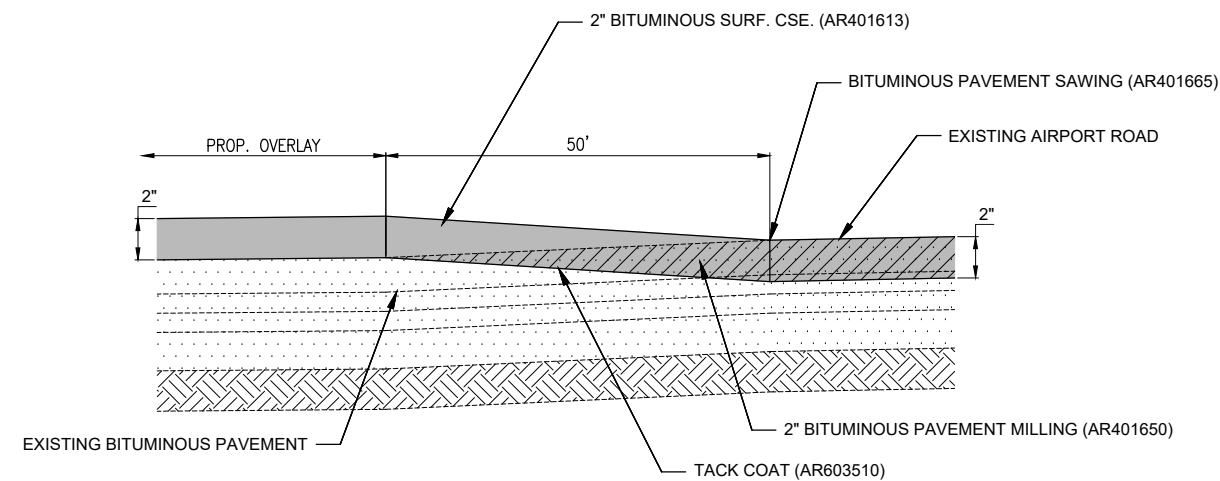
EXISTING	PROPOSED	LEGEND
		BIT. SURF. CSE.-METHOD I, SUPERPAVE
		BIT. PAVEMENT MILLING (VARIABLE)
		SHOULDER ADJUSTMENT (FILL)
		BITUMINOUS PAVEMENT

TYPICAL SECTIONS



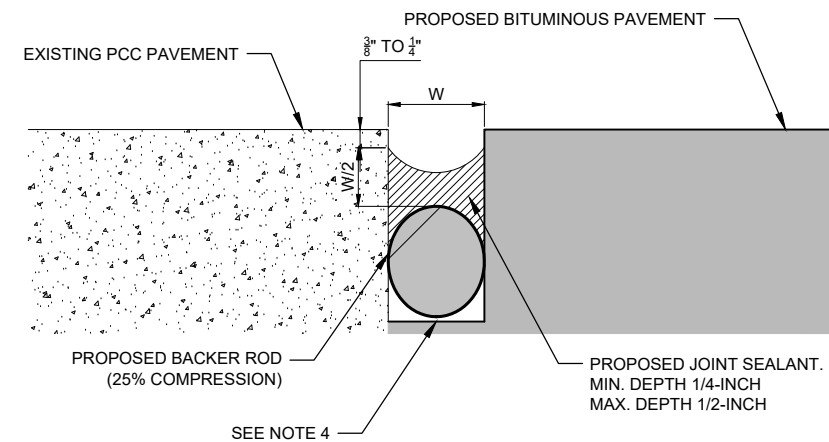
BITUMINOUS BUTT JOINT DETAIL A - ENTRANCE ROAD

NOT TO SCALE



BITUMINOUS BUTT JOINT DETAIL B - ENTRANCE ROAD

NOT TO SCALE



PCC TO ASPHALT JOINT SEALING DETAIL (AR401660)

NOT TO SCALE

NOTES:

- SEALANT SHALL BE RECESSED A MINIMUM 3/8-INCH TO 1/4-INCH BELOW PAVEMENT (BASED ON DEPTH OF LOWEST SLAB).
- JOINT SHALL HAVE A DEPTH/WIDTH RATIO OF 0.5 OR AS SPECIFIED BY THE MANUFACTURER.
- A SHALLOW CUT MAY BE USED WHERE THE BACKER ROD IS PLACED AT THE BOTTOM OF THE JOINT.
- BACKER ROD SIZING SHALL BE BASED ON THE MANUFACTURER'S RECOMMENDATION.
- ASPHALT MUST BE COMPLETELY REMOVED FROM CONCRETE FACE.
- NEW ASPHALT PAVEMENT MUST BE CLEAN, DRY, AND CURED. CURE TIME WILL BE BASED ON THE RESIDENT ENGINEER'S APPROVAL.

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

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PROJECT NO: 22A0125

CAD FILE: C-301-TYP.DWG

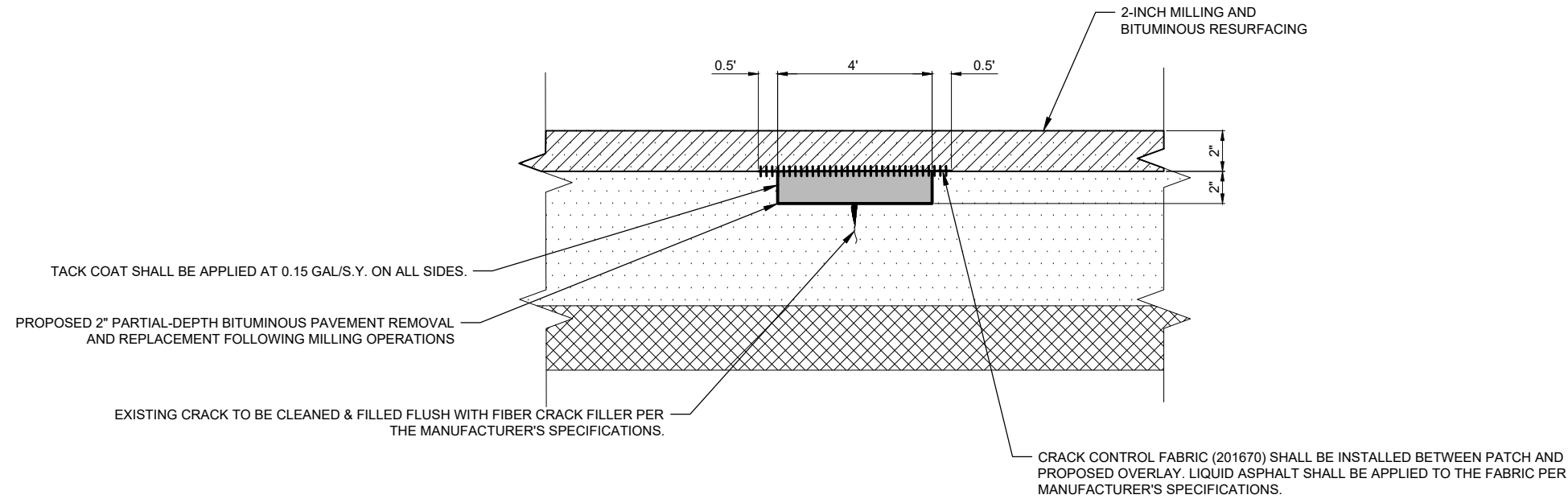
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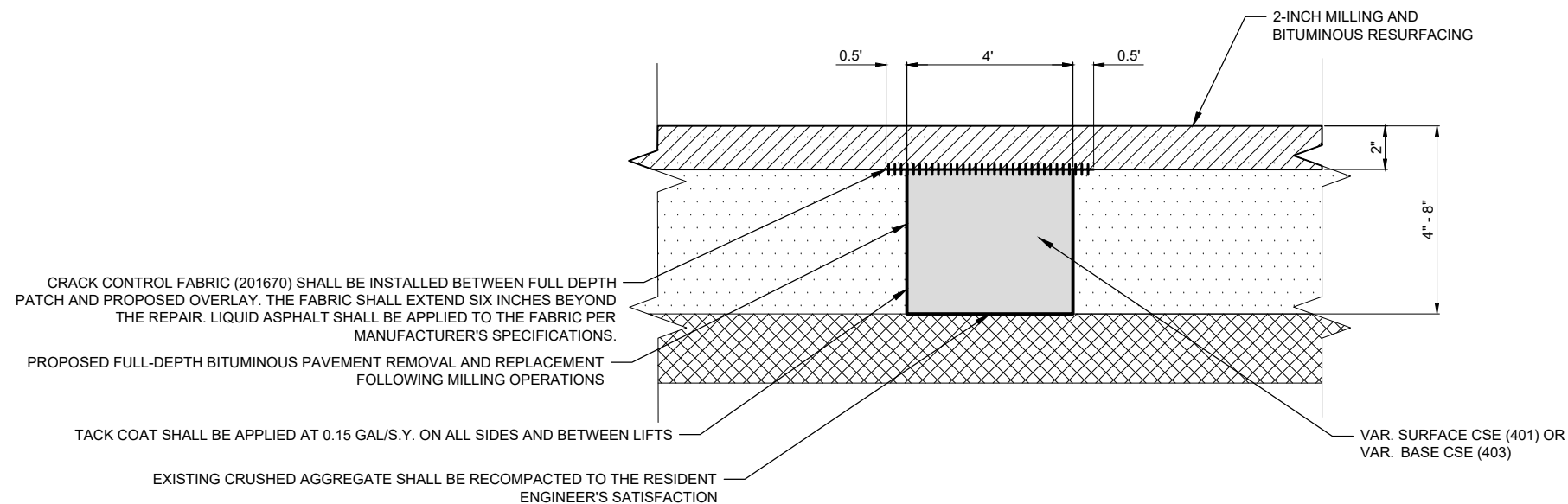
SHEET TITLE

PAVEMENT DETAILS



AR401915 REMOVE & REPLACE BITUMINOUS PAVEMENT - TYPE A (PARTIAL DEPTH)

NOT TO SCALE



AR401916 REMOVE & REPLACE BITUMINOUS PAVEMENT - TYPE B (FULL DEPTH)

NOT TO SCALE

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
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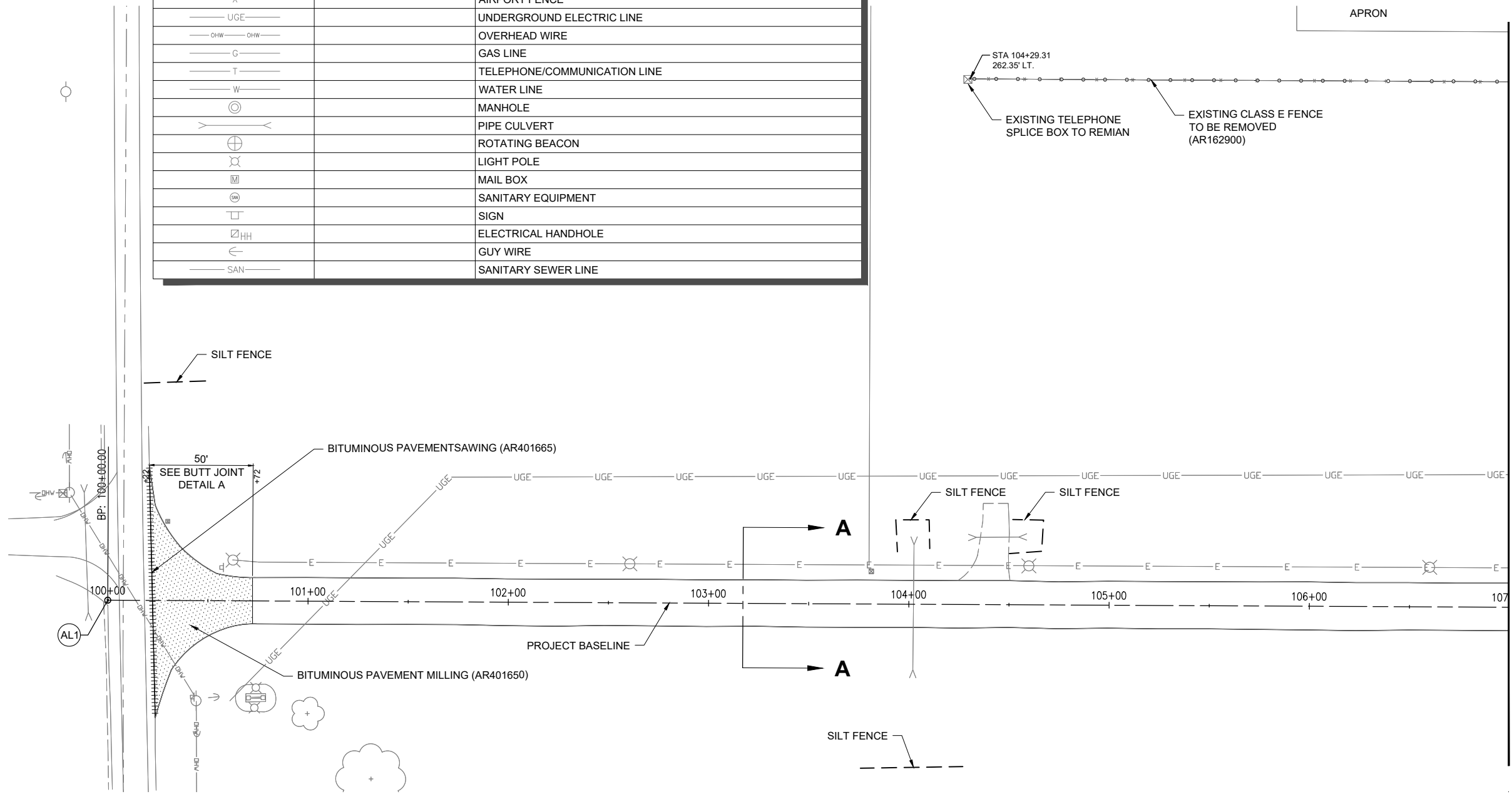
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PAVEMENT
PATCHING DETAILS

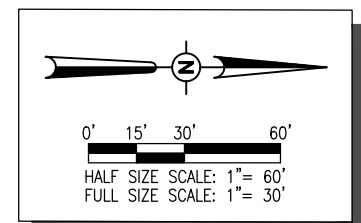
EXISTING	PROPOSED	LEGEND
		BIT. PAVEMENT
		BIT. PAVEMENT MILLING (VARIABLE)
		BITUMINOUS PAVEMENT
		CRUSHED AGGREGATE



EXISTING	PROPOSED	LEGEND
		BITUMINOUS PAVEMENT MILLING (AR401650)
		BITUMINOUS PAVEMENT SAWING (AR401665)
		REMOVE PCC PAVEMENT (AR501900)
		REMOVE CLASS E FENCE (AR162900)
		ELECTRICAL DUCT
		AIRPORT FENCE
		UNDERGROUND ELECTRIC LINE
		OVERHEAD WIRE
		GAS LINE
		TELEPHONE/COMMUNICATION LINE
		WATER LINE
		MANHOLE
		PIPE CULVERT
		ROTATING BEACON
		LIGHT POLE
		MAIL BOX
		SANITARY EQUIPMENT
		SIGN
		ELECTRICAL HANDHOLE
		GUY WIRE
		SANITARY SEWER LINE



ALIGNMENT DATA					
ALIGNMENT	POINT #	STATION	EASTING	NORTHING	DESC
AIRPORT ENTRANCE ROAD PROJECT BASLINE	AL1	100+00	2160589.9800'	1401381.9650'	BEGINNING OF PROJECT
	AL2	110+14.57	2160597.6873'	1402396.5066'	POINT OF CURVATURE
	AL3	110+64.45	2160598.0663'	1402446.3867'	POINT OF INTERSECTION
	AL4	110+92.99	2160548.1872'	1402446.8839'	POINT OF TANGENT
	AL5	114+00.00	2160241.1929'	1402449.9443'	END OF PROJECT



REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

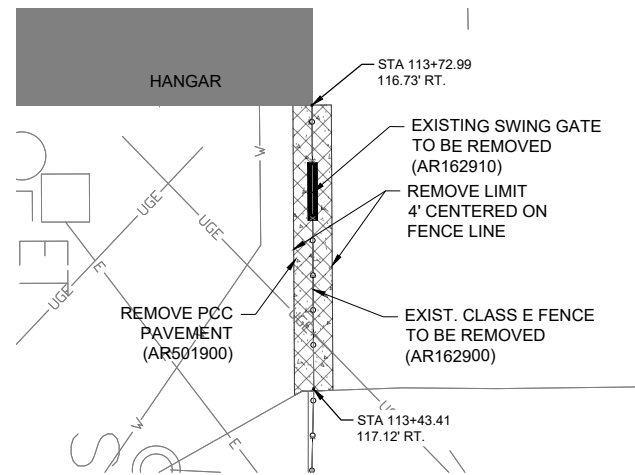
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Contract No.: MB035

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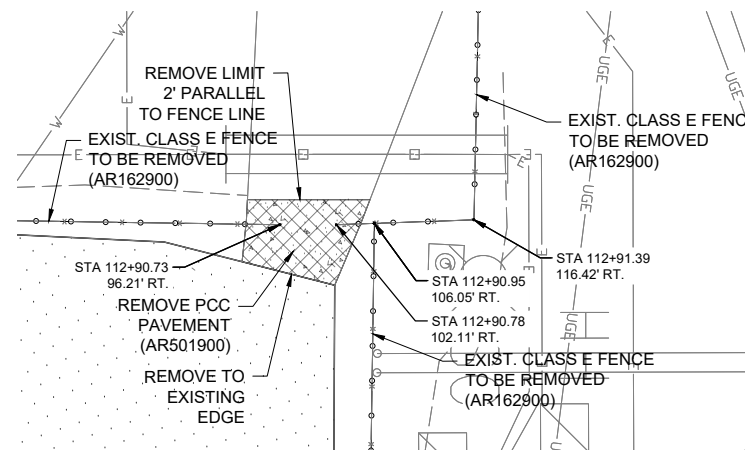
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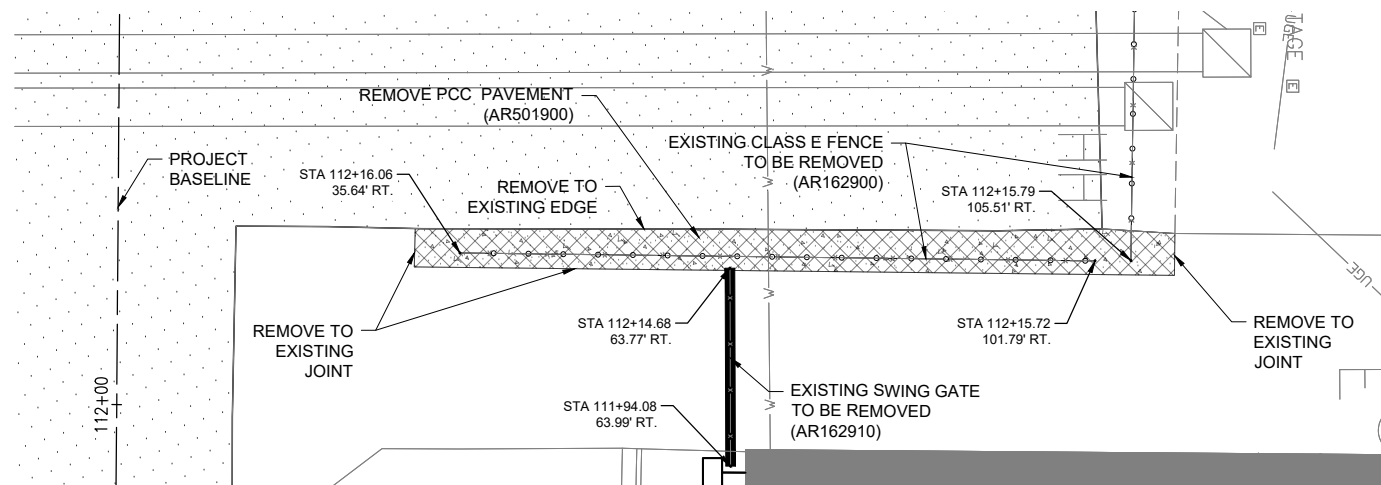
DEMOLITION PLAN - 1



DETAIL "A"



DETAIL "B"



DETAIL "C"

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

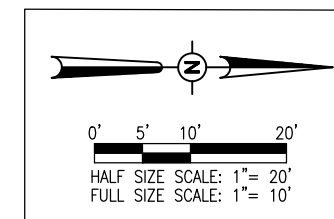
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		DES	DWN	REV

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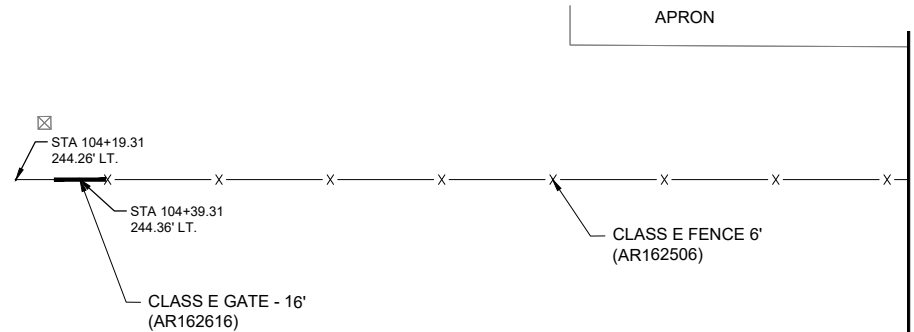
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DEMOLITION PLAN - 3

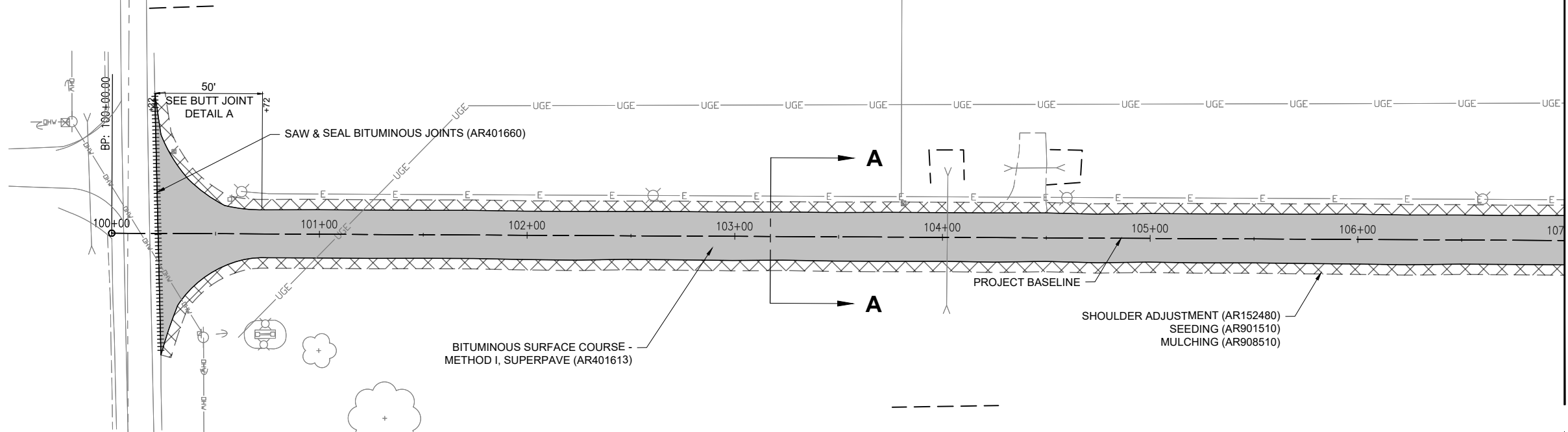




EXISTING	PROPOSED	LEGEND
		BIT SURF CSE - METHOD I SUPERPAVE (AR401613)
		SAW AND SEAL BITUMINOUS JOINTS (AR401660)
		6" PCC SIDEWALK (AR501606)
		CLASS E FENCE 6' (AR162506)
		SHOULDER ADJUSTMENT (AR152480)
		ELECTRICAL DUCT
		AIRPORT FENCE
		UNDERGROUND ELECTRIC LINE
		OVERHEAD WIRE
		GAS LINE
		TELEPHONE/COMMUNICATION LINE
		WATER LINE
		MANHOLE
		PIPE CULVERT
		ROTATING BEACON
		LIGHT POLE
		MAIL BOX
		SANITARY EQUIPMENT
		SIGN
		ELECTRICAL HANDHOLE
		GUY WIRE
		SANITARY SEWER LINE



NOTE:
GATES ARE LOCATED AT CENTER OF OPENING.



REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
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SHEET TITLE



PROPOSED PLAN - 1



REHABILITATE
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AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

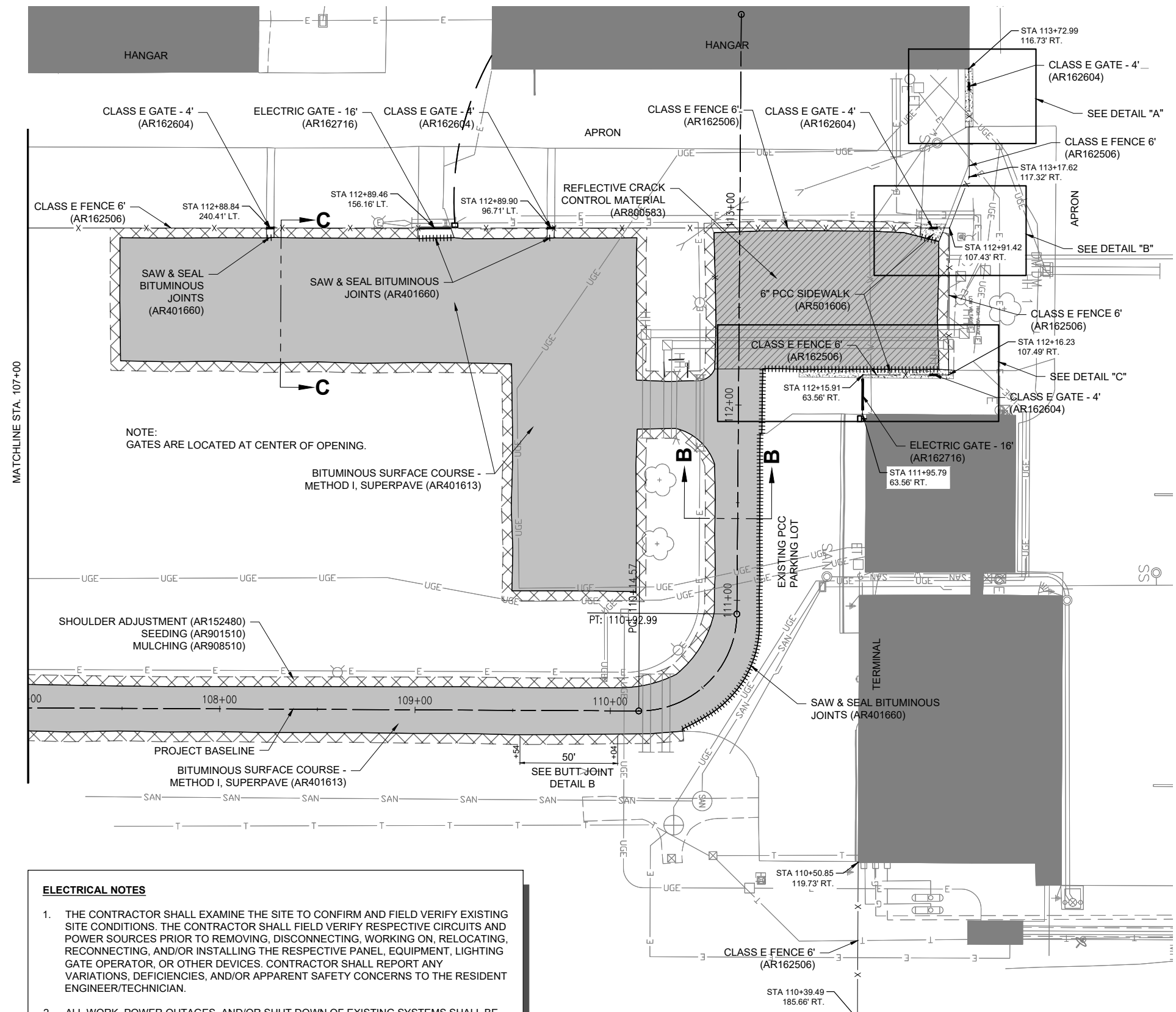
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SBGP No: N/A
Contract No.: MB035

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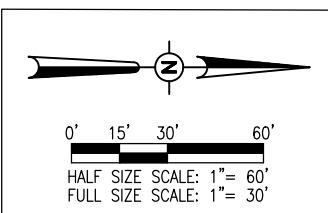
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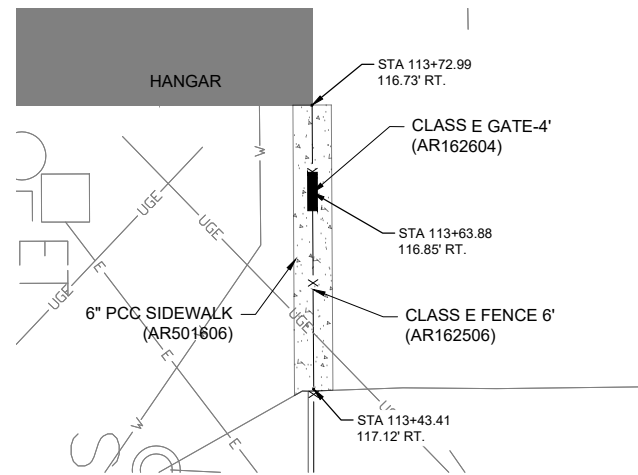
PROPOSED PLAN - 2



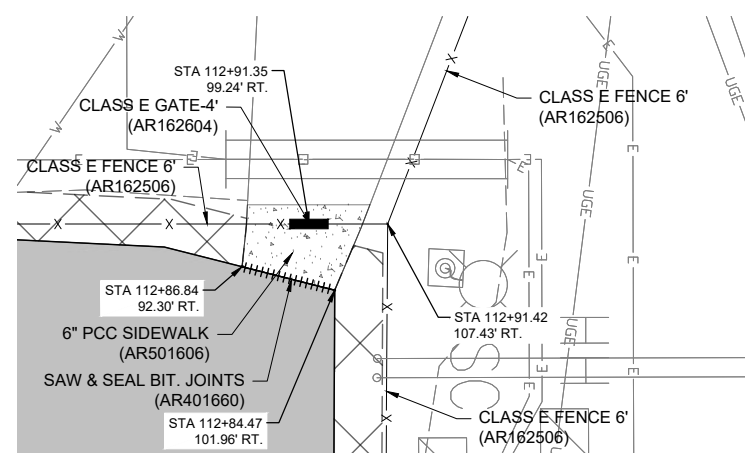
ELECTRICAL NOTES

1. THE CONTRACTOR SHALL EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, WORKING ON, RELOCATING, RECONNECTING, AND/OR INSTALLING THE RESPECTIVE PANEL, EQUIPMENT, LIGHTING GATE OPERATOR, OR OTHER DEVICES. CONTRACTOR SHALL REPORT ANY VARIATIONS, DEFICIENCIES, AND/OR APPARENT SAFETY CONCERNS TO THE RESIDENT ENGINEER/TECHNICIAN.
2. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND RESIDENT ENGINEER/TECHNICIAN. ONCE SHUT DOWN THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL, SAFETY, AND HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL, SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING BUT NOT LIMITED TO 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT). SAFETY OF PERSONNEL IS THE PRIORITY.

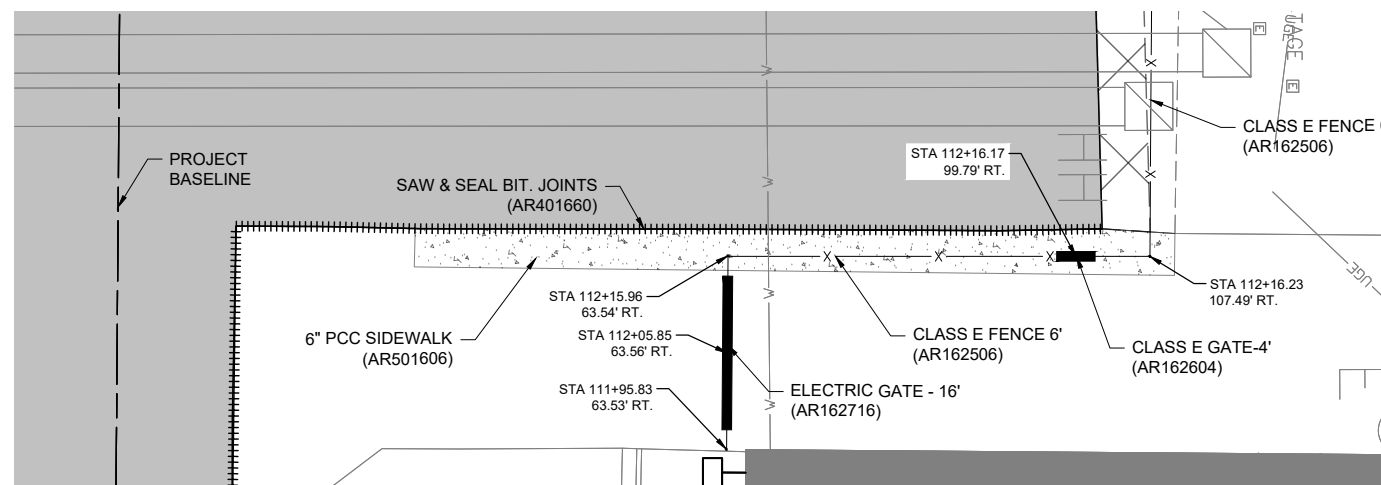




DETAIL "A"



DETAIL "B"



DETAIL "C"

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

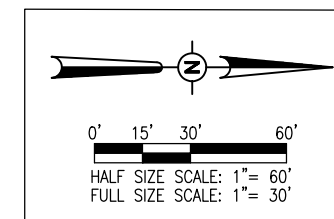
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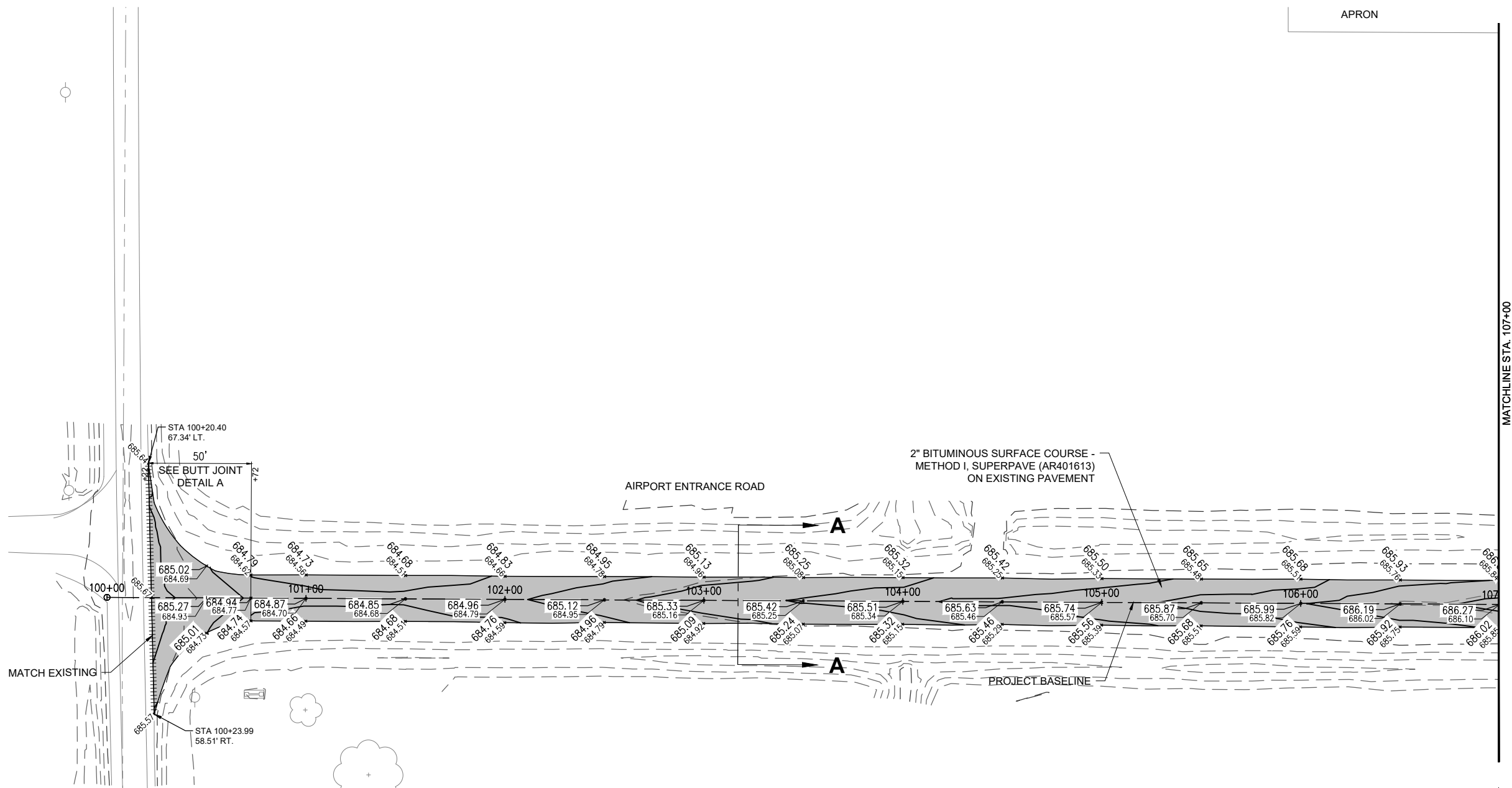
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SHEET TITLE

PROPOSED PLAN - 3





REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

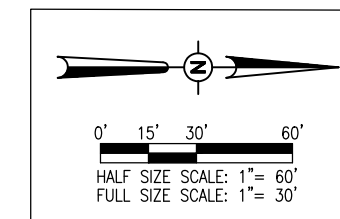
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SHEET TITLE

STAKING PLAN - 1

EXISTING	PROPOSED	LEGEND
		BITUMINOUS PAVEMENT
		.2 / FOOT CONTOURS
± 713.75	± 713.75	ELEVATION





REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

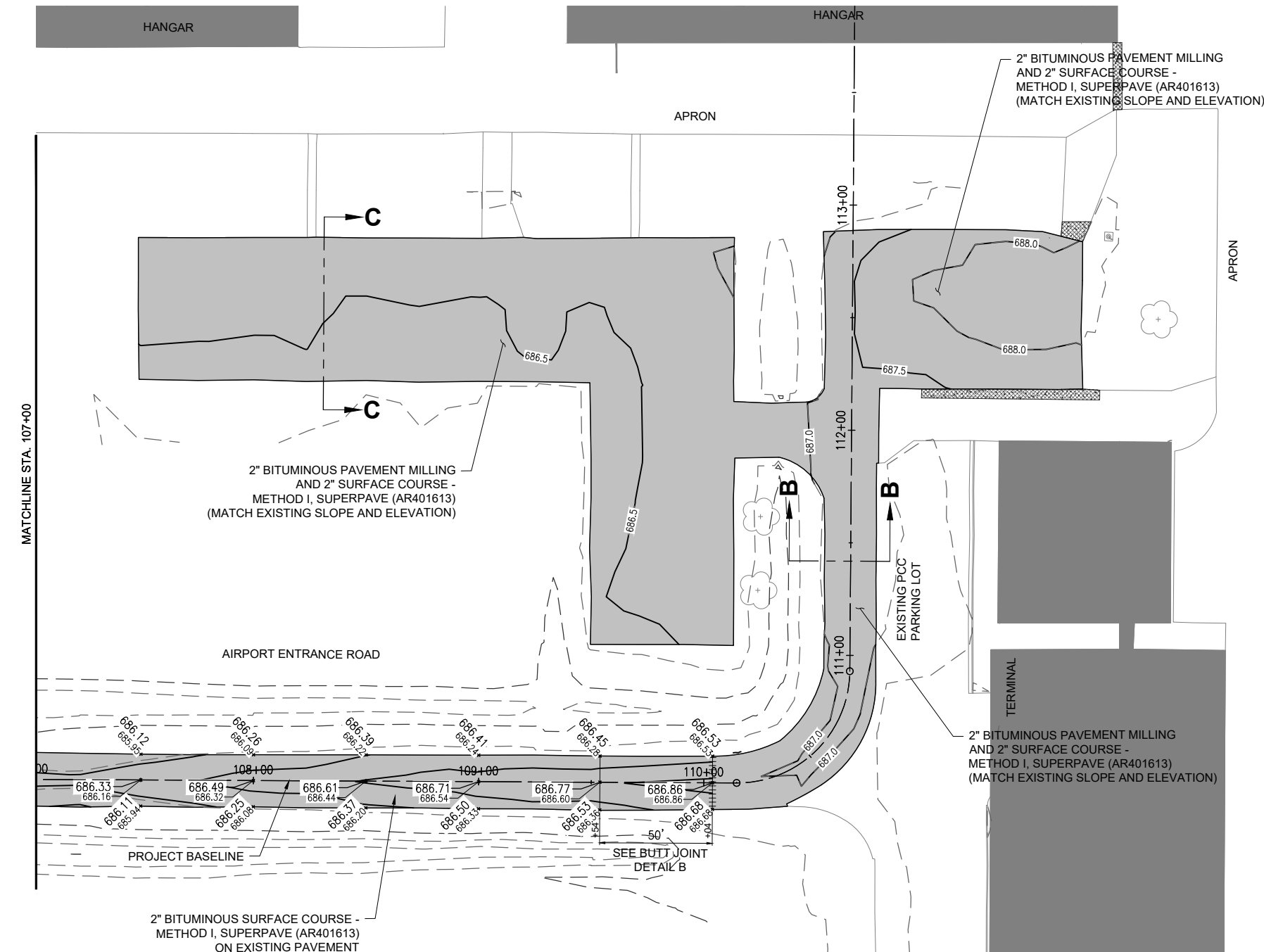
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Contract No.: MB035

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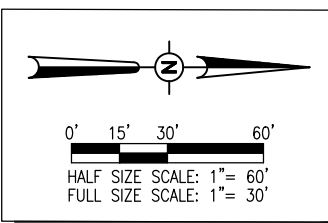
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DESIGN BY: JP 8/14/23
DRAWN BY: JP 8/14/23
REVIEWED BY: LDH 11/2/23

SHEET TITLE

STAKING PLAN - 2



EXISTING	PROPOSED	LEGEND
		BITUMINOUS PAVEMENT
		.2 / FOOT CONTOURS
$+713.75$	$+713.75$	ELEVATION

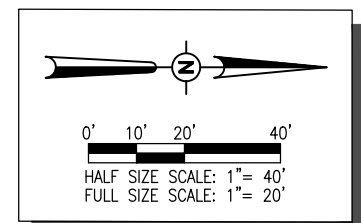
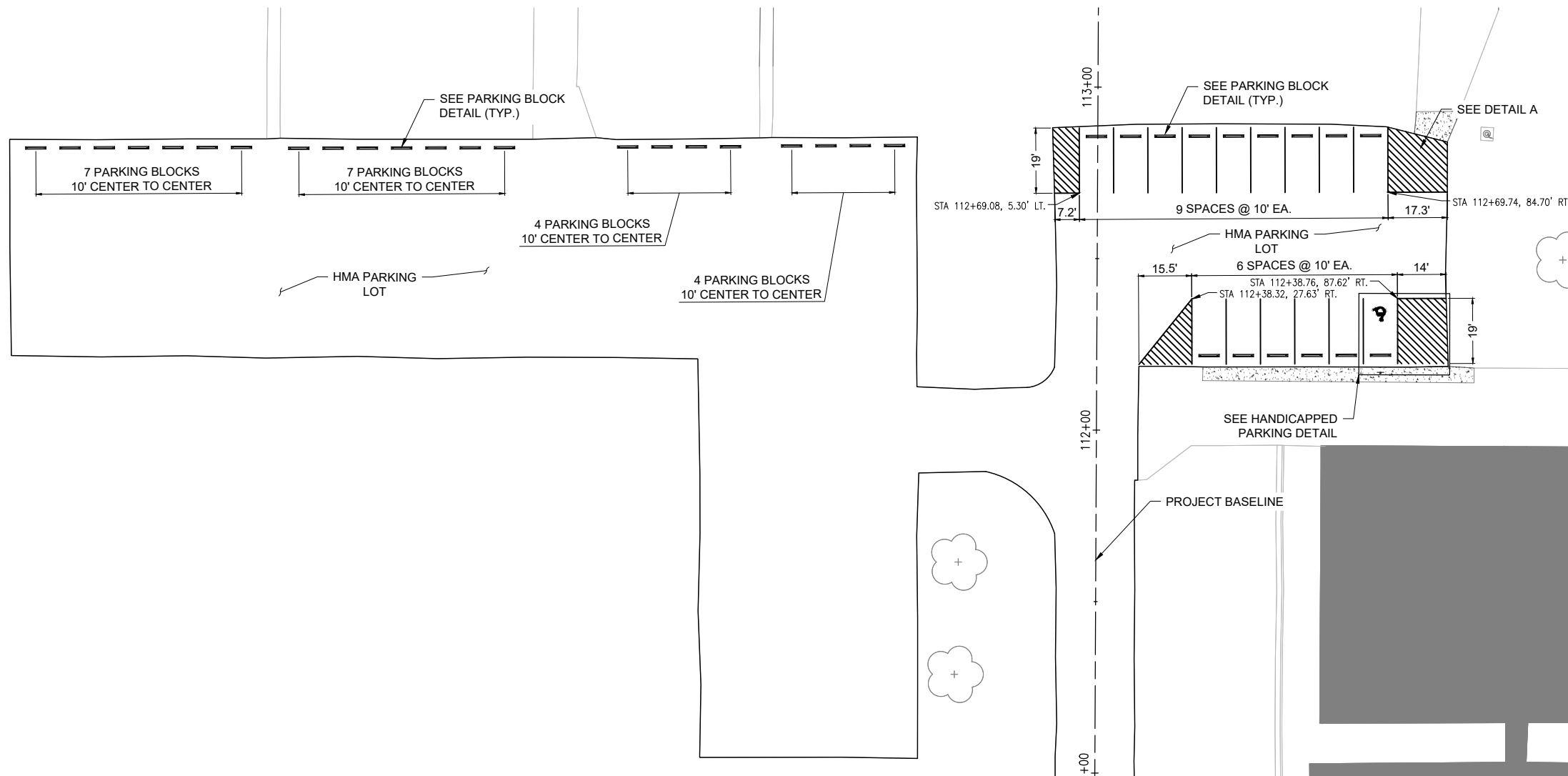




MARKING SCHEDULE			
AR620520 - PAVEMENT MARKING - WATERBORNE (YELLOW)			
DESCRIPTION	UNIT AREA (S.F.)	NO. REQUIRED	TOTAL AREA (S.F.)
PARKING STRIPES	83	1	83
PARKING CROSS HATCH	242	1	242
HANDICAPPED PARKING SYMBOL	4	1	4

WATERBORNE PAVEMENT MARKING NOTES

1. ALL PARKING LOT MARKING WILL BE YELLOW (AR620520) AND 4" IN WIDTH.
2. SEE PROPOSED MARKING AND SIGNING DETAIL SHEET FOR ADDITIONAL INFORMATION.
3. A 30-DAY WAITING PERIOD IS REQUIRED BETWEEN THE PLACEMENT OF BITUMINOUS SURFACE COURSE AND THE FINAL APPLICATION OF WATERBORNE PAINT. AFTER THE PLACEMENT OF SURFACE COURSE AND PRIOR TO THE 30-DAY CURE PERIOD AN INITIAL COAT OF MARKINGS SHALL BE PLACED AT 50% OF THE NORMAL APPLICATION RATE. THE REMAINDER OF THE MARKINGS, SHALL BE PLACED AFTER THE 30-DAY CURE PERIOD HAS ELAPSED.
4. GLASS BEADS SHALL BE APPLIED ON THE SECOND COAT OF MARKING. GLASS BEADS SHALL NOT BE APPLIED TO BLACK PAINT.
5. CUT-OFF SHEETS WILL BE REQUIRED TO ENSURE STRAIGHT EDGES.
6. THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-MARKING ANY MARKINGS DAMAGED BY CONSTRUCTION ACTIVITIES THAT ARE OUTSIDE OF THE PROPOSED WORK LIMITS.



REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

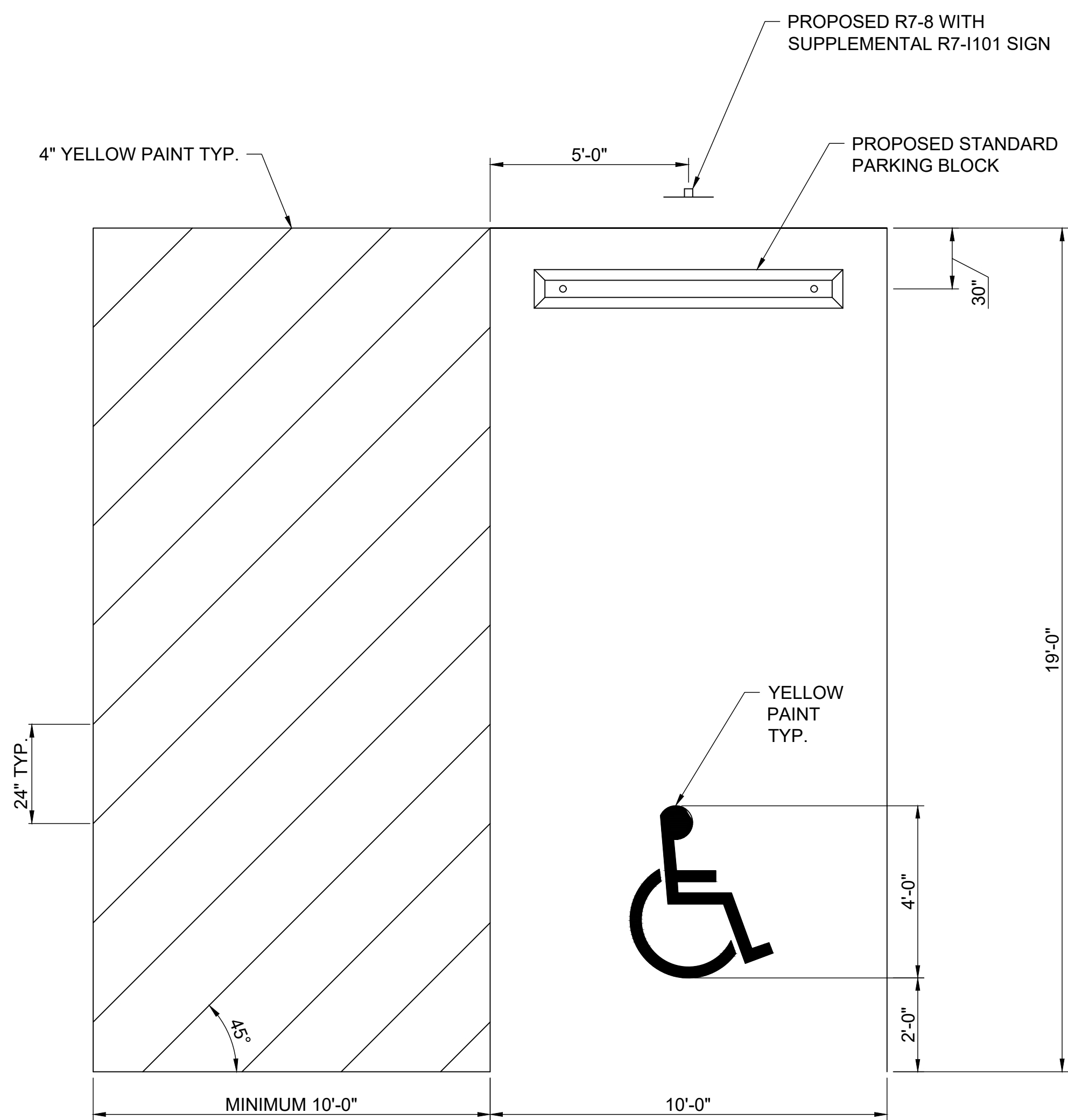
IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
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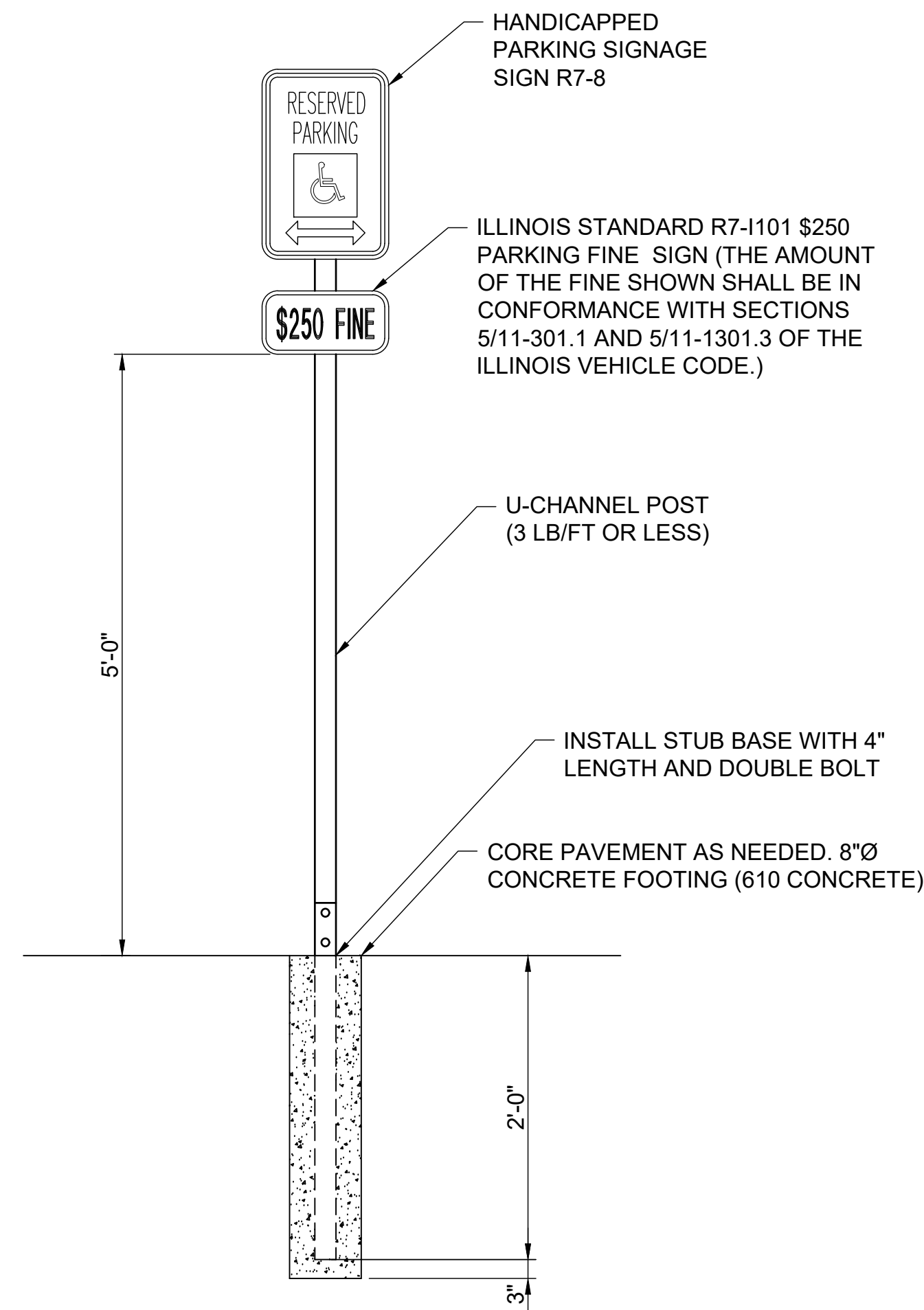
SHEET TITLE

MARKING AND
SIGNING PLAN



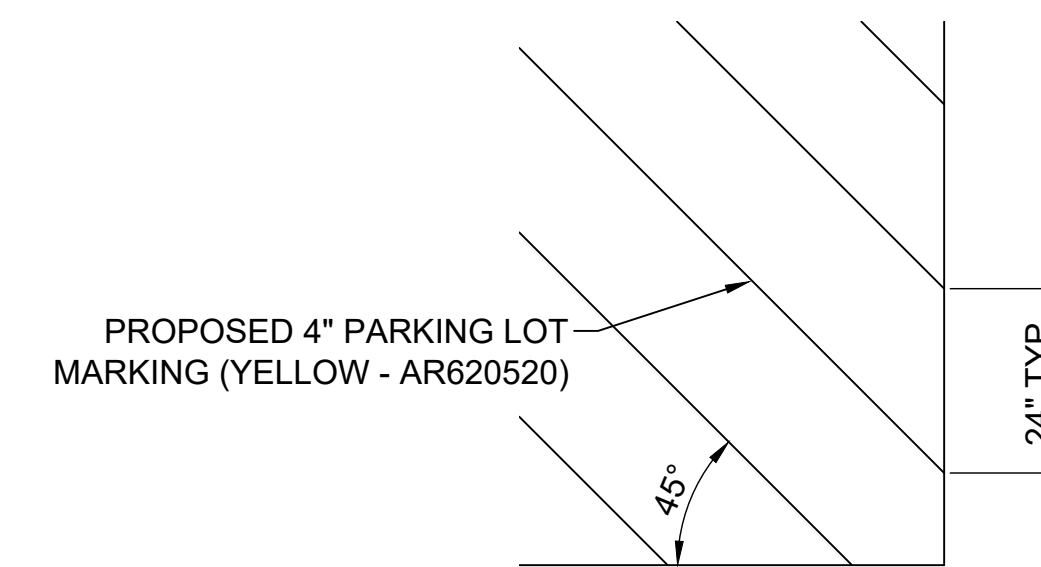
TYPICAL HANDICAPPED PARKING SPACE PAINT STRIPING

NOTE: CENTER SYMBOL AND PARKING BLOCK HORIZONTALLY IN STALL.



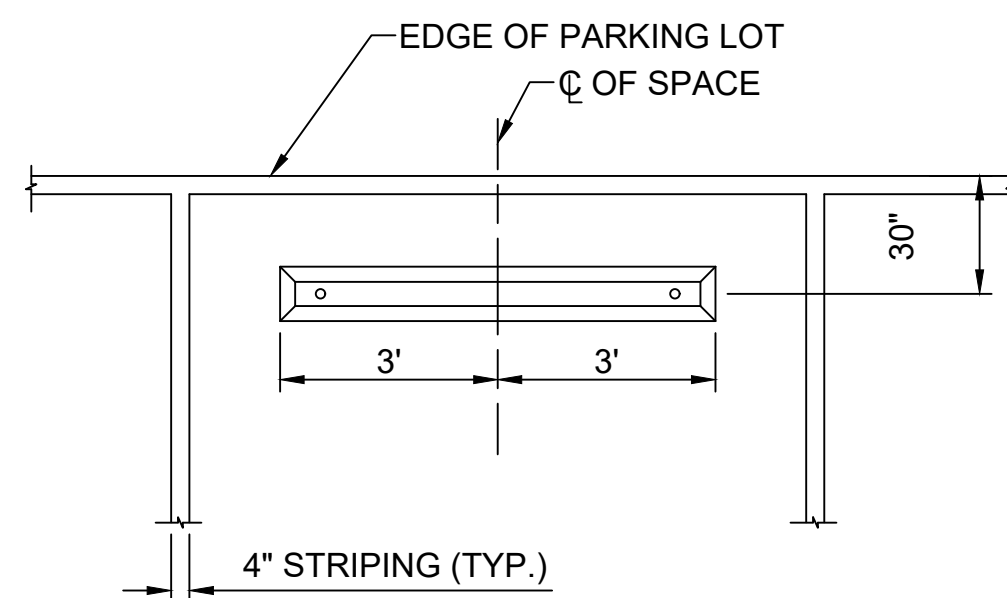
TYPICAL SIGNAGE DETAIL

NOT TO SCALE



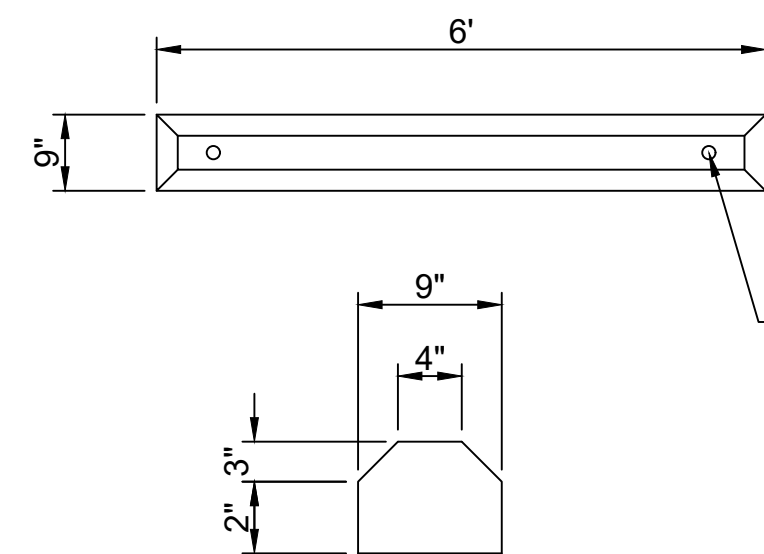
STRIPING DETAIL A

NOT TO SCALE



PARKING BLOCK LAYOUT

NOT TO SCALE



STANDARD PRE-CAST PARKING BLOCK

NOT TO SCALE

AT A MIN. PARKING BLOCKS MUST BE SECURED WITH REBAR AT EACH END.

NOTES: A FUNCTIONAL EQUIVALENT OF THE STANDARD PARKING BLOCK MAY BE USED IF APPROVED BY THE ENGINEER AND AIRPORT MANAGER PRIOR TO INSTALLATION.

THE PARKING BLOCK SHALL BE INSTALLED WITH A MIN OF TWO PINS AT EACH END WITH A MIN EMBEDMENT OF 15" AND BE PAINTED YELLOW.

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
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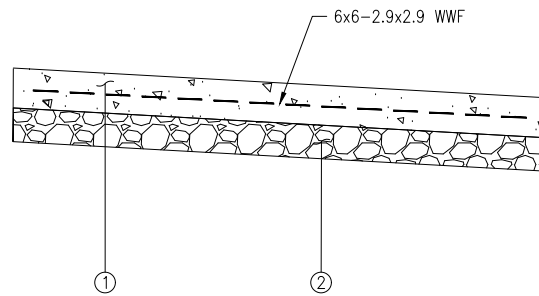
DESIGN BY: LDH 3/12/22

DRAWN BY: LDH 3/12/22

REVIEWED BY: LDH 11/2/23

SHEET TITLE

MARKING AND SIGN DETAILS



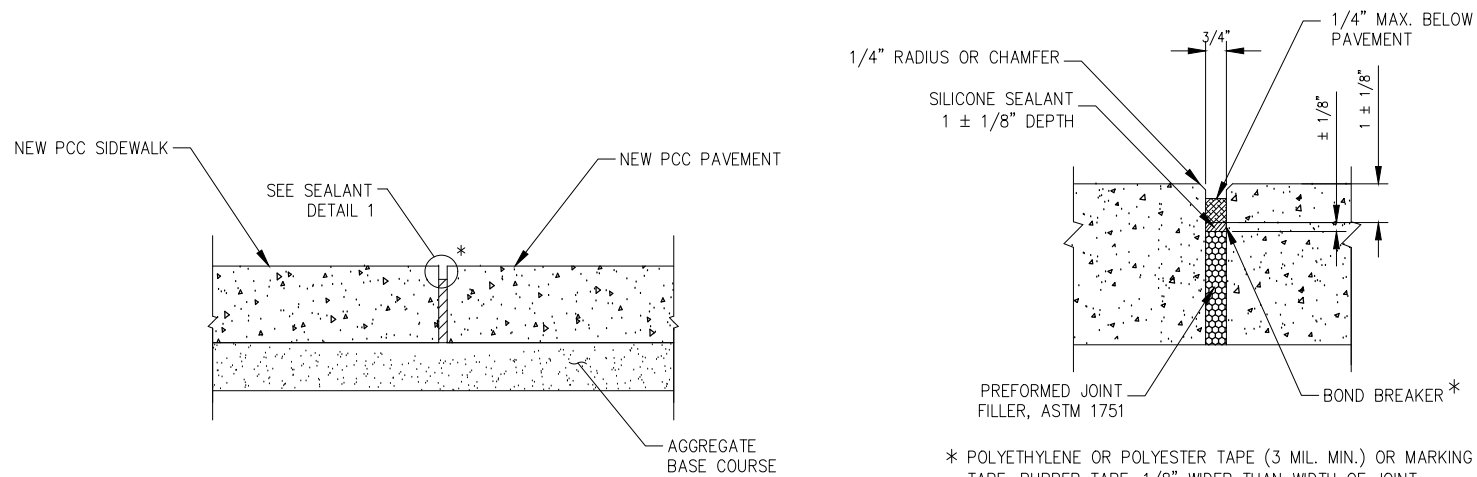
6" PCC SIDEWALK

(SECTION SHOWN LOOKING NORTH)

- ① PROPOSED 6 INCH PCC SIDEWALK, ITEM AR501606
- ② PROPOSED 4 INCH AGGREGATE BASE COURSE, ITEM AR209604

NOTES

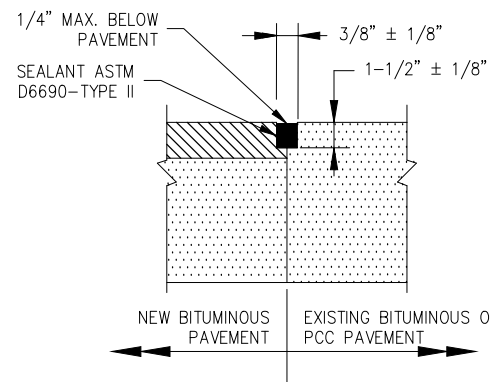
1. 3/4" PREFORMED JOINT FILLER TO BE USED IN ALL LOCATIONS WHERE SIDEWALK IS ADJACENT TO EXISTING PAVEMENT.
2. JOINTS ARE TO BE SPACED EVENLY, MAX. SPACING IS 4 FEET WITH 3/4" PREFORMED EXPANSION JOINTS AT 24' MAX. INTERVALS.



EXPANSION JOINT

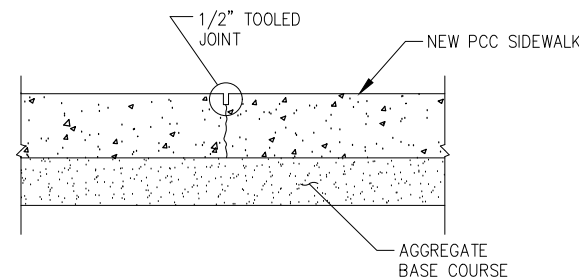
DETAIL 1 - SEALANT

* POLYETHYLENE OR POLYESTER TAPE (3 MIL. MIN.) OR MARKING TAPE, RUBBER TAPE, 1/8" WIDER THAN WIDTH OF JOINT.



BITUMINOUS/BITUMINOUS SEAL

NOTE:
ALL BITUMINOUS/BITUMINOUS JOINT SEALING TO BE PAID UNDER SAW AND SEAL BITUMINOUS JOINTS, ITEM AR401660.



TOOLED CONTRACTION JOINT

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

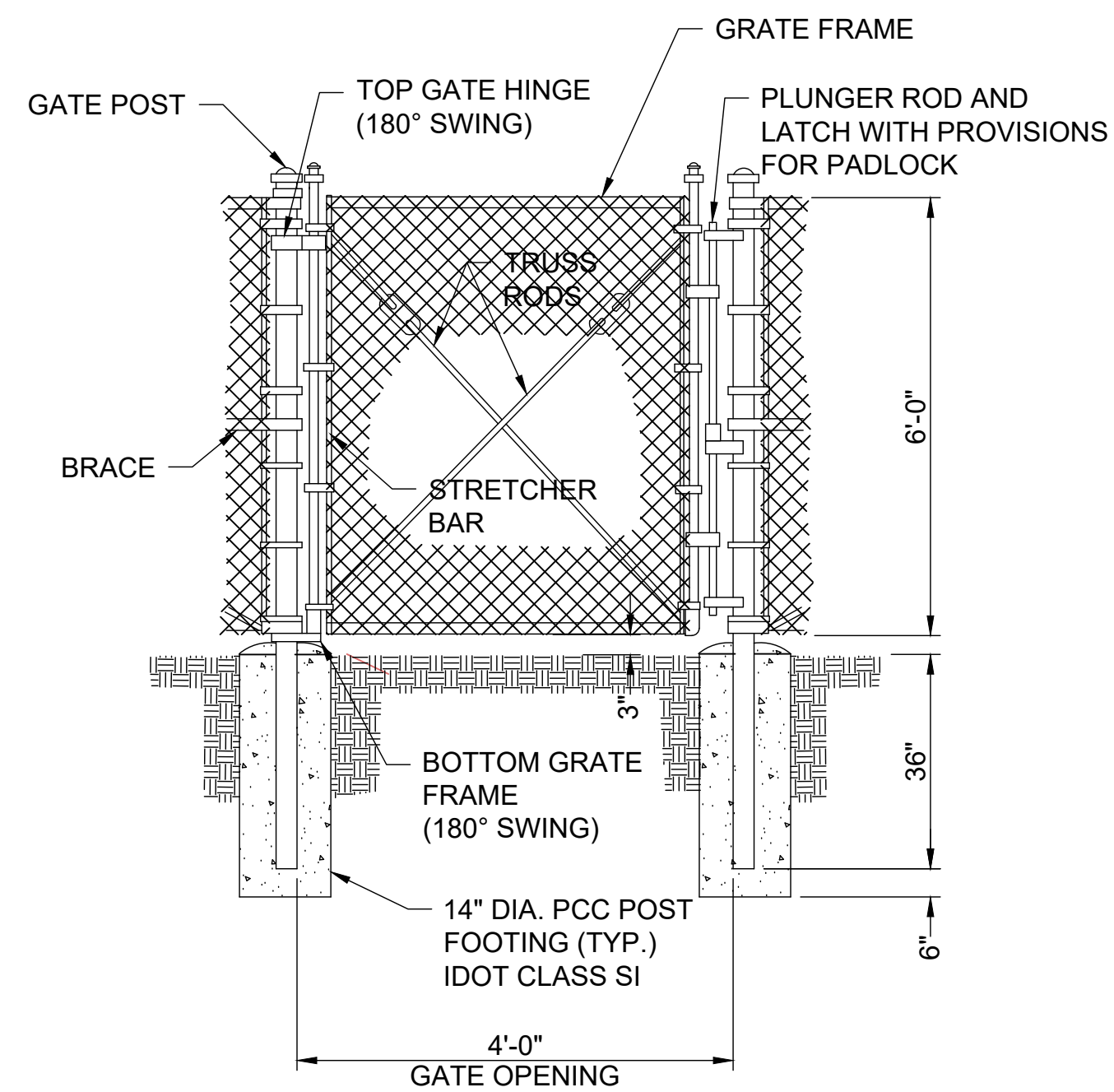
IDA No: MQB-5007
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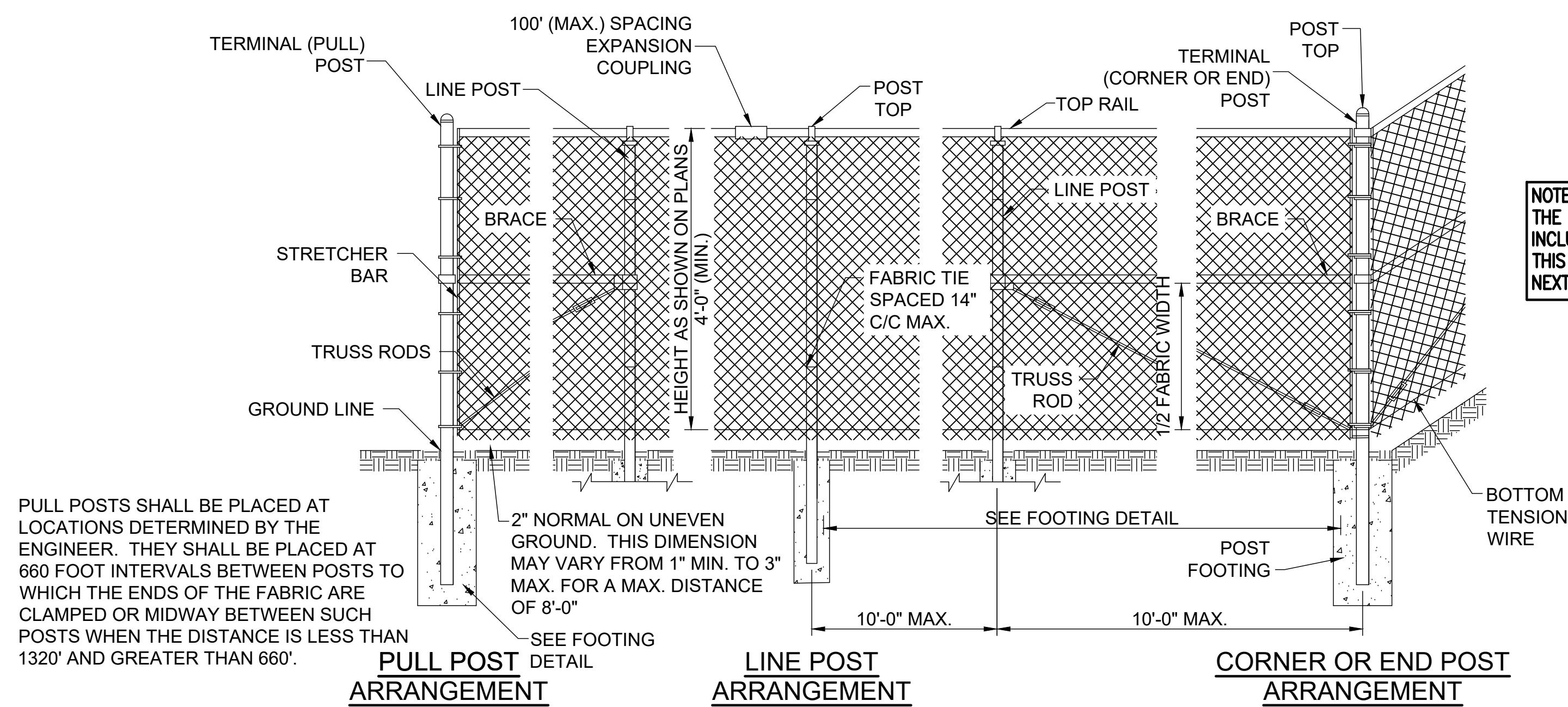
SHEET TITLE

PCC SIDEWALK DETAILS

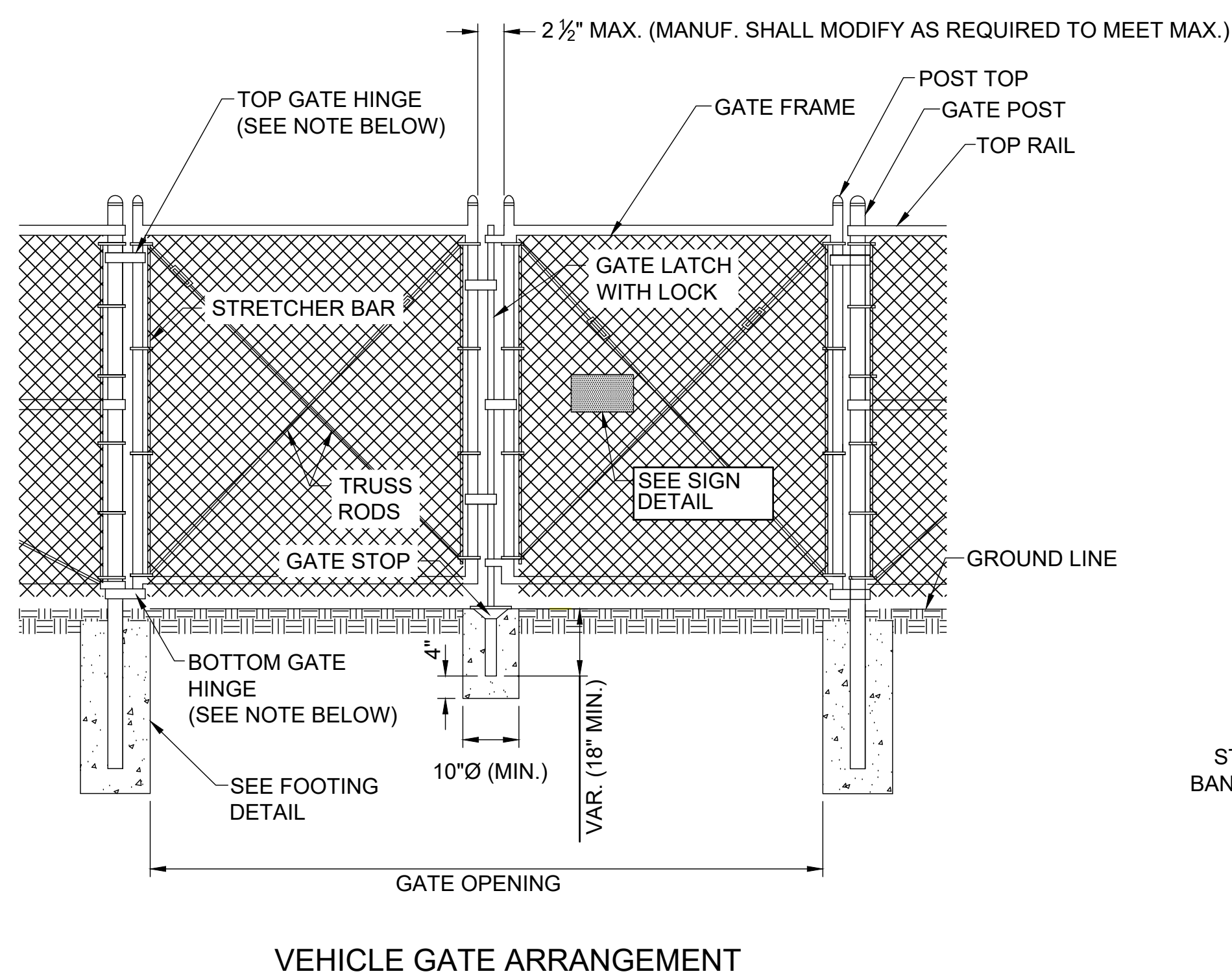


NOTE: 180° HINGES FOR GATES SHALL NOT BE AN "ADJUSTABLE ARM HINGE." INSTEAD HINGE SHALL BE HOOVER FENCE COMPANY'S BULLDOG CHAIN LINK GATE HINGE OR APPROVED EQUAL.

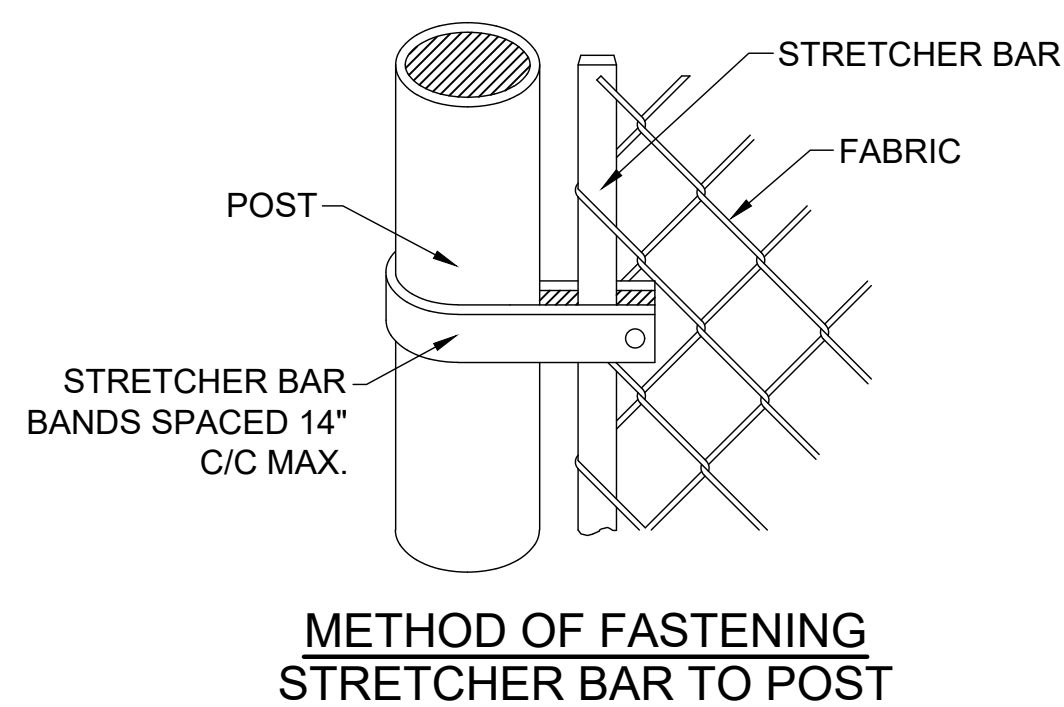
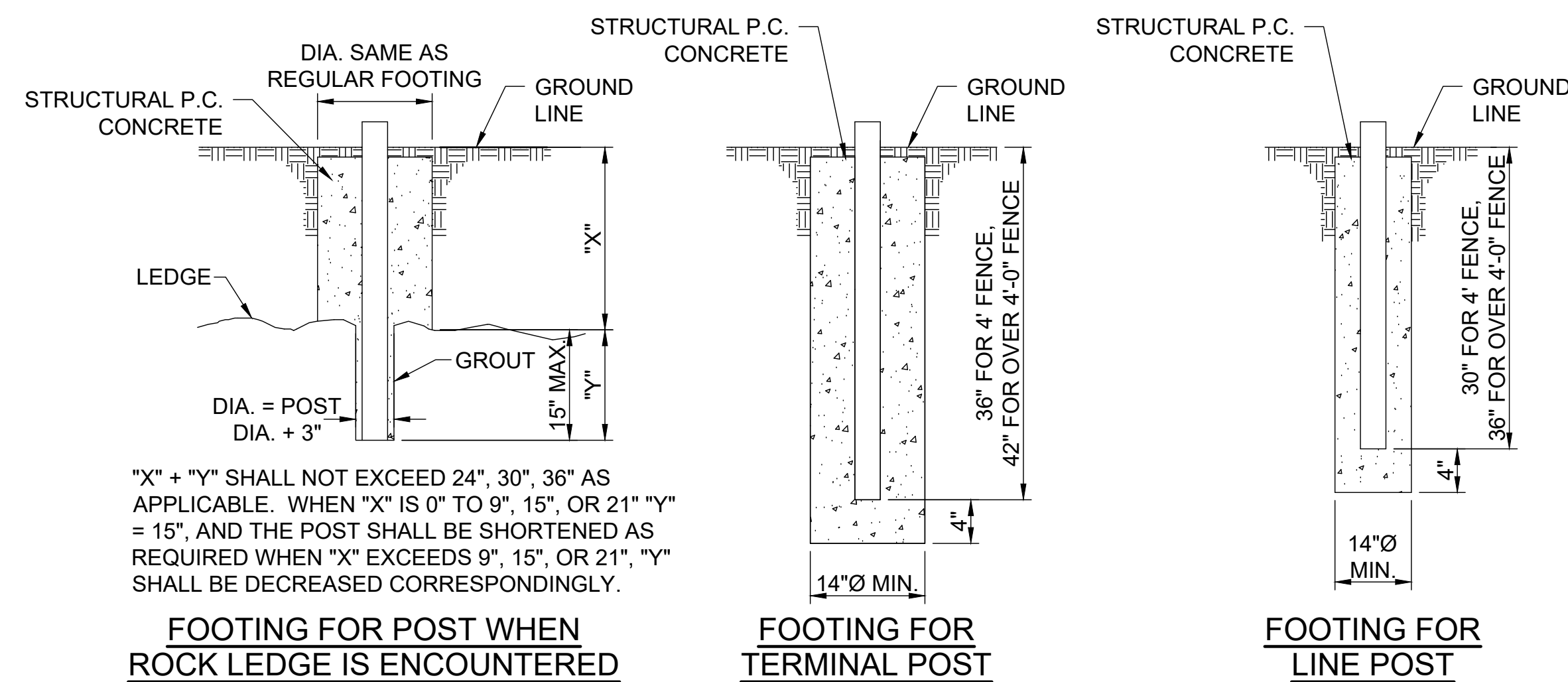
PEDESTRIAN GATE, 4 FOOT WIDE



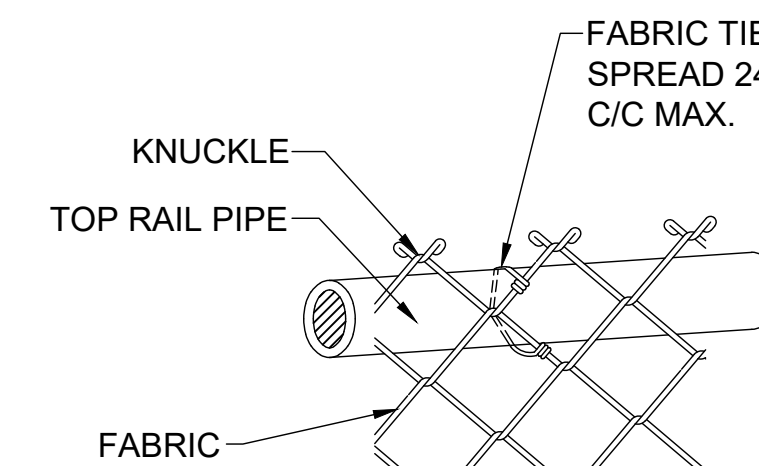
NOTE: THE PROPOSED FENCING AND GATE SHALL INCLUDE PRIVACY SLATS (NOT SHOWN ON THIS DETAIL FOR CLARITY.) SEE NOTE 10 ON NEXT SHEET FOR ADDITIONAL INFORMATION.



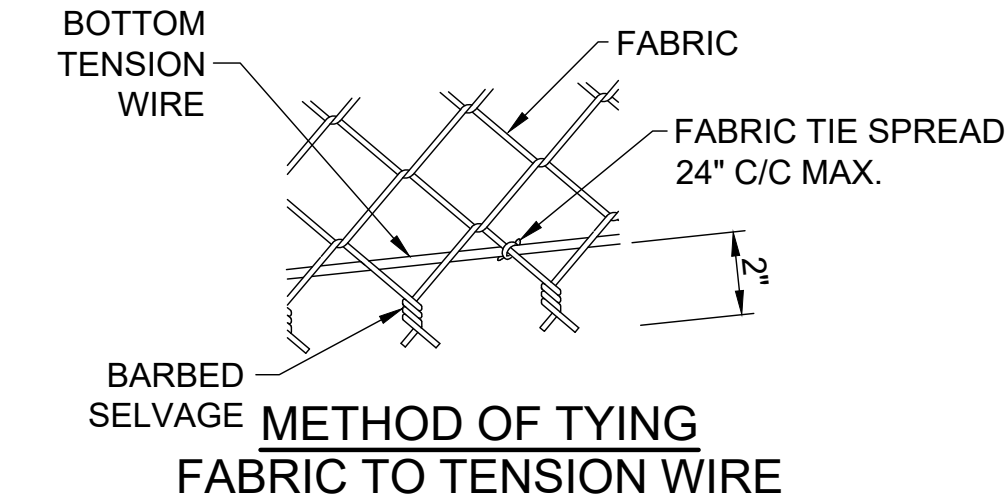
VEHICLE GATE ARRANGEMENT



METHOD OF FASTENING STRETCHER BAR TO POST



METHOD OF TYING FABRIC TO PIPE



METHOD OF TYING FABRIC TO TENSION WIRE

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

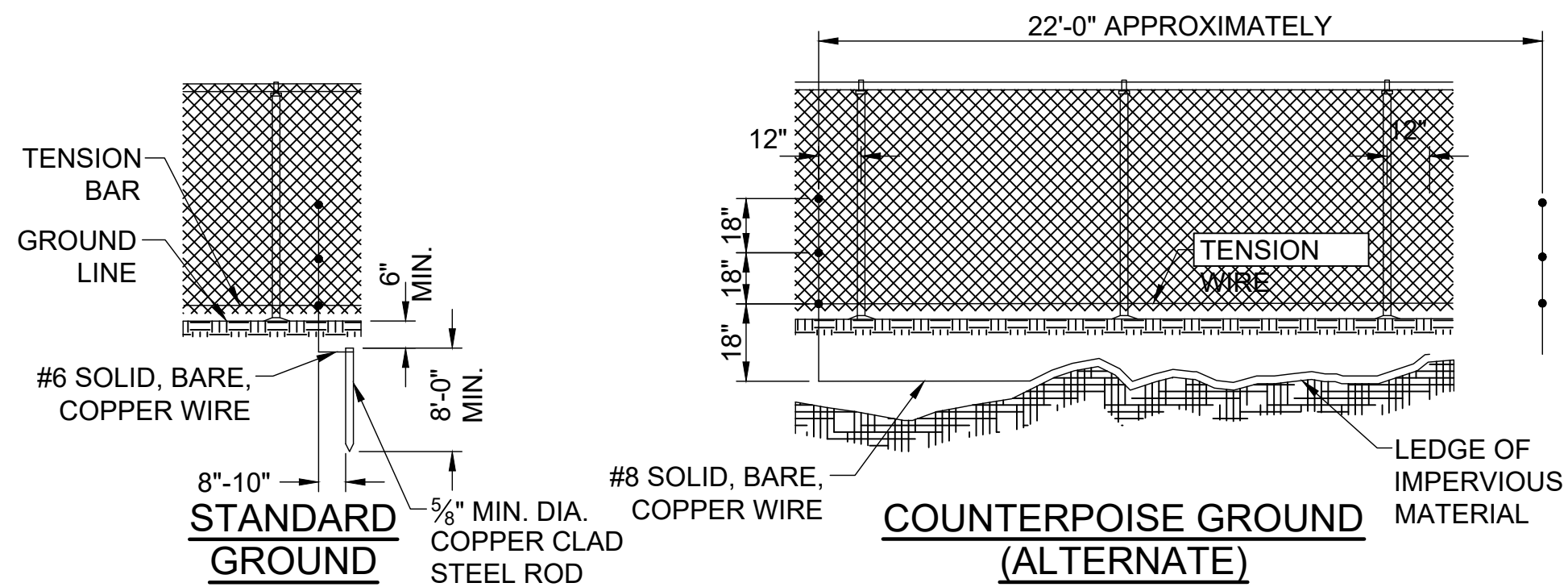
IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

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		DES	DWN	REV

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SHEET TITLE

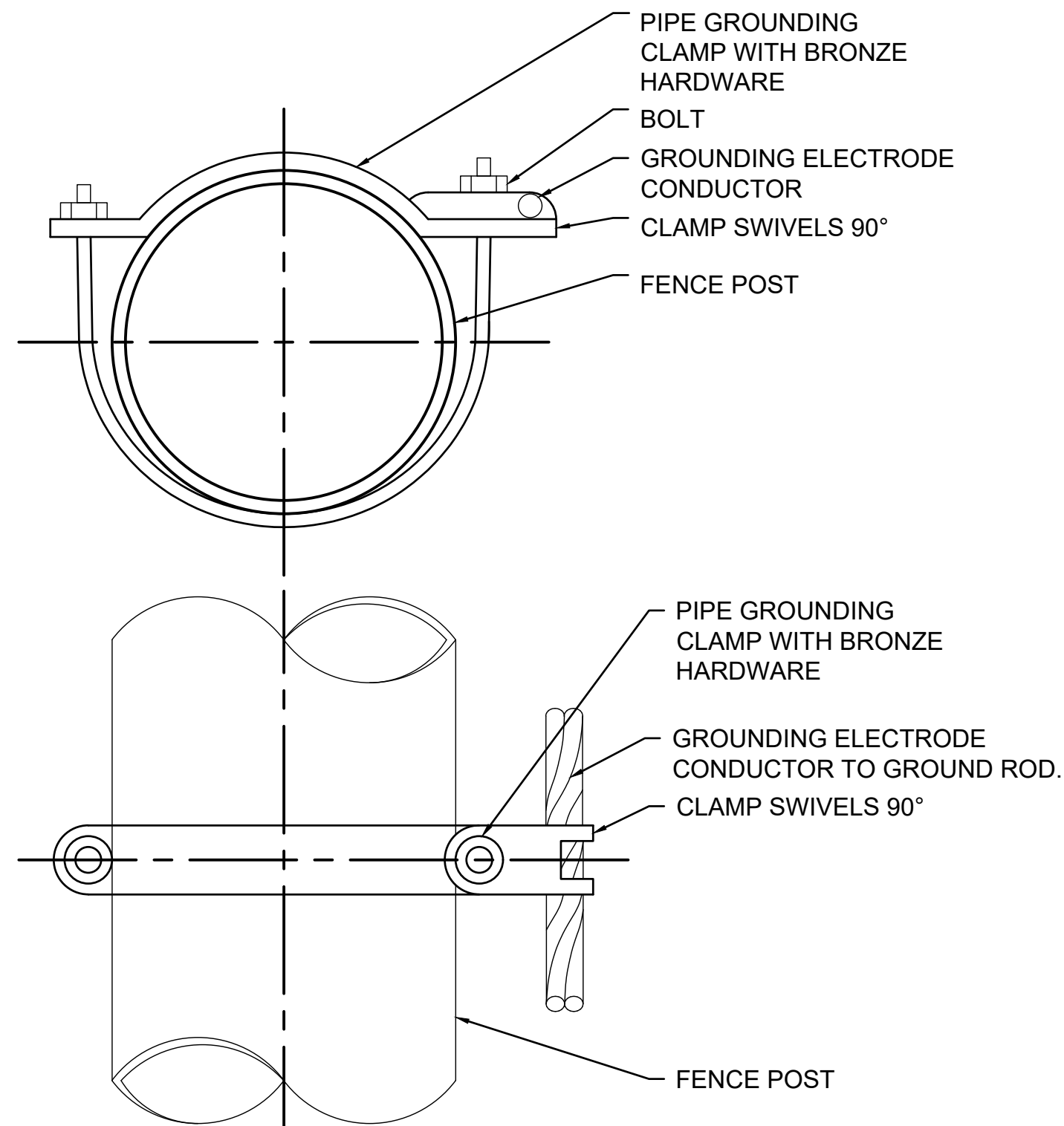
FENCE DETAILS



GROUNDING NOTE:

PROTECTIVE ELECTRICAL GROUND

CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT IN URBAN AREAS AND 1,000 FT IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 FT TO 50 FT AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE COUNTERPOISE GROUND SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED GROUNDING CONNECTORS/FENCE FABRIC GROUND CLAMPS; BURNDY CAT. NO. FFGC6, HARGER CAT. NO. FGC6, OR APPROVED EQUAL. ADJUST FENCE FABRIC GROUND CLAMP SELECTION FOR GROUND WIRES LARGER THAN #6 AWG. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED GROUNDING CONNECTORS SUITABLE FOR DIRECT BURIAL IN EARTH OR EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., ULTRAWELD BY HARGER, OR THERMOWELD BY CONTINENTAL INDUSTRIES, INC. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS SUITABLE FOR EACH RESPECTIVE APPLICATION. GROUND RODS SHALL BE 5/8-IN. DIAMETER BY 8 FT LONG (MINIMUM), UL-LISTED, COPPER-CLAD. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG BARE SOLID COPPER CONDUCTOR.



PIPE GROUNDING CLAMP TABLE (OR APPROVED EQUAL)		
BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PIPE SIZE
GAR3902-BU	3902BU	1/2" - 1"
GAR3903-BU	3903BU	1 1/4" - 2"
GAR3904-BU	3904BU	2 1/2" - 3 1/2"
GAR3905-BU	3905BU	4" - 5"
GAR3906-BU	3906BU	6"

NOTES

- PIPE GROUNDING CLAMPS SHALL HAVE BRONZE HARDWARE, BE CORROSION RESISTANT, SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE, & UL467 LISTED.
- CONNECT FENCE POST TO GROUND ROD WHERE ACCESS TO FENCE FABRIC IS NOT AVAILABLE TO ACCOMMODATE PROTECTIVE ELECTRICAL GROUND AT A GATE.

FENCE POST GROUNDING CLAMP DETAIL
NOT TO SCALE

GENERAL NOTES

- FABRIC - THE FABRIC MAY BE WOVEN WITH EITHER ZINC COATED STEEL WIRE OR ALUMINUM-ALLOY WIRE IN A 2-INCH MESH. COATED WIRE AND ALUMINUM-ALLOY SHALL HAVE A DIAMETER OF 0.148 INCHES. THE FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS:
 - ZINC-COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181, TYPE 1, CLASS D. THE FABRIC SHALL BE GALVANIZED AFTER WEAVING.
 - ALUMINUM-COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181 TYPE II. THE UNIT WEIGHT OF THE COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213. THE ALUMINUM-COATED STEEL FABRIC SHALL BE GIVEN A CLEAR ORGANIC COATING AFTER FABRICATION.
 - ALUMINUM-ALLOY FABRIC SHALL BE MADE FROM WIRE CONFORMING TO THE REQUIREMENTS OF AASHTO M 181 TYPE III.
 - VINYL-COATED FABRIC IS NOT INCLUDED.
 - ZINC-5% ALUMINUM-MISCHMETAL ALLOY-COATED STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 1345, CLASS 2.
- METAL POSTS - METAL POSTS (LINE, CORNER, END, PULL AND GATE POSTS) SHALL BE THE SHAPES, DIMENSIONS, AND WEIGHT SHOWN IN THE TABLES WITHIN IDOT STANDARD 664001-02- CHAIN LINK FENCE, FOR THE SHAPES IDENTIFIED BELOW.

- STEEL PIPE, TYPE A, SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF ASTM F 1083.
- STEEL PIPE, TYPE B, SHALL BE MANUFACTURED FROM COLD ROLLED ELECTRIC RESISTANCE WELDED, HEATED AND TEMPERED STEEL. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 569 OR ASTM A 607. THE WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE TABLES. THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF THE PIPE MEETING THE REQUIREMENTS OF ASTM F 1083.

THE PROTECTIVE COATINGS SHALL BE AS FOLLOWS:

- EXTERNAL AND INTERNAL HOT-DIPPED ZINC COATING ACCORDING TO ASTM F1083.
- EXTERNAL COATING SHALL BE IN-LINE HOT-DIPPED ZINC COATING AFTER FABRICATION FOLLOWED BY A CHROMATE CONVERSION COATING WITH AN ELECTROSTATIC THERMOPLASTIC FINISH. THE ZINC COATING SHALL BE NOT LESS THAN .9 OUNCES PER SQUARE FOOT OF SURFACE. THE CHROMATE COATING WEIGHT SHALL BE 30 MICROGRAMS + .0002 INCHES.
- THE INTERNAL SURFACE SHALL BE GIVEN CORROSION PROTECTION BY IN-LINE APPLICATION OF A FULL ZINC BASE ORGANIC COATING AFTER FABRICATION. THE COATING SHALL BE 87% ZINC POWDER BY WEIGHT AND CAPABLE OF PROVIDING GALVANIC PROTECTION. THE THICKNESS SHALL BE A MINIMUM OF .5 MIL. THE EXTERNAL PROTECTIVE COATING SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING TESTS:

EXPOSURE TEST	ASTM	DESIGNATION	EXPOSURE TIME
SALT SPRAY	ASTM B 117		1000 HRS. MIN.
HUMIDITY	ASTM D 2247		500 HRS. MIN.
WEATHERING	ASTM G 23		500 HRS. MIN.

THE INTERNAL PROTECTIVE COATING SHALL BE CAPABLE OF WITHSTANDING EXPOSURE TO SALT SPRAY, ASTM B 117, FOR A MINIMUM OF 500 HOURS.

- STEEL PIPE, TYPE C, SHALL BE MANUFACTURED BY ROLLED FORMING ALUMINIZED STEEL TYPE 2 STRIP AND ELECTRIC RESISTANCE WELDING INTO TUBULAR FORM. THE OUTSIDE OF THE WELD AREA SHALL BE METALLIZED WITH COMMERCIAL PURE ALUMINUM TO A THICKNESS SUFFICIENT TO PROVIDE RESISTANCE TO CORROSION EQUAL TO THAT OF THE REMAINDER OF THE OUTSIDE OF THE TUBE. THE ALUMINUM COATING WEIGHT SHALL BE A MINIMUM OF 0.75 OUNCES PER SQUARE FOOT, TRIPLE SPOT TEST, 0.70 OUNCES PER SQUARE FOOT SINGLE SPOT TEST, AS MEASURED IN ACCORDANCE WITH ASTM A 428. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 787 TYPE 1 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 P.S.I. THE WEIGHT OF THE PIPE SHALL NOT BE LESS THAN THAT SHOWN ON THE PLANS AND THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF PIPE MEETING THE REQUIREMENTS OF ASTM A 120.
 - SQUARE HOLLOW STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500, GRADE B OR ASTM A 501. THE TUBING SHALL BE GALVANIZED INSIDE AND OUTSIDE IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENT OF AASHTO M 120. THE ZINC COATING SHALL NOT BE LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE.
 - STRUCTURAL SHAPES SHALL BE EXCLUDED.
- BOTTOM TENSION WIRE - THE BOTTOM TENSION WIRE SHALL BE #9 GAUGE GALVANIZED STEEL WIRE MEETING THE REQUIREMENTS OF AASHTO M 181, THE WIRE SHALL BE STRETCHED TIGHT WITH GALVANIZED TURNBUCKLES SPACED AT INTERVALS NOT MORE THAN 1,000 FEET. THE ZINC COATING SHALL BE NOT LESS THAN 12 OUNCES PER SQUARE FOOT OF SURFACE.
 - METAL BRACES - METAL BRACES SHALL HAVE THE SHAPES SHOWN ON THE PLANS AND AT THE DIMENSIONS SHOWN WITHIN THE TABLE WITHIN IDOT STANDARD 664001-02 - CHAIN LINK FENCE. THEY SHALL BE ACCORDING TO THE SPECIFICATIONS FOR METAL POSTS, EITHER STEEL PIPE, STRUCTURAL SHAPE OR ROLLED FORMED SECTION AND SHALL BE GALVANIZED AS SPECIFIED FOR METAL POSTS.
 - GATE - THE GATE TYPE AND SIZE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS AND AS PROVIDED IN THE SPECIAL PROVISIONS.
 - STRUCTURAL P.C. CONCRETE - THE STRUCTURAL P.C. CONCRETE SHALL CONFORM TO IDOT CLASS SI CONCRETE. A HIGH EARLY STRENGTH CONCRETE MAY BE USED. THE CONCRETE MIX DESIGN SHALL BE APPROVED FOR USE BY THE ENGINEER PRIOR TO USING IT ON THE PROJECT.
 - BOLTS AND NUTS - ALL BOLTS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND SHALL BE ZINC-COATED IN ACCORDANCE WITH AASHTO M 298, CLASS 50 OR ASTM A 153.
 - WIRE TIES AND TENSION WIRE - WIRE FABRIC TIES, WIRE TIES, AND TENSION WIRE FURNISHED FOR USE IN CONJUNCTION WITH A GIVEN TYPE OF FABRIC SHALL BE OF THE SAME MATERIAL AND COATING WEIGHT IDENTIFIED WITH THE FABRIC TYPE. ZINC-COATED STEEL WIRE, ALUMINUM-COATED STEEL WIRE, AND ALUMINUM ALLOY WIRE SHALL CONFORM TO REQUIREMENTS OF AASHTO M 181, TYPE I CLASS 2 OR TYPE II. THE TOP TENSION WIRE WILL BE DELETED IN LIEU OF THE TOP RAIL WHEN TOP RAIL IS REQUIRED. THE BOTTOM TENSION WIRE IS REQUIRED.
 - TOP RAILS - THE TOP RAILS SHALL BE 1.66 INCH O.D., GALVANIZED OR ALUMINUM COATED PIPE HAVING A MINIMUM BENDING STRENGTH OF 202 LBS. AT THE CENTER OF A 10 FT. SPAN AND WILL BE REQUIRED.
 - PRIVACY SLATS - PROPOSED CHAIN-LINK FENCING AND GATE SHALL INCLUDE VERTICAL POLYMER PRIVACY INSERT SLATS, PROVIDING VISUAL CLOSURE OF A MINIMUM OF 70%. THE SLATS SHALL EITHER BE PRE-INSTALLED INTO THE CHAIN-LINK MESH OR INSTALLED AFTER THE CHAIN-LINK FENCE INSTALLATION. THE INSERT SLATS SHALL MEET ASTM F3000/F3000M. THE LENGTH OF THE SLAT INSERTS SHALL COVER THE FULL DIAMOND PORTION OF THE CHAIN-LINK FABRIC, AND SHALL NOT PROTRUDE ABOVE THE TOP RAIL OR BELOW THE BOTTOM TENSION WIRE. THE FENCE FRAMEWORK SHALL BE DESIGNED TO SUPPORT THE WIND LOADING CALCULATED WITH THE INSERT SLATS INSTALLED, WHICH MAY AFFECT THE LINE POST SIZE AND SPACING. COLOR OF THE INSERT SLATS SHALL BE BLACK.

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

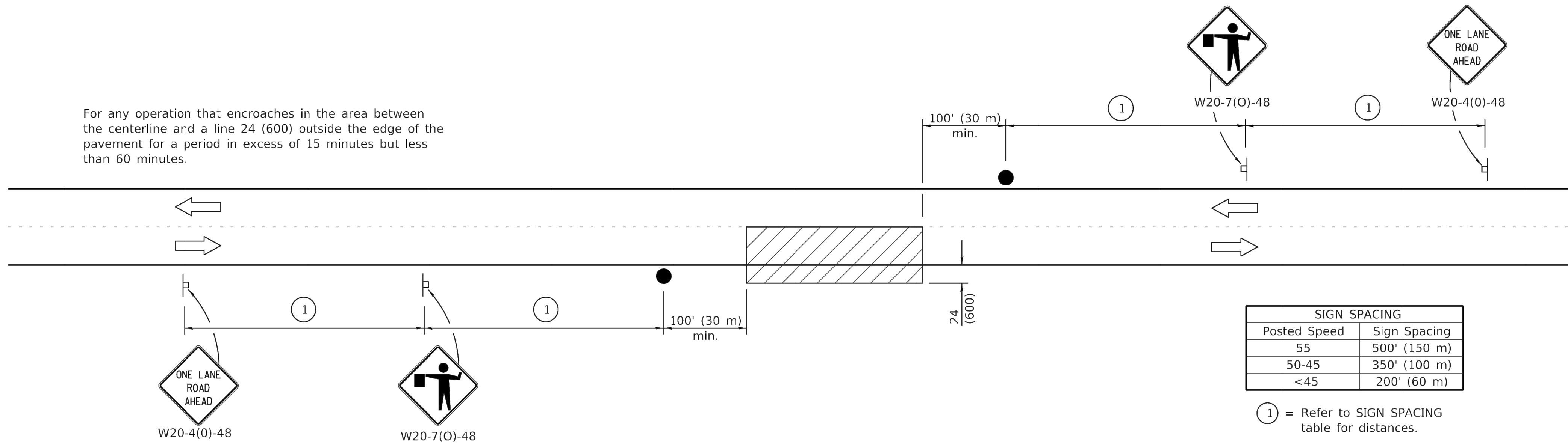
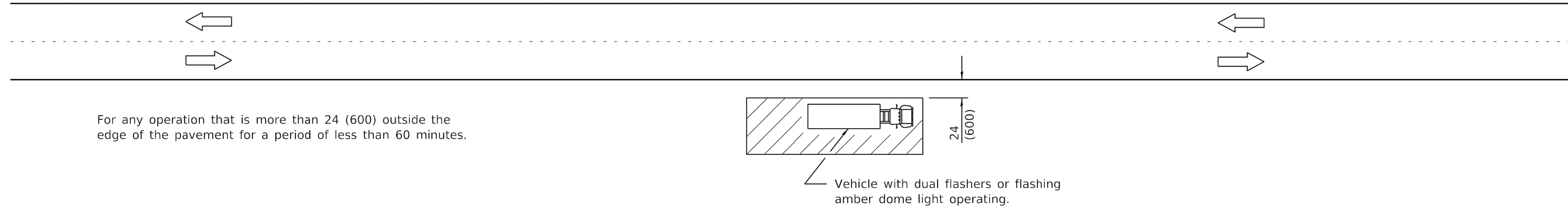
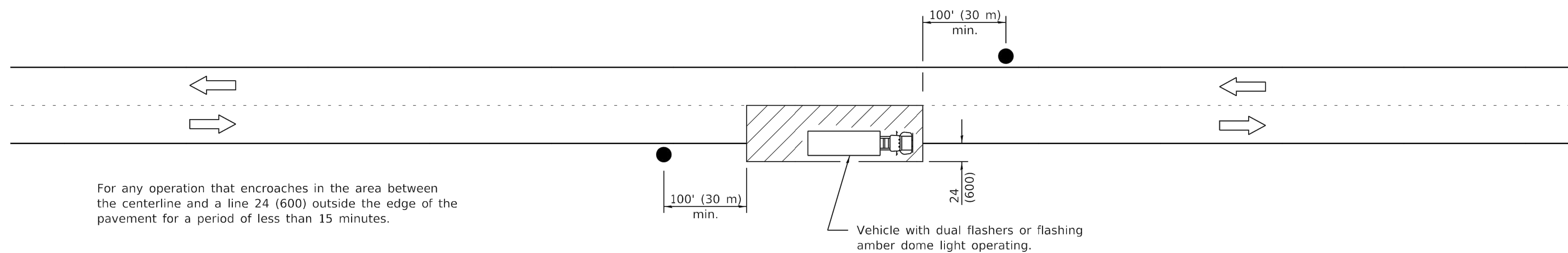
IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
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REVIEWED BY: LDH 11/2/23

SHEET TITLE

FENCE NOTES



TYPICAL APPLICATIONS

- Marking patches
- Field survey
- String line
- Utility operations
- Cleaning up debris on pavement

SYMBOLS

- Work area
- String line
- Flagger with traffic control sign

Illinois Department of Transportation

PASSED January 1, 2011
ENGINEER OF SAFETY ENGINEERING

APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to English (metric).

LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS

STANDARD 701301-04

All dimensions are in inches (millimeters) unless otherwise shown.

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

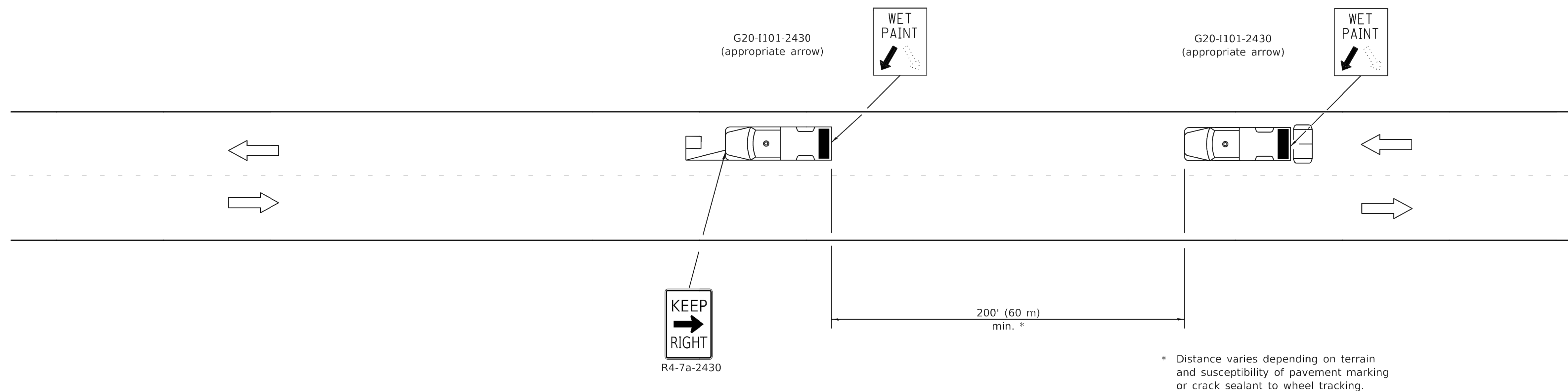
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Contract No.: MB035

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REVIEWED BY: LDH 11/2/23

SHEET TITLE

HIGHWAY STANDARD 701301-04



TYPICAL APPLICATIONS

- Landscaping work
- Utility work
- Pavement marking
- Weed spraying
- Roadometer measurements
- Debris cleanup
- Crack pouring

SYMBOLS

- Arrow board (Hazard Mode only)
- Truck with headlights, emergency flashers and flashing amber light. (visible from all directions)
- 18x18 (450x450) min. orange flag (use when guide wheel is used)
- Truck mounted attenuator

GENERAL NOTES

This Standard is used where any vehicle, equipment, workers or their activities will require a continuous moving operation where the average speed is greater than 3 mph (5 km/h).

For shoulder operations not encroaching on the pavement, use DETAIL A, Standard 701426.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS	<p>LANE CLOSURE 2L, 2W MOVING OPERATIONS- DAY ONLY</p> <p>STANDARD 701311-03</p>
1-1-09	Switched units to English (metric). Omitted Pass With Care sign.	
1-1-00	Elim. speed restrictions in Standard title.	

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

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SHEET TITLE

HIGHWAY STANDARD
701311-03

Illinois Department of Transportation

PASSED January 1, 2009
ENGINEER OF OPERATIONS

APPROVED January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



**REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES**

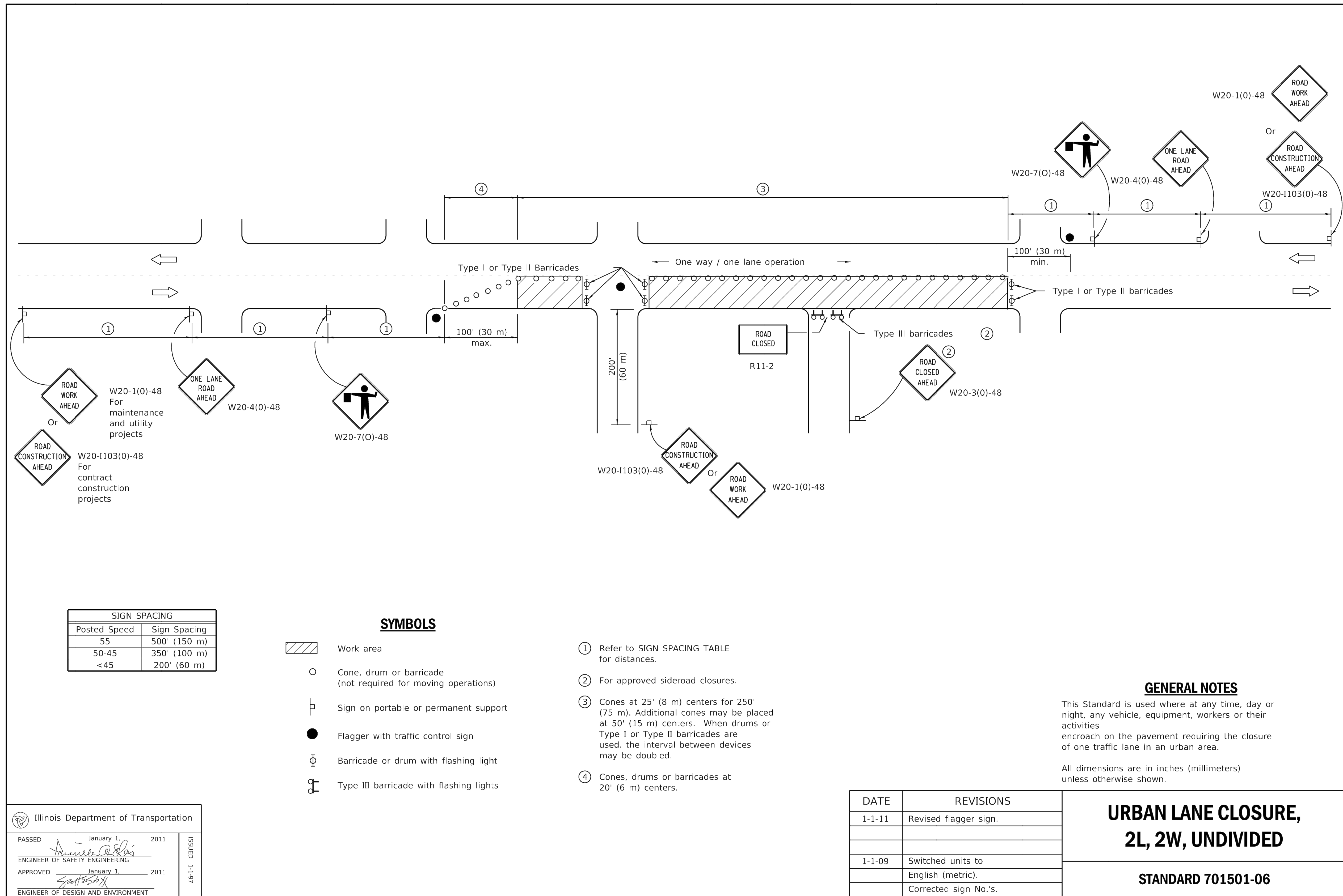
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SHEET TITLE

HIGHWAY STANDARD
701501-06



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Illinois Department of Transportation

PASSED January 1, 2011
ENGINEER OF SAFETY ENGINEERING

APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

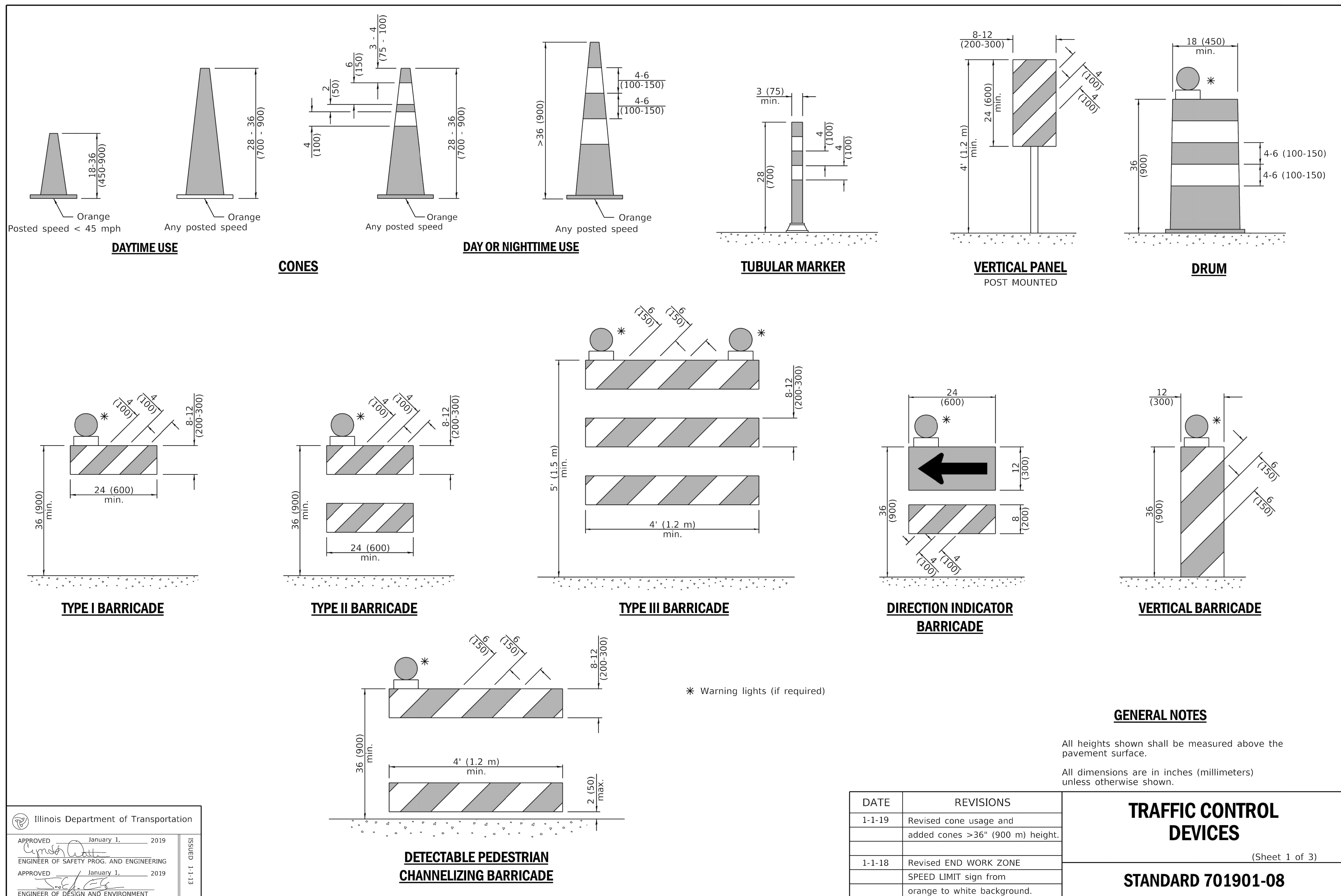
IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
 PROJECT NO: 22A0125
 CAD FILE: C-503-TCSTD.DWG
 DESIGN BY: JP 8/14/23
 DRAWN BY: JP 8/14/23
 REVIEWED BY: LDH 11/2/23

SHEET TITLE

HIGHWAY STANDARD
701901-08 (1)



GENERAL NOTES

All heights shown shall be measured above the pavement surface.
 All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS	TRAFFIC CONTROL DEVICES (Sheet 1 of 3) STANDARD 701901-08
1-1-19	Revised cone usage and added cones >36" (900 m) height.	
1-1-18	Revised END WORK ZONE	
	SPEED LIMIT sign from orange to white background.	

Illinois Department of Transportation

APPROVED January 1, 2019

 ENGINEER OF SAFETY PROG. AND ENGINEERING

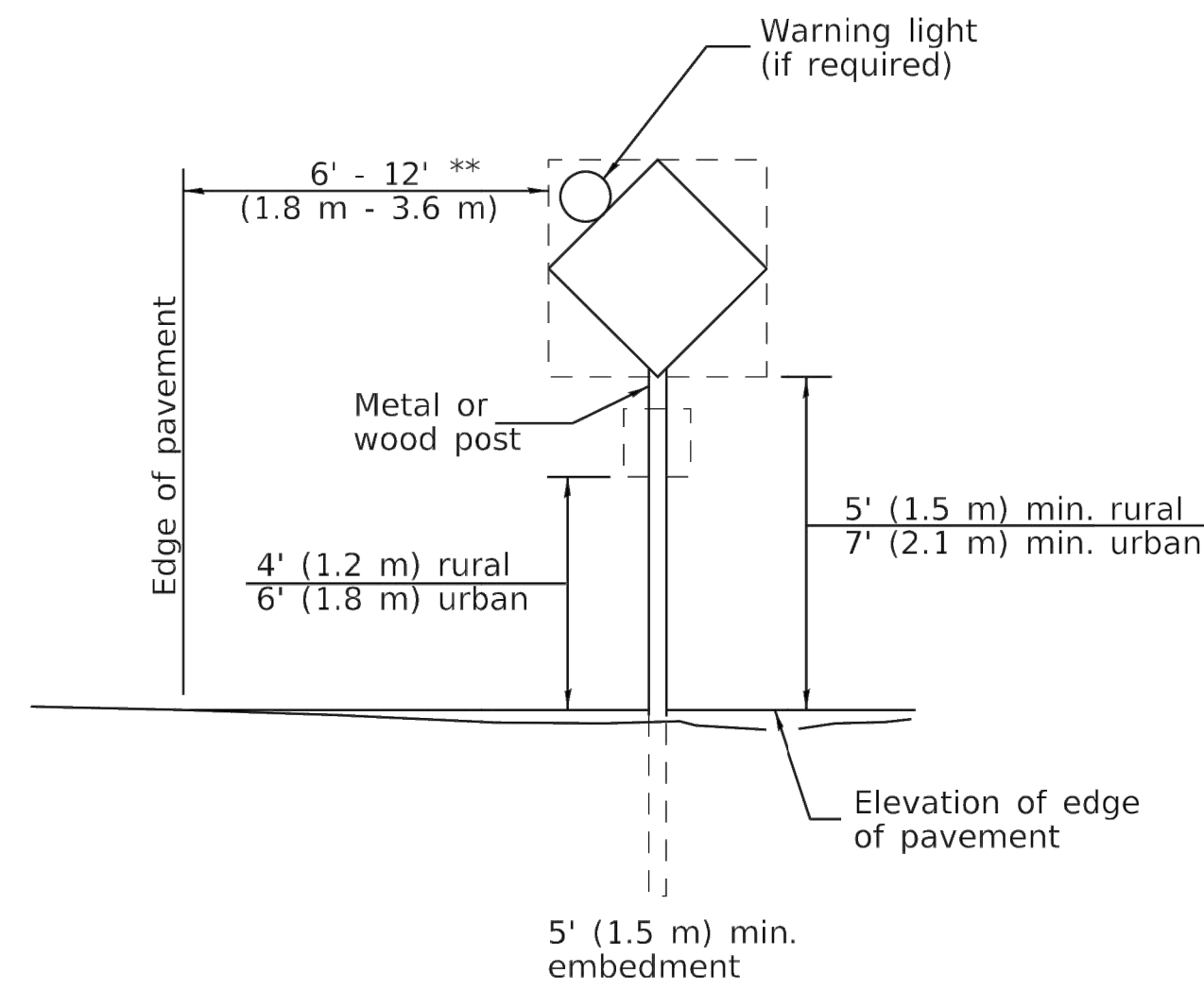
APPROVED January 1, 2019

 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 11-1-19

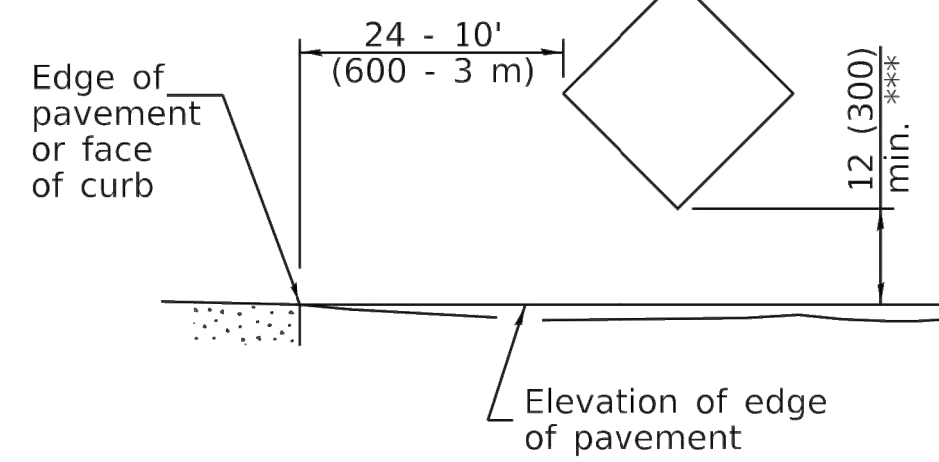


MACOMB MUNICIPAL AIRPORT
16190 East 1300th Street
Macomb, Illinois 61455
Telephone: 309.833.3324
Fax: 309.836.7721



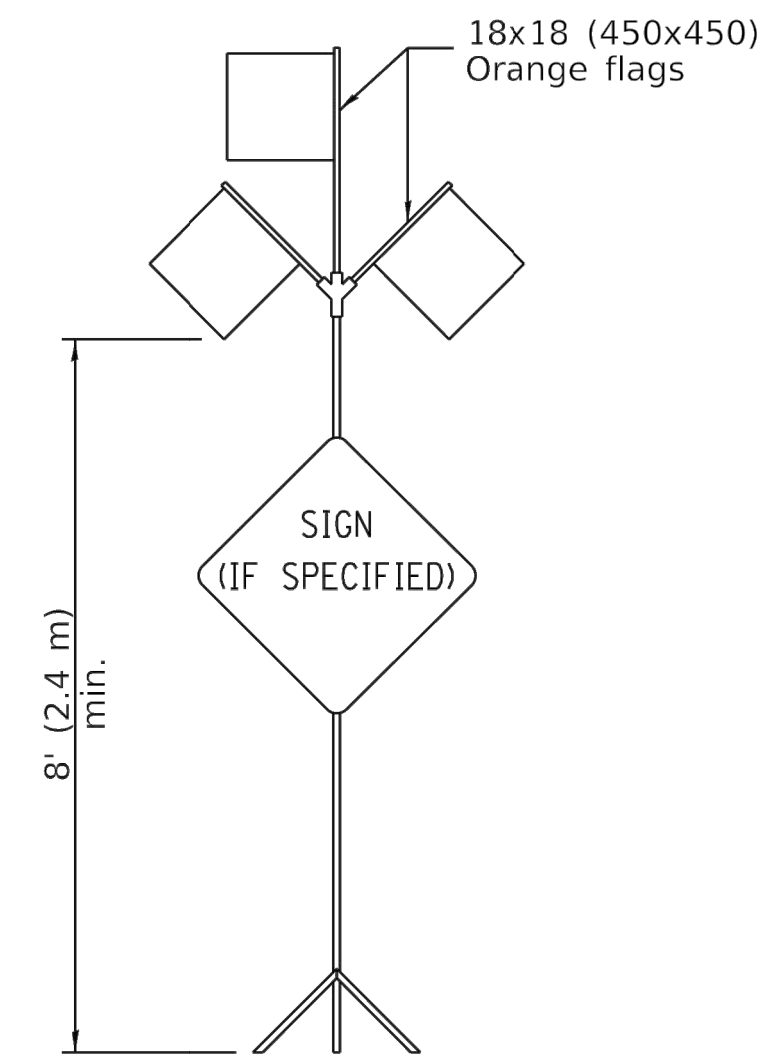
POST MOUNTED SIGNS

** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



HIGH LEVEL WARNING DEVICE

ROAD
CONSTRUCTION
NEXT X MILES

G20-1104(0)-6036

END
CONSTRUCTION

G20-1105(0)-6024

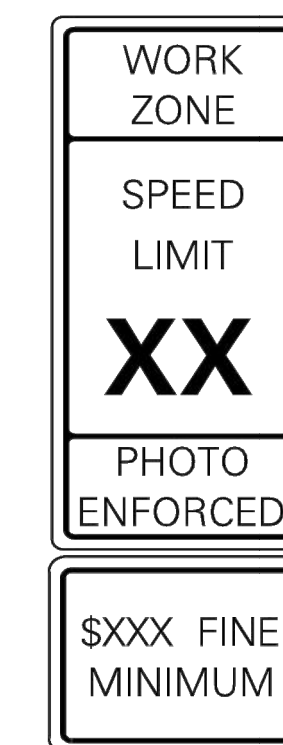
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING



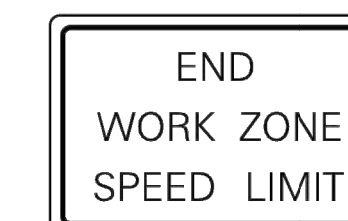
W21-1115(0)-3618

R2-1-3648

R10-1108p-3618 ****

R2-1106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.

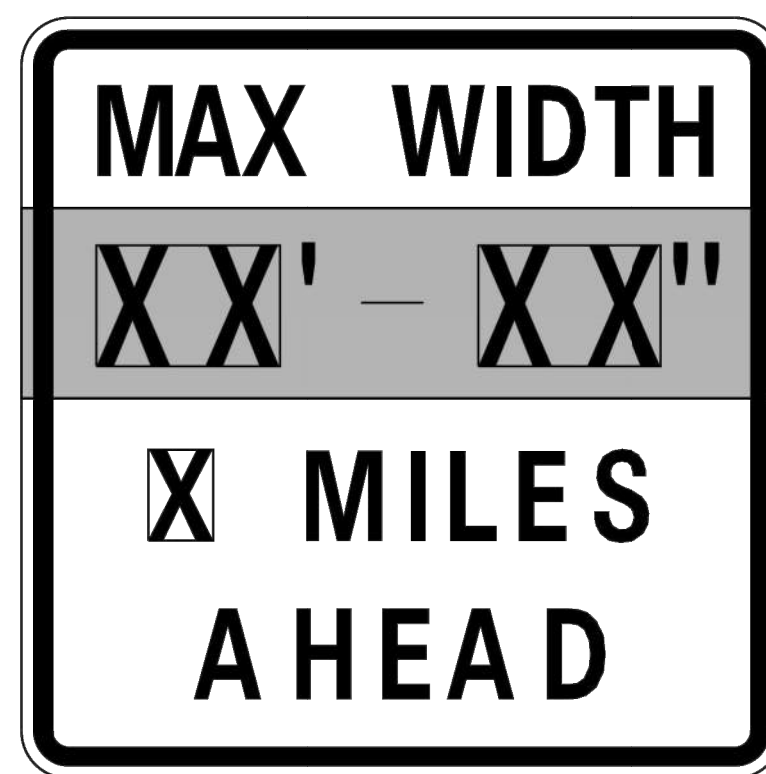


G20-1103-6036

This sign shall be used when the above sign assembly is used.

**HIGHWAY CONSTRUCTION
SPEED ZONE SIGNS**

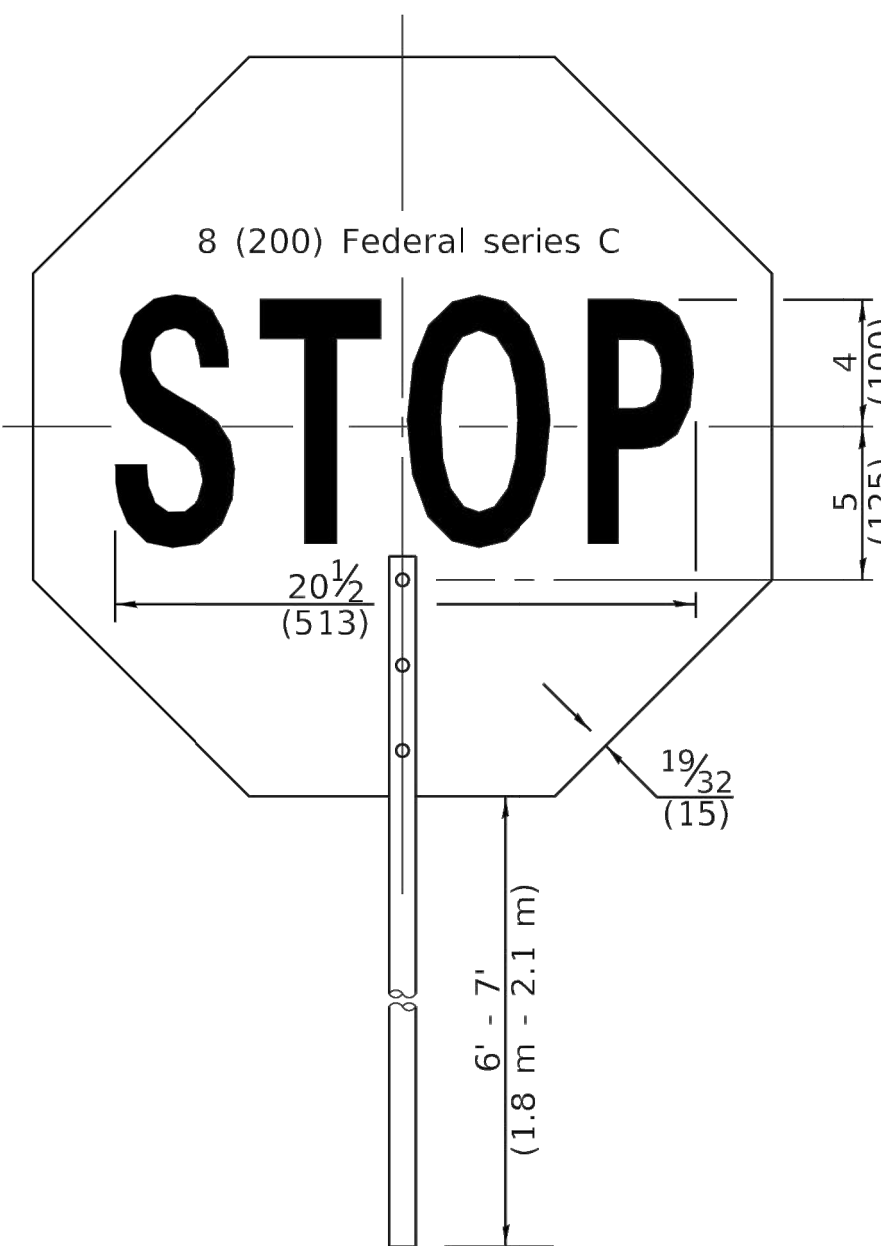
**** R10-1108p shall only be used along roadways under the jurisdiction of the State.



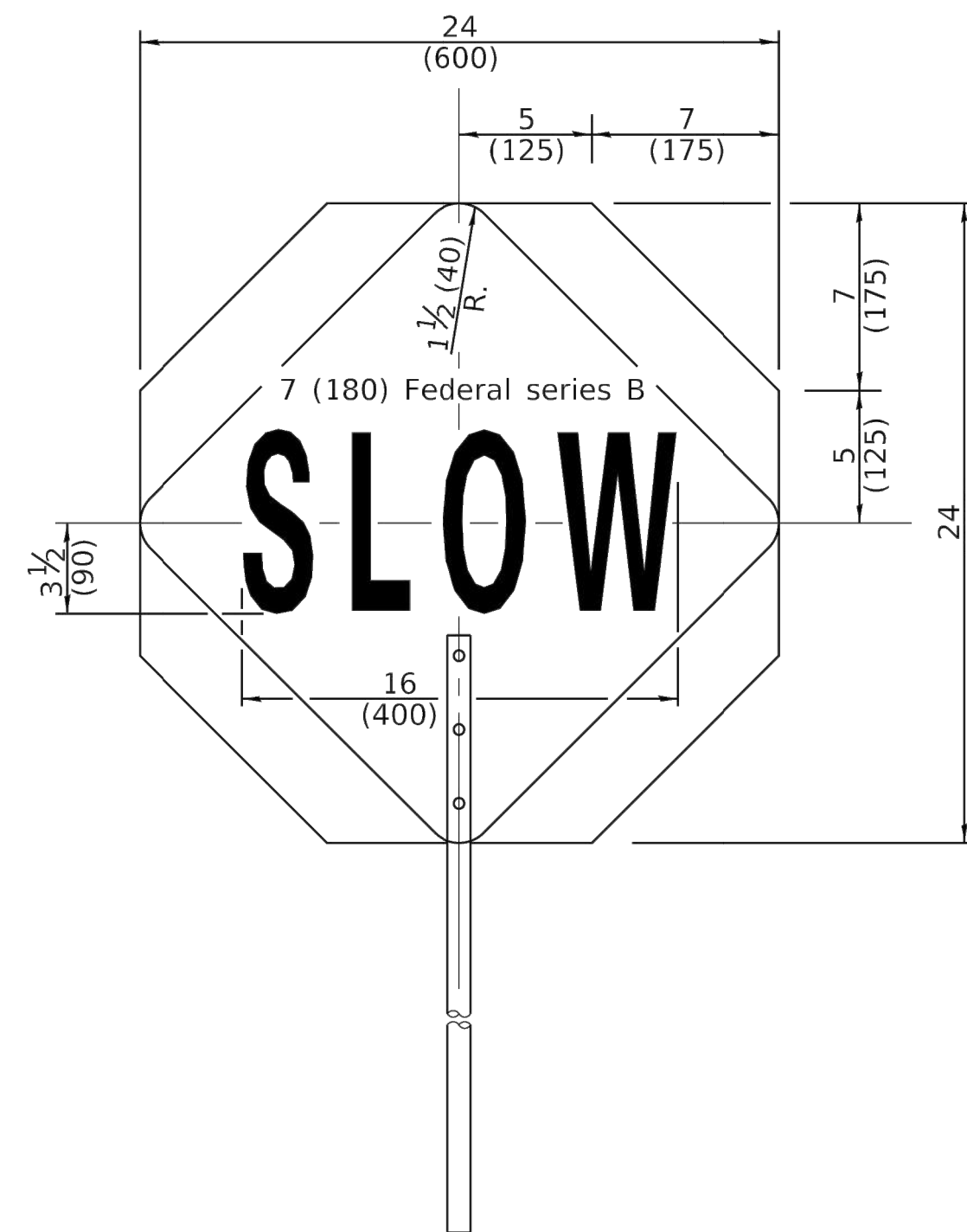
W12-1103-4848

WIDTH RESTRICTION SIGN

XX'-XX" width and X miles are variable.



FRONT SIDE



REVERSE SIDE

FLAGGER TRAFFIC CONTROL SIGN

Illinois Department of Transportation

APPROVED January 1, 2019

 ENGINEER OF SAFETY PROG. AND ENGINEERING

APPROVED January 1, 2019

 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1.1.13

**TRAFFIC CONTROL
DEVICES**

(Sheet 2 of 3)

STANDARD 701901-08

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

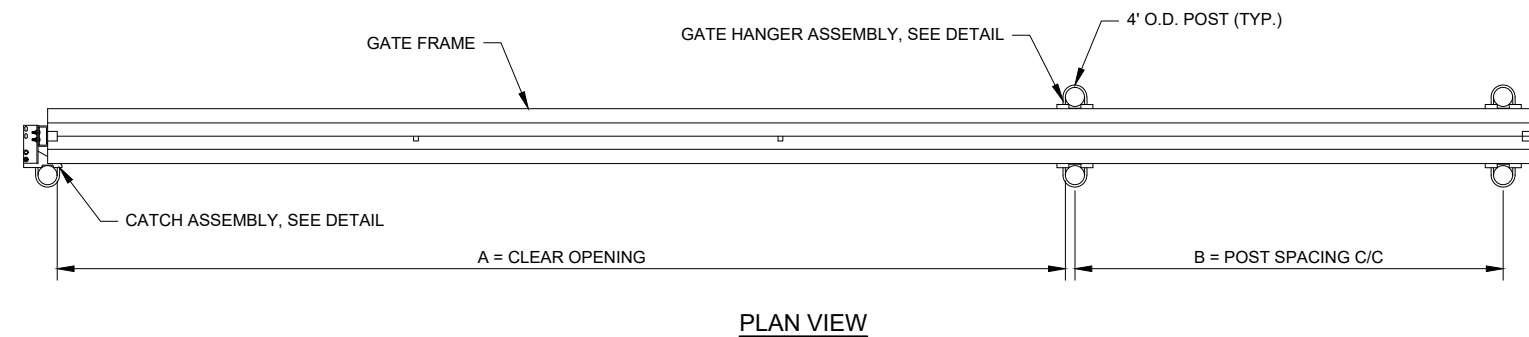
IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
 PROJECT NO: 22A0125
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 DESIGN BY: JP 8/14/23
 DRAWN BY: JP 8/14/23
 REVIEWED BY: LDH 11/2/23

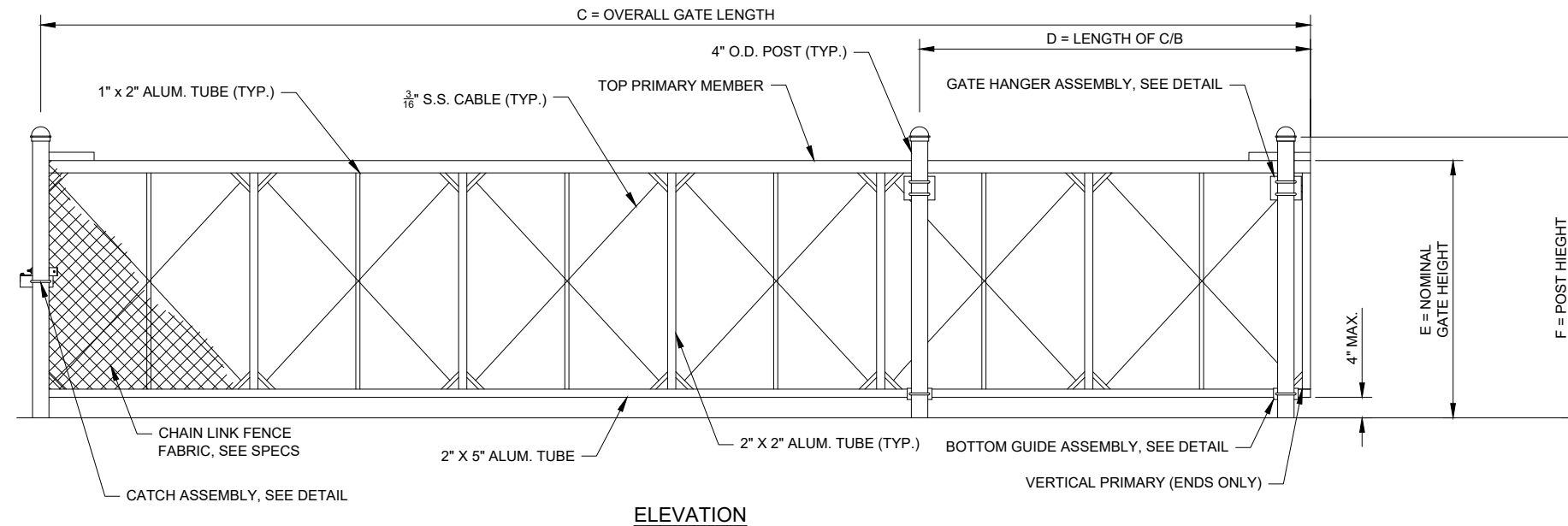
SHEET TITLE

HIGHWAY STANDARD
701901-08 (2)

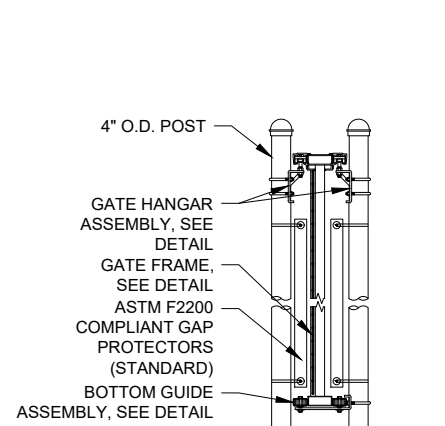


NOTES

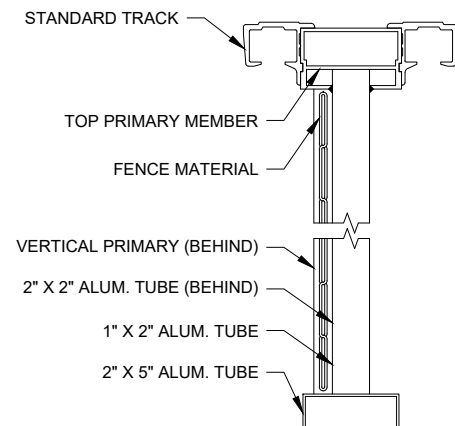
1. FOOTING WIDTH TO BE 4X POST WIDTH. MINIMUM 1'-6" DIAMETER. MINIMUM DEPTH TO BE 42"
2. GATE SHALL BE FORTRESS "STRUCTURAL" CANTILEVER SLIDE GATE WITH TWIN TRACKS. VERIFY DIMENSIONS WITH MANUFACTURER. PRIMARY GATE FRAME SHALL BE ALUMINUM ALLOY AND RECTANGULAR IN SHAPE. GATE MESH SHALL MATCH FENCE MESH SIZE AND MATERIAL. (2-INCH MESH, 9 GAUGE). SEE SPECS
3. ALL SIGN INSTALLATIONS SHALL BE CONSIDERED INCIDENTAL TO THE FENCE & GATE INSTALLATIONS. SEE SIGNAGE DETAILS



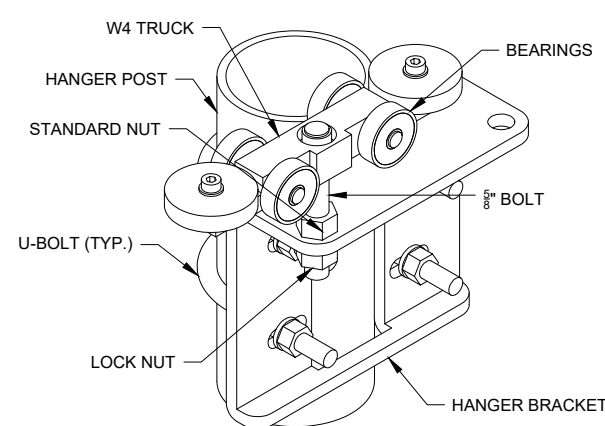
ELEVATION



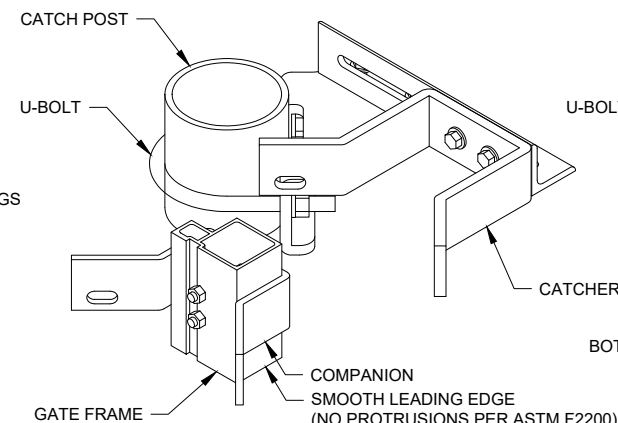
ASSEMBLY SECTION



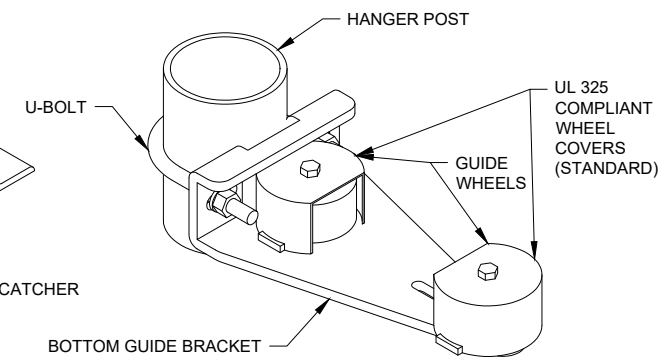
GATE FRAME SECTION



GATE HANGER ASSEMBLY



CATCH ASSEMBLY



BOTTOM GUIDE ASSEMBLY

CRITICAL DIMENSION CHART

NOMINAL GATE SIZE **		16' W X 6' H
A	CLEAR OPENING	16'-0"
B	COUNTERBALANCE POST SPACING C/C	7'-1"
C	OVERALL GATE LENGTH	24'-0"
D	COUNTERBALANCE LENGTH	8'-0"
E	NOMINAL GATE HEIGHT *	6'-0"
F	POST HEIGHT	7'-6"

* EXCLUDES BARBED WIRE ARM
** CONFIRM ALL DIMENSIONS WITH GATE MFR.

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 11/17/23
PROJECT NO: 22A0125
CAD FILE: C-002.DWG
DESIGN BY: KNL 9/15/2023
DRAWN BY: CWS 09/18/2023
REVIEWED BY: KNL 09/18/2023

SHEET TITLE

16 FOOT SLIDE GATE DETAILS



ISSUE: 11/17/23

PROJECT NO: 22A0125

CAD FILE: E-001-LGND.DWG

DESIGN BY: KNL 09/01/2020

DRAWN BY: SDN 09/04/2020

REVIEWED BY: KNL 09/18/2023

SHEET TITLE

ELECTRICAL ABBREVIATIONS	
A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EOR	ENGINEER OF RECORD
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK - ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KNL	KEVIN NEIL LIGHTFOOT
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

ELECTRICAL ABBREVIATIONS (CONTINUED)	
PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS	
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALS-R	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

ELECTRICAL LEGEND - ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	HEAVY DUTY FUSIBLE SAFETY SWITCH 2 POLE 30A WITH 20A FUSES
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND - GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
	TRANSFER SWITCH
	ENGINE GENERATOR SET

ELECTRICAL LEGEND - PLANS	
	CONDUIT (EXPOSED)
	CONDUIT OR DUCT (CONCEALED OR BURIED)
	DUCT
	DUCT
	BURIED/UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	TOGGLE SWITCH
	PUSH BUTTON STATION
	WALL OR CEILING MTD. JUNCTION BOX. CONFIGURATION VARIES WITH USE
	SINGLE THROW DISCONNECT SWITCH
	SINGLE THROW, FUSIBLE DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	MOTOR
	TRANSFORMER
	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
	CONTROL PANEL
	GROUND ROD
	POLE WITH CAMERA

NOTES:

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING/CONSTRUCTION FOR USE AS A REFERENCE.
3. NEW WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
4. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
5. INSULATED CONDUCTORS SHALL COLOR CODE PHASE AND NEUTRAL. CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

120/240 VAC, 1 PHASE, 3 WIRE	
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN
6. SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
7. ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES UL LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
8. ONLY QUALIFIED ELECTRICAL CONTRACTORS SHALL PERFORM ELECTRICAL WORK ON THIS PROJECT.
9. RESPECTIVE POWER SOURCES FOR EACH PANEL, EQUIPMENT, LIGHT, GATE OPERATOR, OR OTHER DEVICE SHALL BE VERIFIED PRIOR TO WORKING ON, RELOCATING, REMOVING, DISCONNECTING, AND/OR INSTALLING THE RESPECTIVE DEVICES. SHUT OFF, LOCKOUT, AND TAGOUT FOR PROTECTION OF PERSONNEL.
10. HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, RACEWAY, JUNCTION STRUCTURE OR HANDHOLE.
11. PER NEC 513 THE ENTIRE AREA OF A HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLY CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS I, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR, PER NEC 513.3(C) "VICINITY OF AIRCRAFT". THE AREA WITHIN 5 FT. HORIZONTALLY FROM AIRCRAFT POWER PLANTS OR AIRCRAFT FUEL TANKS SHALL BE CLASSIFIED AS A CLASS I, DIVISION 2 LOCATION THAT SHALL EXTEND UPWARD FROM THE FLOOR TO A LEVEL 5FT. ABOVE THE UPPER SURFACE OF WINGS AND OF ENGINE ENCLOSURES. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS OTHER APPLICABLE CODES AND REQUIREMENTS.

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

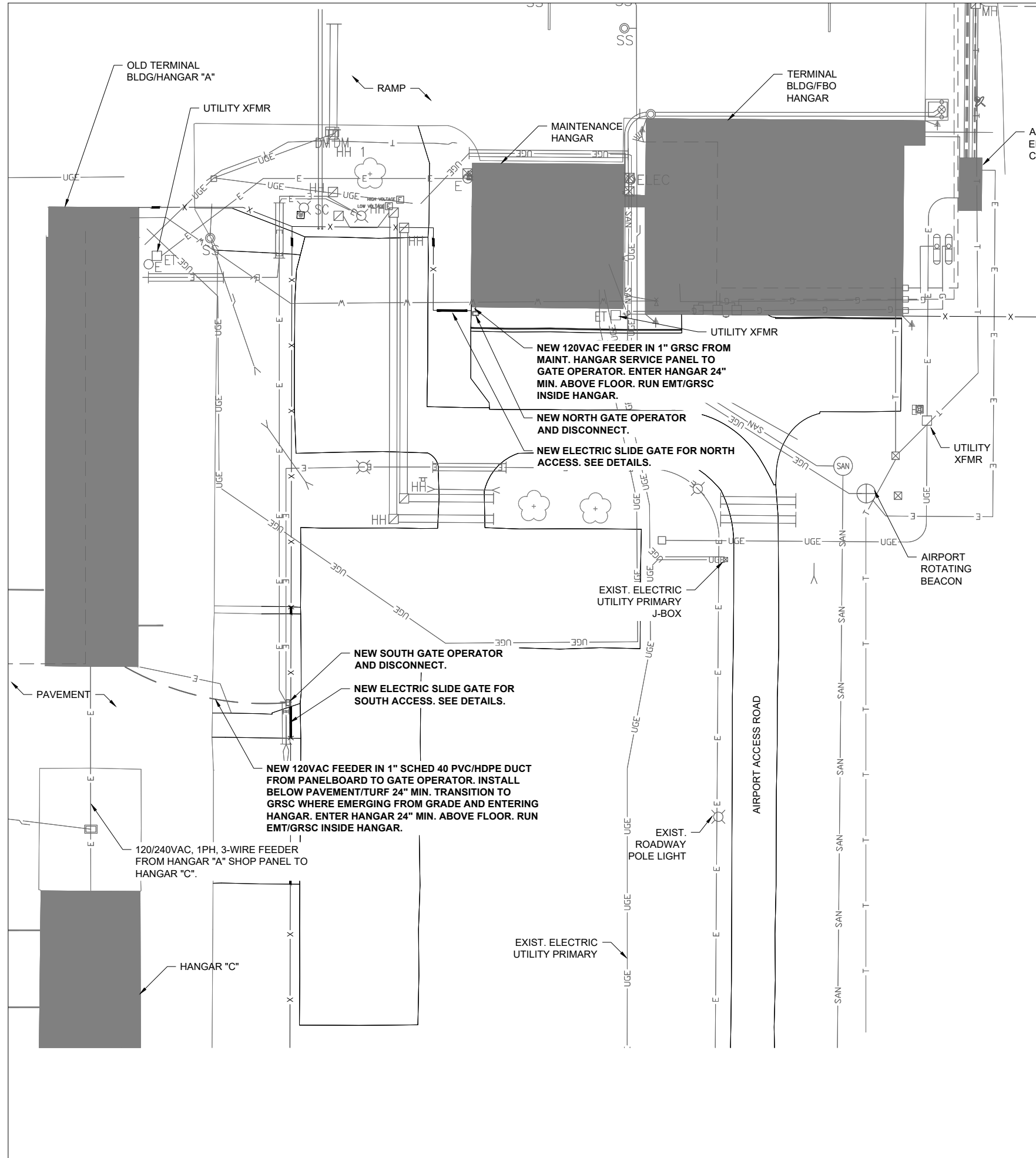
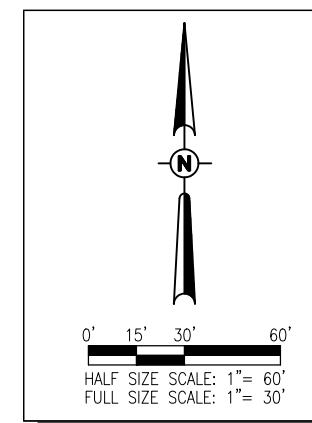


THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

LEGEND

- EXISTING PAVEMENT
- EXISTING ELECTRICAL DUCT
- PROPOSED ELECTRICAL DUCT
- EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING ELECTRICAL CABLES
- EXISTING ELECTRICAL
- PROPOSED ELECTRIC
- EXISTING AWOS COMMUNICATIONS CABLE IN UNIT DUCT
- EXISTING GAS
- EXISTING TELEPHONE
- EXISTING FENCE
- EXISTING WATER
- NEW PROPOSED FENCE
- EXISTING SWALE / DRAINAGE
- EXISTING UNDERDRAIN
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY THRESHOLD LIGHT
- EXISTING PAPI
- EXISTING DUCT MARKER
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- EXISTING ELECTRICAL HANDHOLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING ELECTRICAL UTILITY TRANSFORMER



NOV 16, 2023 9:24 AM PEARC00387
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REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

NO.	DATE	DESCRIPTION		
		DES	DWN	REV
12				

ISSUE: 11/17/23
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CAD FILE: E-101-SITE.DWG
DESIGN BY: KNL 09/15/2023
DRAWN BY: CWS 09/18/2023
REVIEWED BY: KNL 09/18/2023

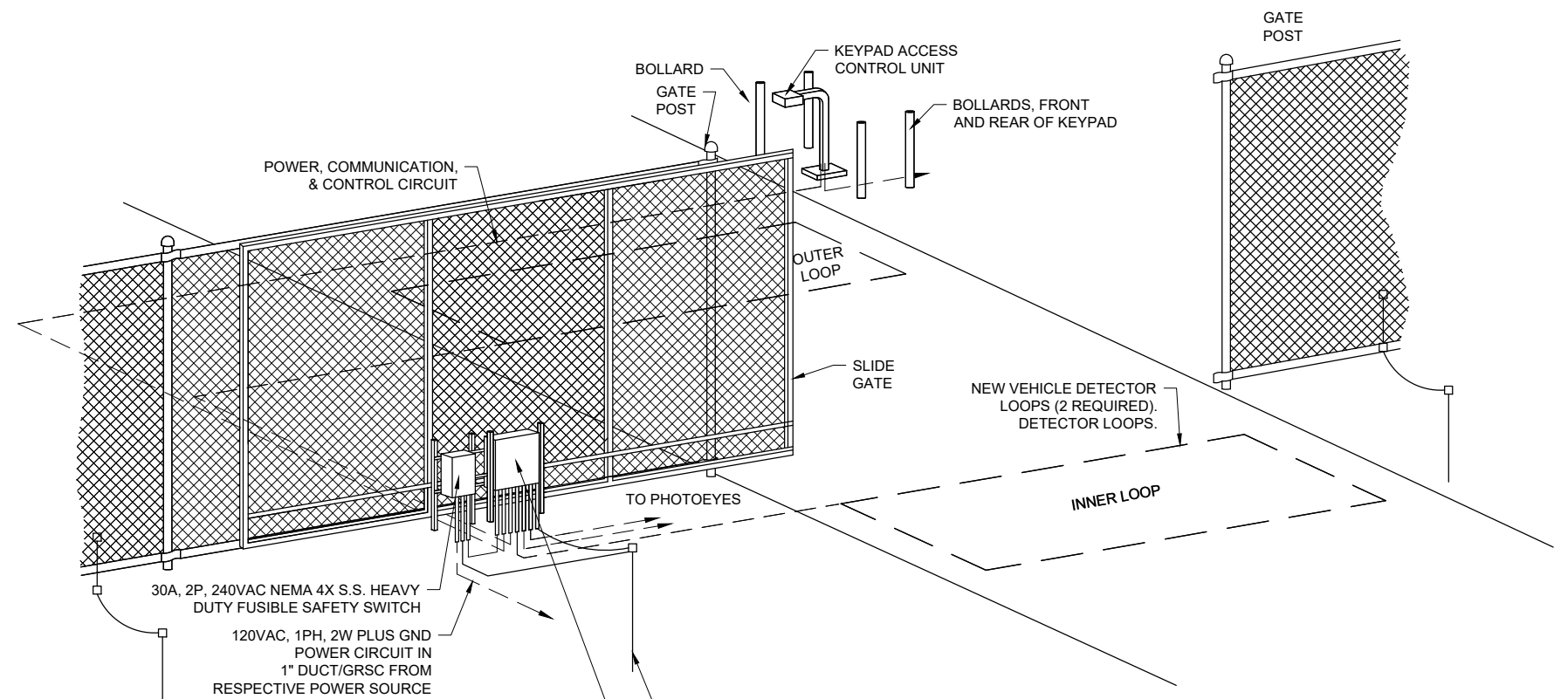
SHEET TITLE

ELECTRICAL SITE
PLAN



NOTES:

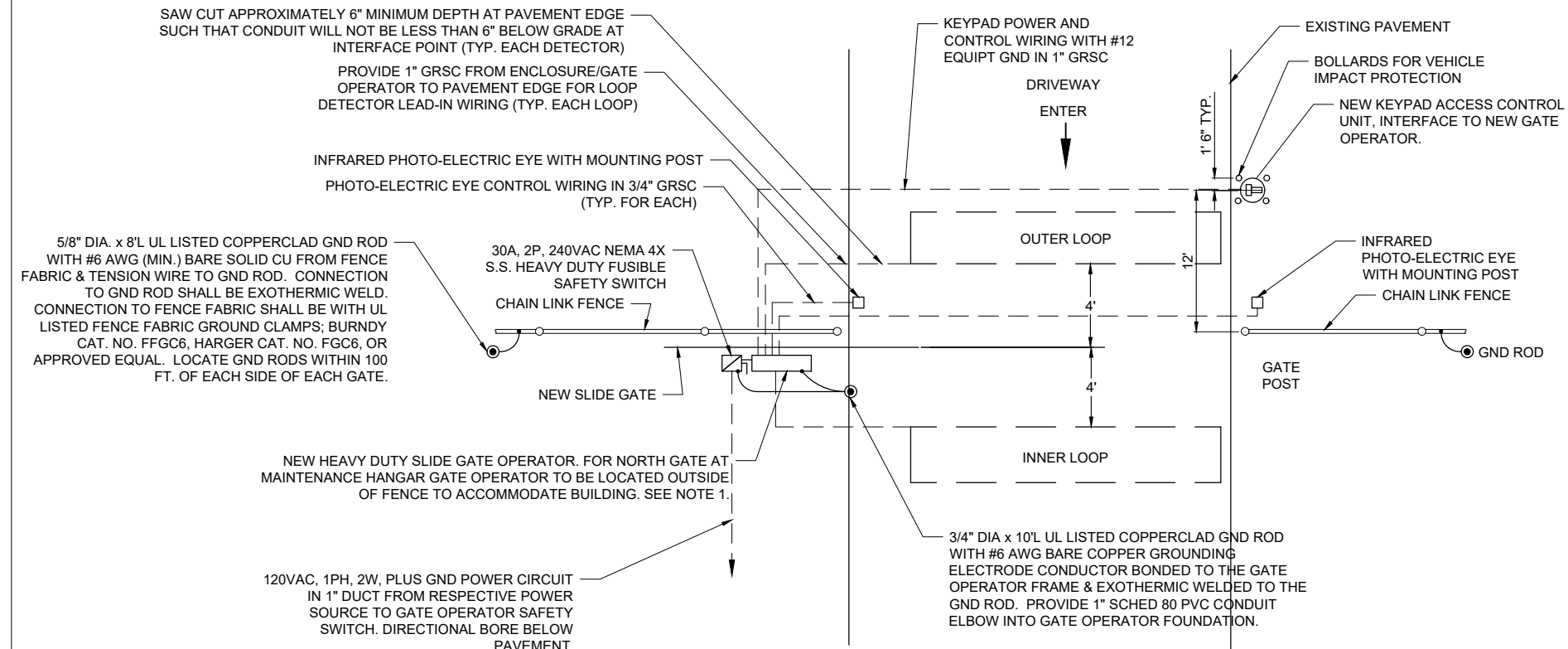
- SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON RESPECTIVE GATE & GATE OPERATOR SYSTEM.
- ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER. SEE RESPECTIVE SITE PLAN FOR EACH GATE.
- CONCRETE FOUNDATIONS AND SUPPORT POSTS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER. KEYPAD ACCESS CONTROL UNIT FOUNDATIONS SHALL BE 48" IN DEPTH AS DETAILED HEREIN. SEE DETAILS.
- 1" GRSC CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR INSTALLATION, AND THE DETECTOR LOOPS. PROVIDE 3/4" GRSC BETWEEN THE SLIDE GATE OPERATOR AND THE PHOTO-ELECTRIC EYES. THE MINIMUM BURYING DEPTH IS 18" IN AREAS NOT SUBJECT TO VEHICLE TRAFFIC AND 30" IN AREAS SUBJECT TO VEHICLE TRAFFIC. ALL METAL CONDUITS ENTERING THE GATE OPERATOR SHALL BE BONDED TO THE GATE OPERATOR FRAME WITH A #8 AWG (MIN.) COPPER BONDING JUMPER. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SALES AND SERVICE REPRESENTATIVE.
- NEW GATE OPERATOR SHALL INTERFACE TO THE NEW KEYPAD ACCESS CONTROL UNIT. FIELD VERIFY EXISTING SITE CONDITIONS, CABLE ROUTES, & DUCT LOCATIONS AS APPLICABLE TO INTERFACE THE CONTROL SYSTEM TO THE NEW GATE OPERATOR.
- THE SLIDING GATE SHALL BE CANTILEVER TYPE OF THE SIZE CALLED FOR ON THE PLANS. SHALL HAVE AN ENCLOSED ROLLER ASSEMBLY WITH TWIN TRACK SUPPORTS, SEE SPECS.
- PROVIDE SIGNS ON NEW GATE. SECURE WITH STAINLESS STEEL HARDWARE. PROVIDE NEW SIGNS AS DETAILED HEREIN.
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT DIRECTOR.
- INCLUDE AC SURGE PROTECTOR FOR THE GATE OPERATOR, UL 1449 LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON A 120 VAC, 1 PHASE, 2 WIRE SYSTEM WITH LED INDICATING OPERATIONAL STATUS, JOSLYN MODEL 1260-21, SQUARE D CAT. NO. TVS120XR50S, SQUARE D CAT. NO. SDSA1175T, OR APPROVED EQUAL. INCLUDE MOUNTING BRACKET. INSTALL AT GATE OPERATOR INPUT POWER.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR, CARD READER, & FENCE SHALL MEET THE REQUIREMENTS OF ITEM 610 CONCRETE FOR MISCELLANEOUS STRUCTURES.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE UL LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR NOTING THE GATE SERVED, VOLTAGE, AND RESPECTIVE POWER SOURCE CIRCUIT AND LOCATION.
- PAYMENT FOR EACH SLIDE GATE, GATE OPERATOR, AND ALL ASSOCIATED CONTROL & SAFETY DEVICES SHALL BE ON A PER EACH BASIS AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, CABLE IN CONDUIT, DUCT, OR UNIT DUCT, GROUNDING, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO INSTALL THE GATE COMPLETE AND IN OPERATING CONDITION.
- CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
- INCLUDE CORROSION RESISTANT SUPPORT POSTS AND HARDWARE WITH THE PHOTO-ELECTRIC EYE SAFETY DEVICES.
- ALL CONTROL POWER TRANSFORMERS, SURGE PROTECTORS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, SECURITY SYSTEM EQUIPMENT AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.



ELECTRIC GATE DETAIL (ISOMETRIC)

"NOT TO SCALE"

NOTE: PHOTO-ELECTRIC EYES ARE REQUIRED FOR THE GATE OPENING BUT NOT SHOWN THIS DETAIL.



ELECTRIC GATE PLAN

"NOT TO SCALE"

VEHICLE DETECTOR LOOPS		
GATE SIZE	LOOP SIZE	NO. OF TURNS
8' TO 12'	4' X 6'	3 TURNS
12' TO 16'	4' X 10'	2 TURNS
16' TO 20'	4' X 14'	2 TURNS
20' TO 24'	4' X 18'	2 TURNS
24' TO 30'	6' X 22'	2 TURNS
30' TO 34'	6' X 26'	2 TURNS

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

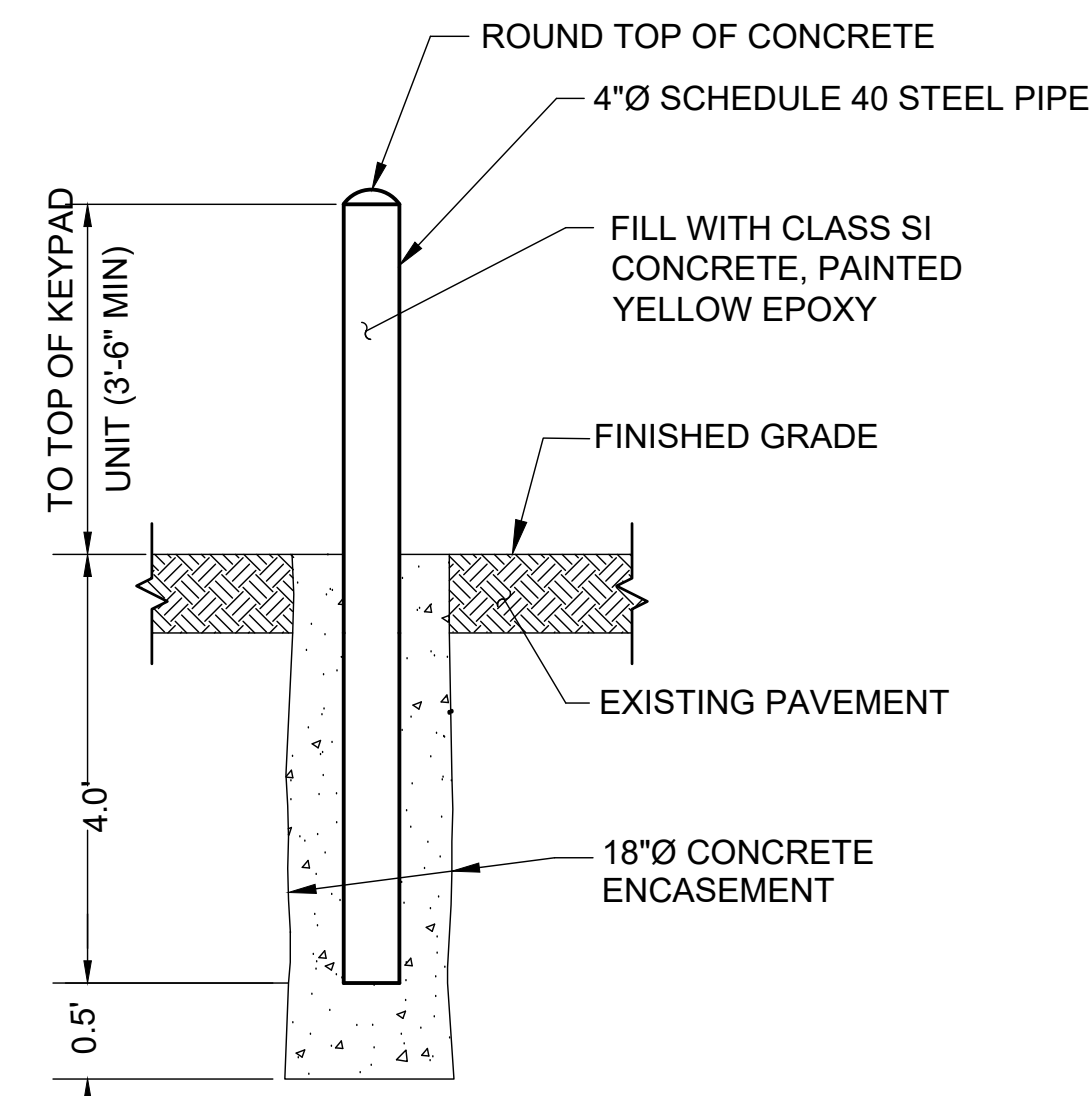
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PROPOSED SLIDE GATE DETAILS

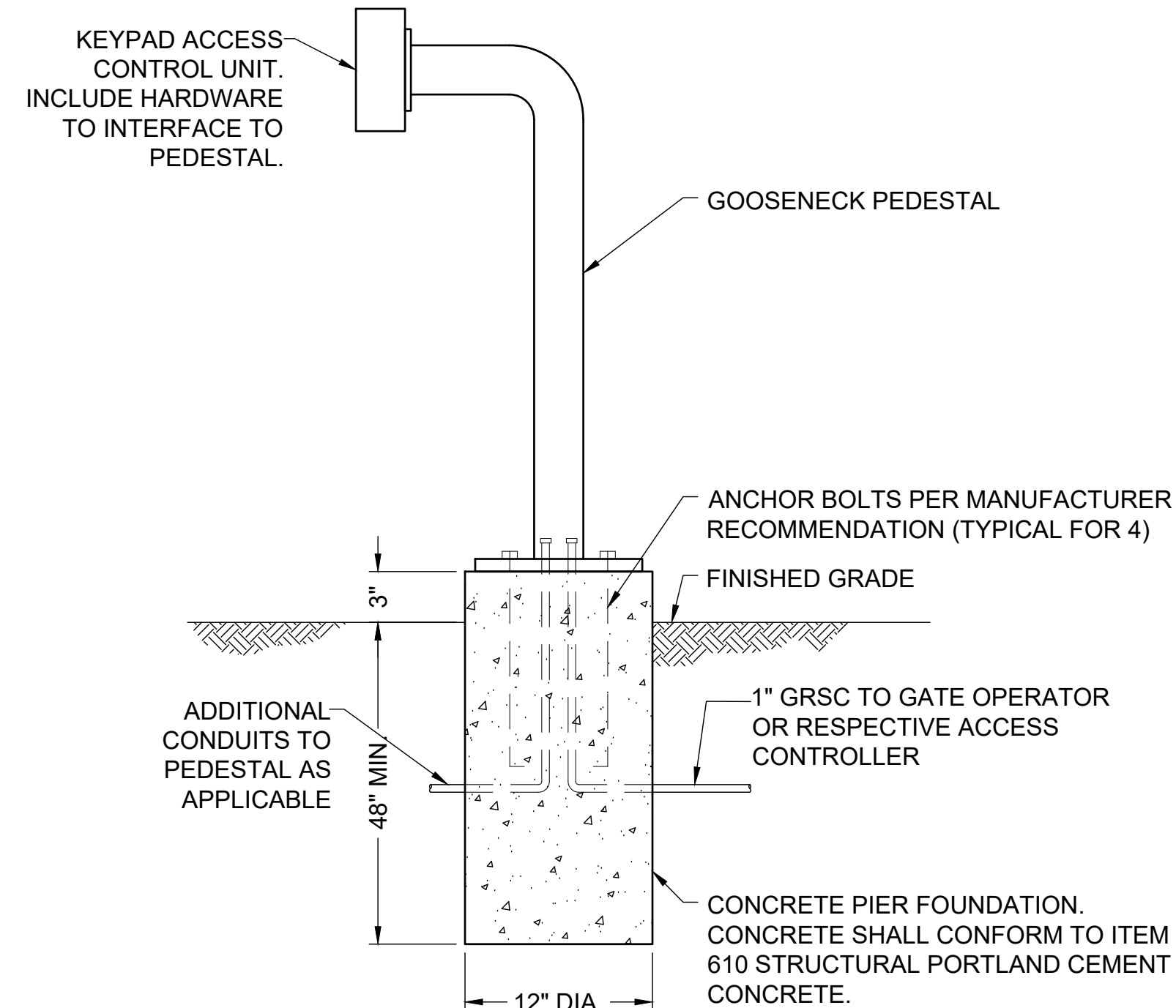


NOTES

1. THE EXPOSED PORTION OF THE BOLLARD SHALL BE PAINTED YELLOW EPOXY.
2. BOLLARD AND ASSOCIATED ITEMS ARE INCIDENTAL TO THE ELECTRIC SLIDING GATE INSTALLATION.

BOLLARD DETAIL

NOT TO SCALE

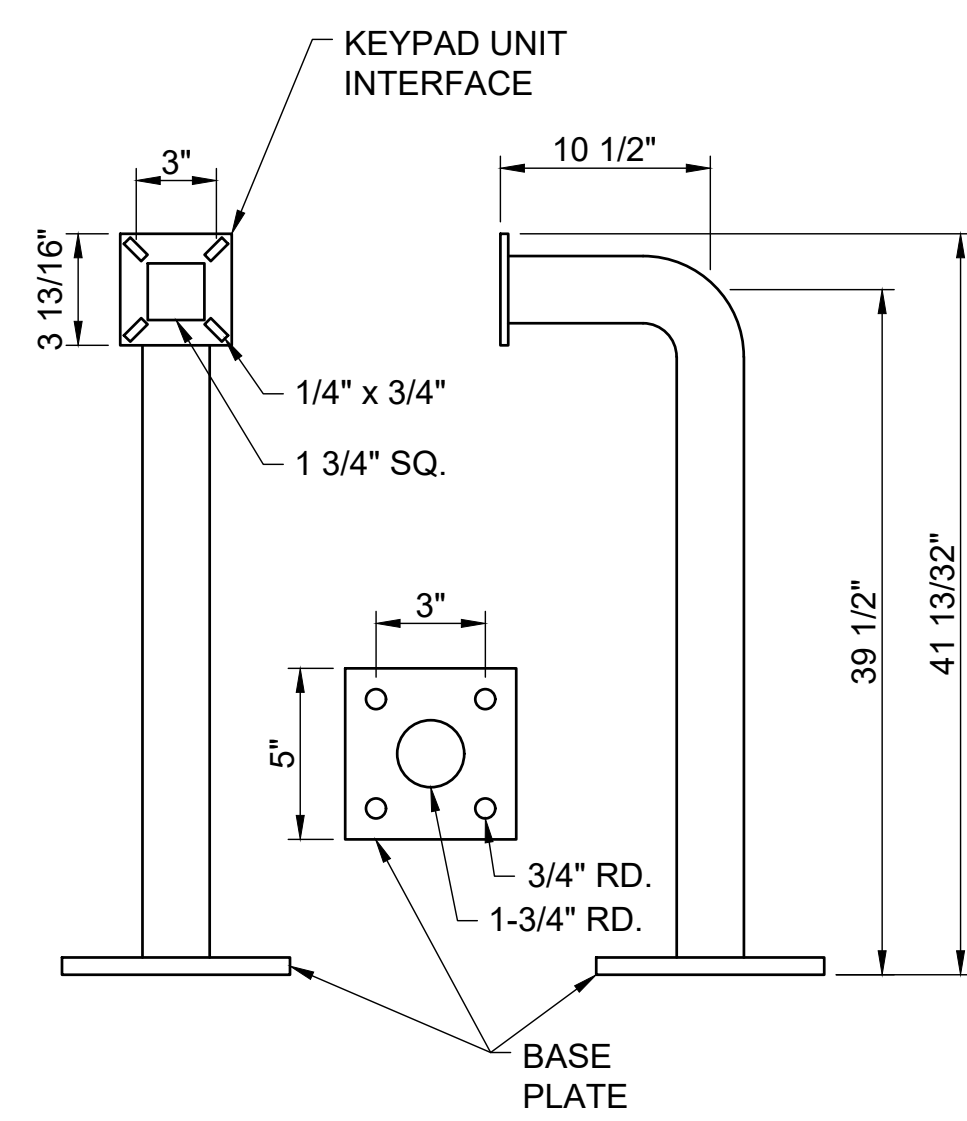


NOTES

1. PROPOSED KEYPAD ACCESS CONTROL UNIT WITH PEDESTAL & FOUNDATION WILL REQUIRE INTERFACE TO THE NEW GATE OPERATOR CONTROL SYSTEM.
2. INCLUDE #12 AWG EQUIPMENT GND WIRE TO CARD READER.
3. FACE OF KEYPAD ACCESS CONTROL UNIT SHALL NOT EXTEND BEYOND BOLLARDS.

CARD READER ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL

NOT TO SCALE

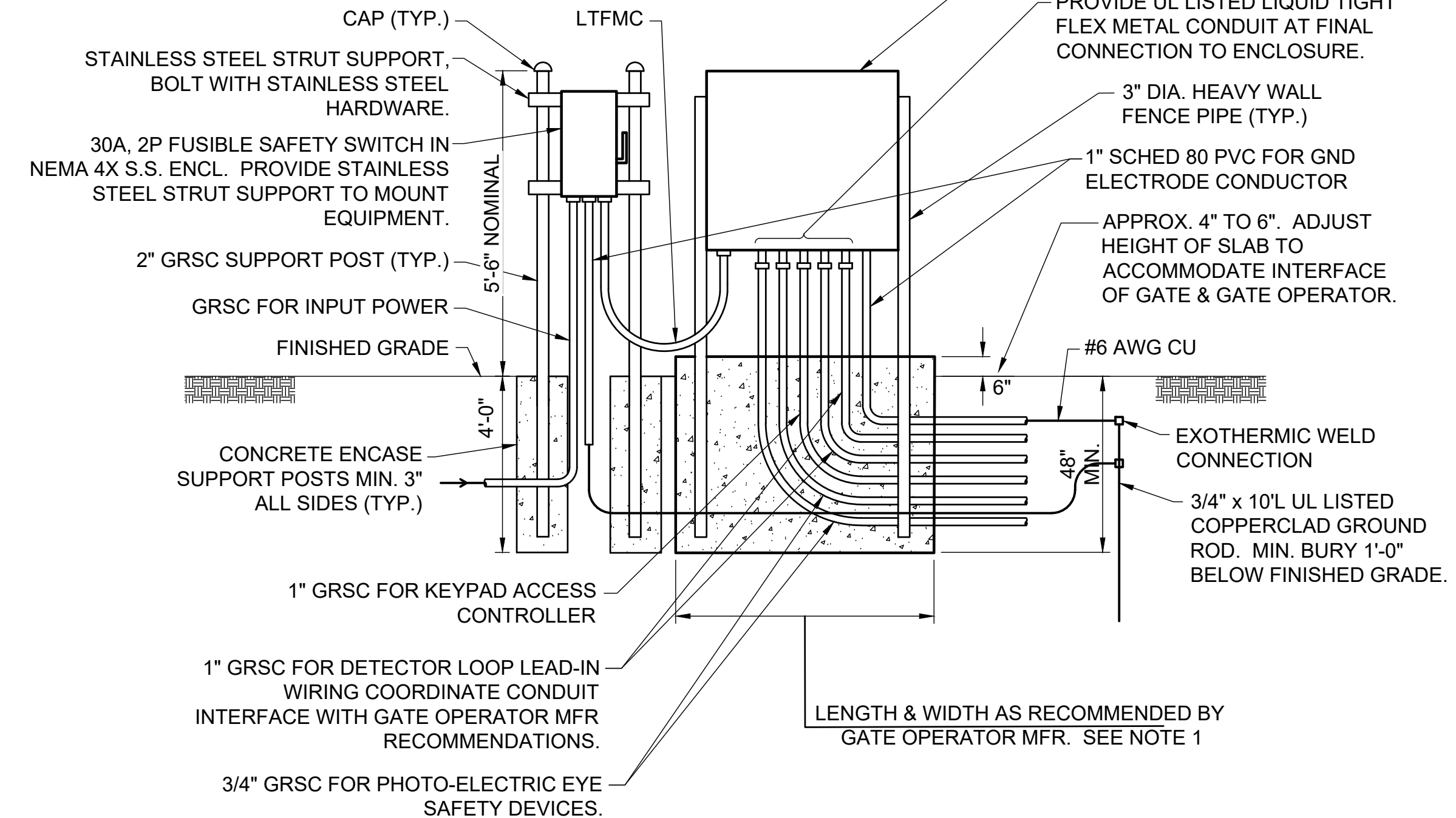


GOOSENECK PEDESTAL DETAIL

NOT TO SCALE

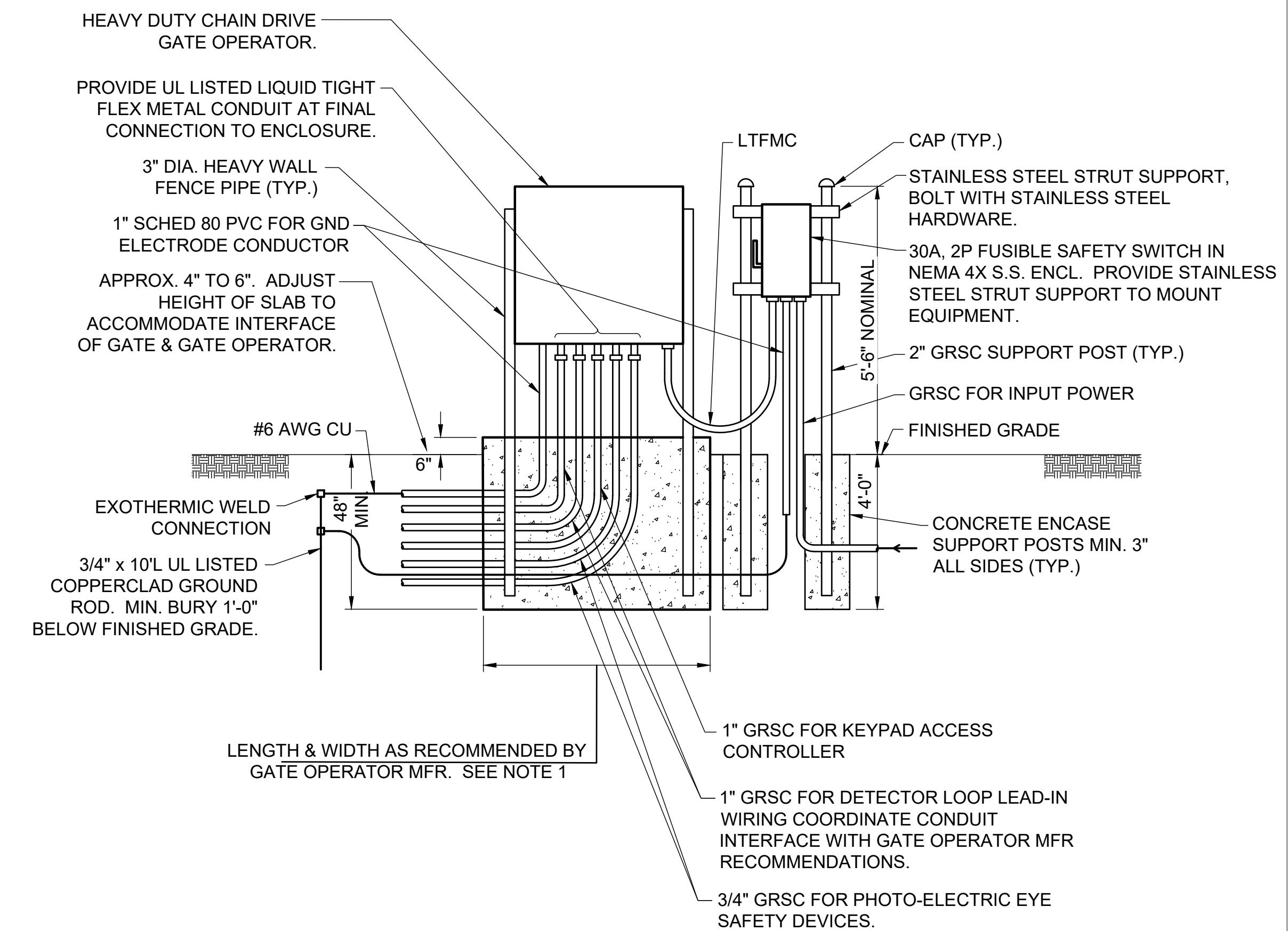
NOTES

1. FOUNDATION FOR GATE OPERATOR SHALL BE 48" MIN. IN DEPTH AND OF THE LENGTH & WIDTH RECOMMENDED BY THE MANUFACTURER. CONFIRM MOUNTING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER
2. COORDINATE CONDUITS INTO FOUNDATION.
3. CONFIRM CONDUIT SIZES AND WIRING REQUIREMENTS WITH THE GATE OPERATOR MFR. ADJUST/INCREASE CONDUIT SIZES WHERE APPLICABLE. REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS.
4. ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
5. GATE WILL REQUIRE PHOTOELECTRIC EYE SECONDARY SAFETY DEVICES. PROVIDE CONDUITS BETWEEN GATE OPERATOR SYSTEM AND SAFETY DEVICES.



SOUTH ACCESS GATE

NOT TO SCALE



NORTH ACCESS GATE

NOT TO SCALE

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

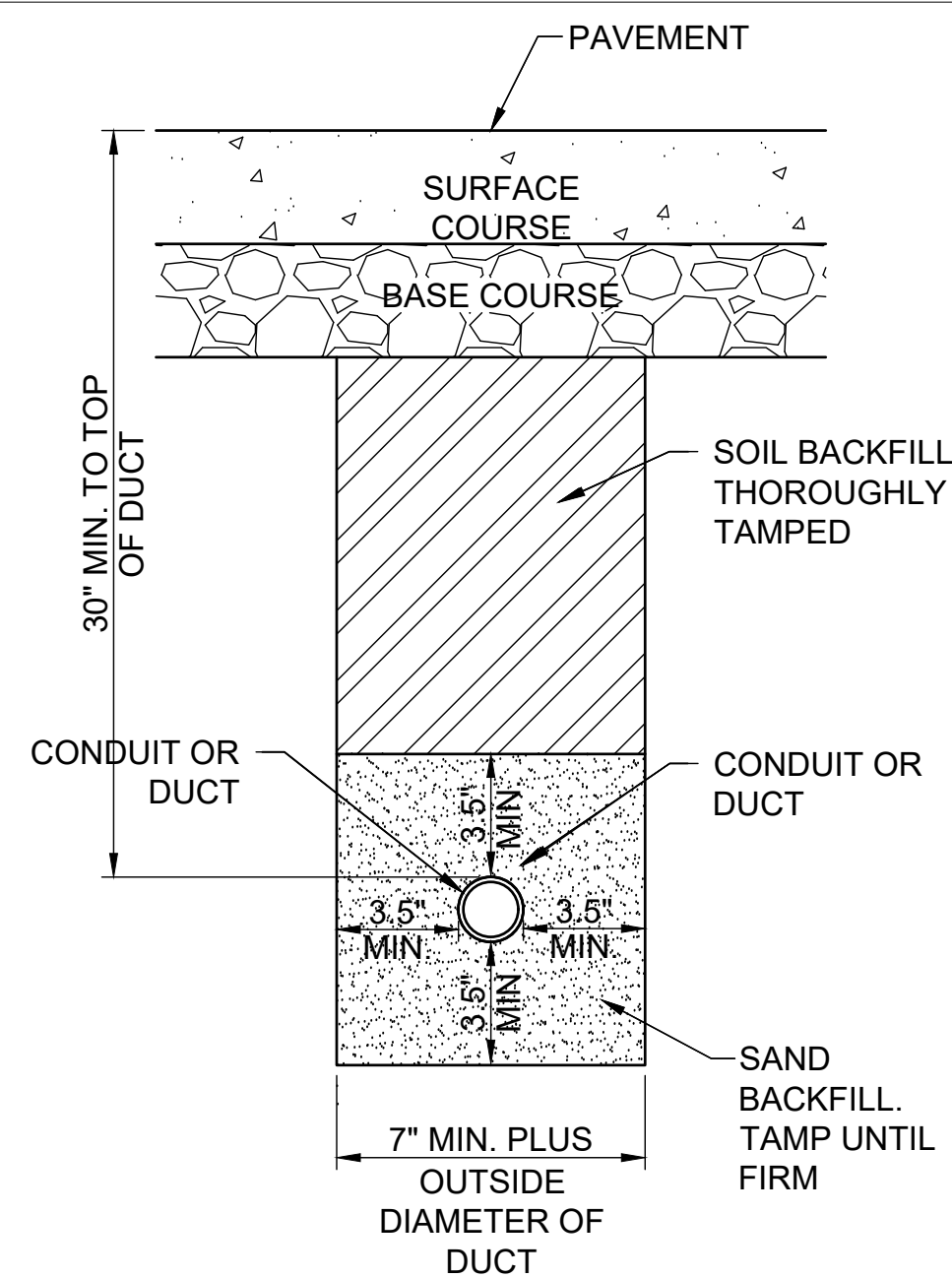
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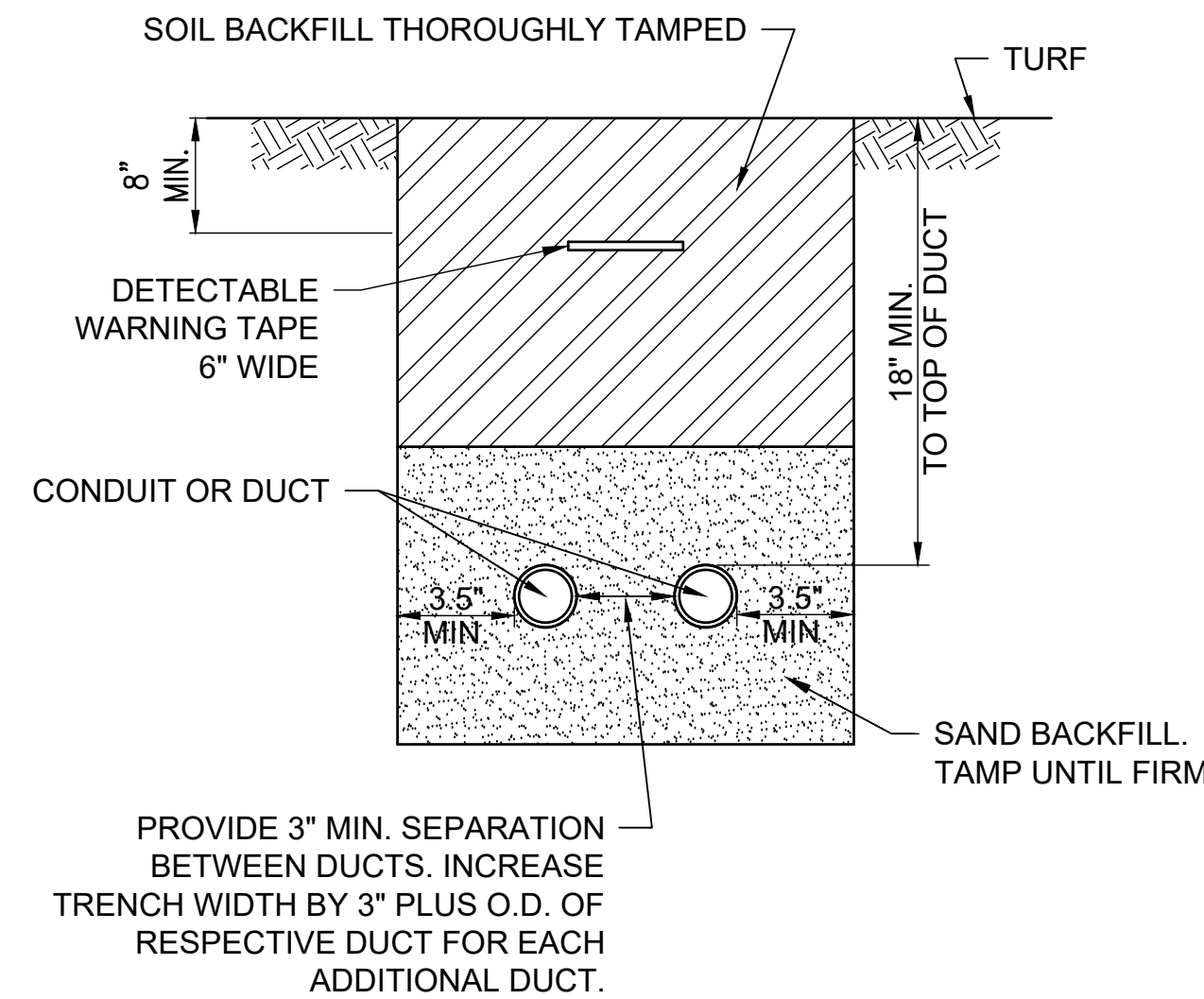
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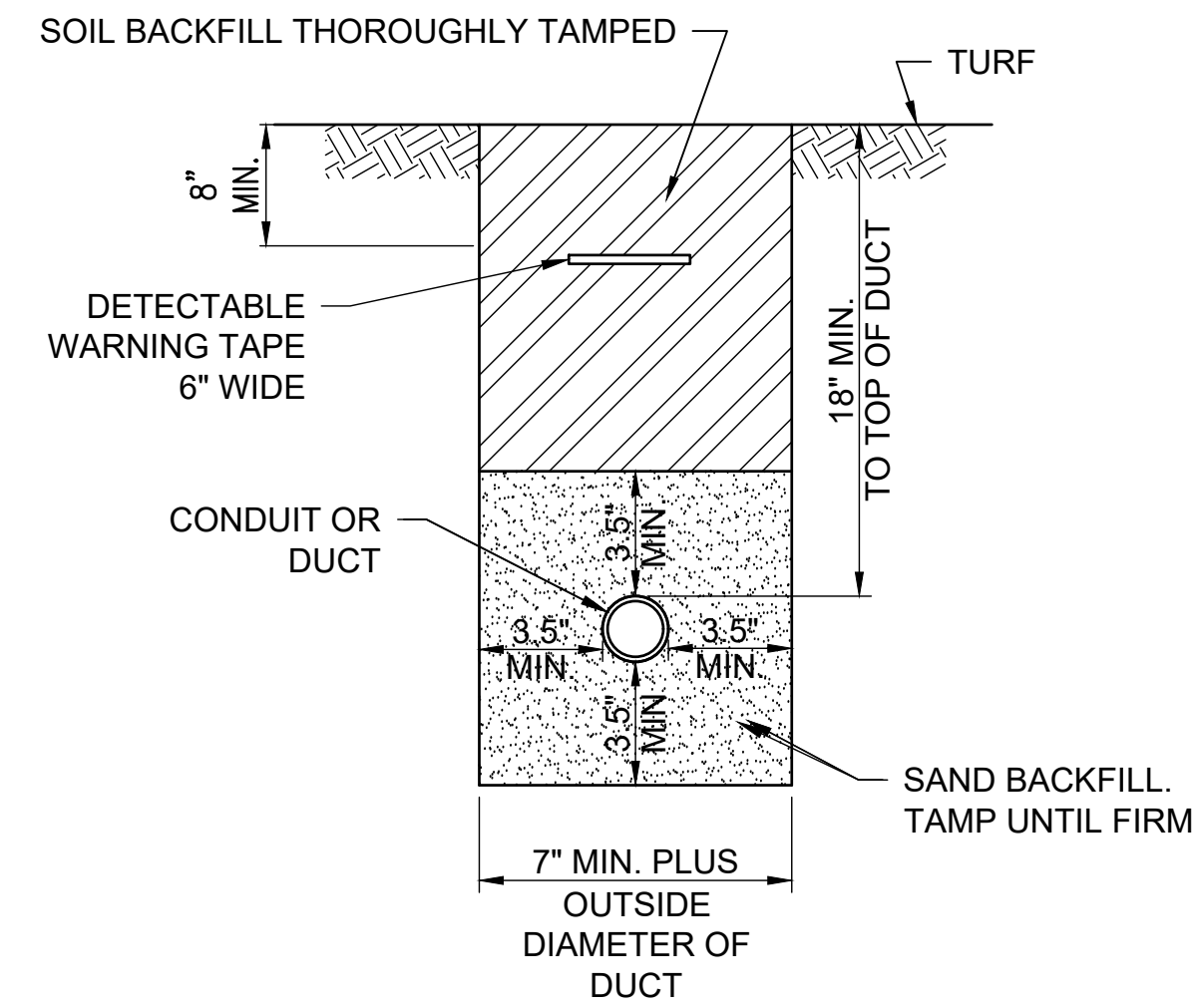
GATE OPERATOR DETAILS



CONDUIT IN TRENCH - PAVED AREAS
"NOT TO SCALE"



CONDUIT IN TRENCH - NON-PAVEMENT AREAS
"NOT TO SCALE"

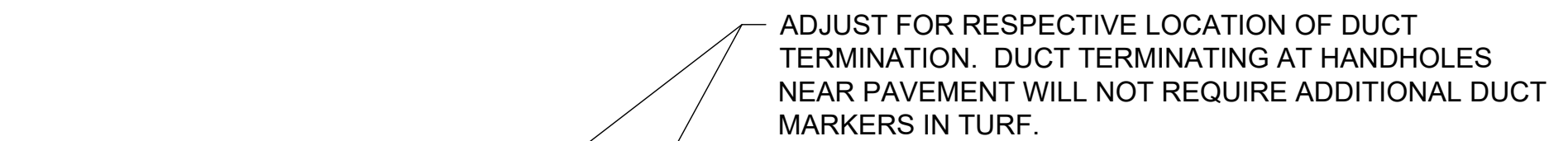


CABLE & DUCT MARKER NOTES:

1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED AND 30" MIN BELOW FINISHED GRADE IN PAVED AREAS.
 - A. REDUCE LETTER SIZE TO 3" HIGH, 2" WIDE.
 - B. INCREASE THE MARKER SIZE TO 30" X 30".
 - C. PROVIDE ADDITIONAL MARKERS PLACED SIDE BY SIDE.
5. EMPLOY THE FOLLOWING METHODS WERE ADDITIONAL SPACE TO FIT LEGEND IS REQUIRED:

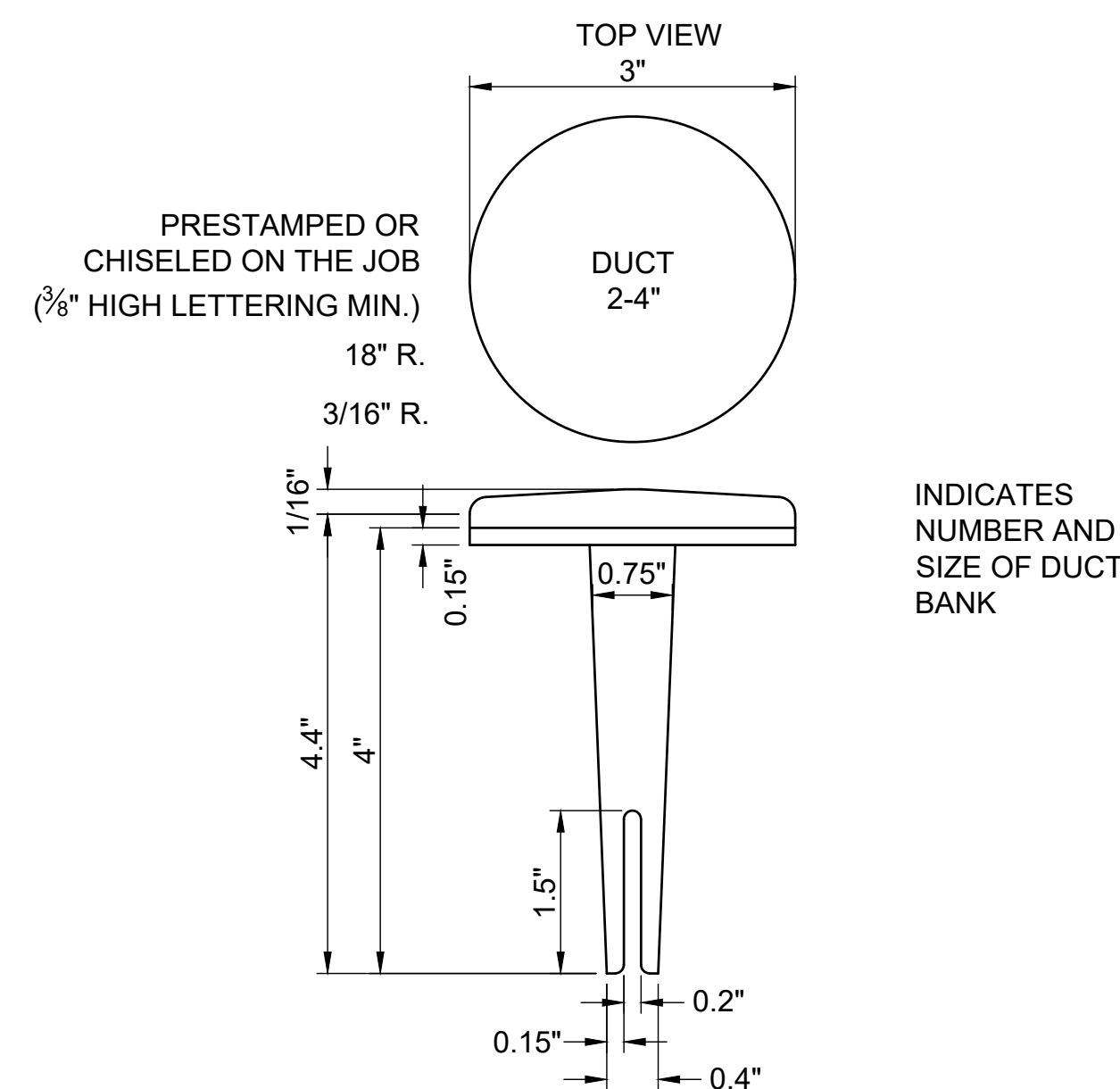
DUCT BANK NOTES:

1. DIMENSIONS FOR COVERAGE AND SEPARATION BETWEEN DUCTS ARE MINIMUM FOR SECURED AREAS AT AIRPORTS.
2. TRENCHES WITH MORE THAN TWO CONDUITS OR DUCTS SHALL BE INCREASED 3" IN WIDTH PLUS DIAMETER OF RESPECTIVE DUCT FOR EACH ADDITIONAL CONDUIT, OR DUCT; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
3. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS. MINIMUM COVER REQUIREMENTS FOR CABLES AND DUCTS AT AIRPORT RUNWAYS AND ADJACENT AREAS WHERE TRESPASSING IS PROHIBITED IS 18 INCHES PER NEC 300.5 AND 300.50. COVER IS DEFINED AS THE SHORTEST DISTANCE IN INCHES MEASURED BETWEEN A POINT ON THE TOP SURFACE OF ANY DIRECT-BURIED CONDUCTOR, CABLE, CONDUIT, OR OTHER RACEWAY AND THE TOP SURFACE OF FINISHED GRADE, CONCRETE OR SIMILAR COVER.
4. HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
5. COMMUNICATION CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, OR HANDHOLE WITH POWER CIRCUITS.
6. DUCT AND CONDUIT INTERFACE TO HANDHOLES OR MANHOLES WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCT WORK OR DUCT PAY ITEM
7. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.



UNDERGROUND ELECTRICAL DUCT

(NOT TO SCALE)

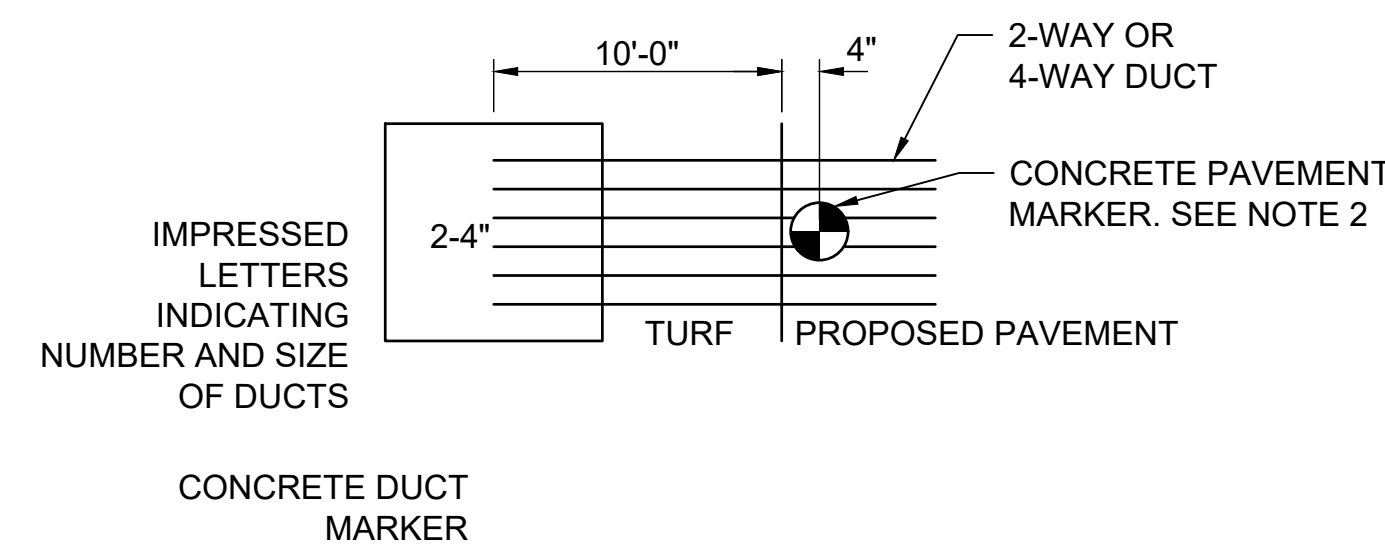


INDICATES NUMBER AND SIZE OF DUCT BANK

BITUMINOUS PAVEMENT DUCT MARKERS

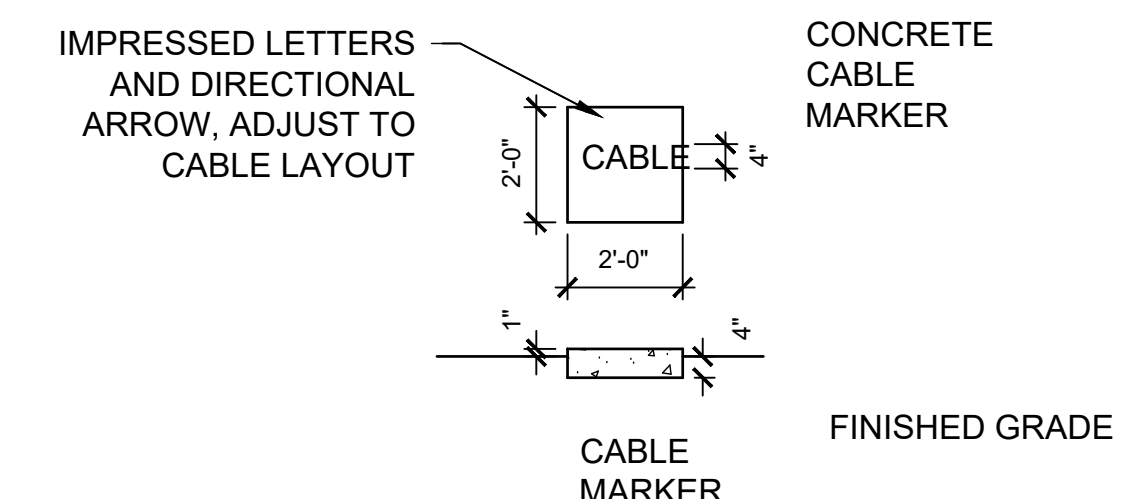
"NOT TO SCALE"

- NOTES:
1. TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.
 2. BRASS DUCT MARKERS ARE AVAILABLE FROM G&S FOUNDRY & MANUFACTURING CO., INC., 210 KASKASKIA DRIVE, RED BUD, IL 62278, PHONE: (618)-282-4114



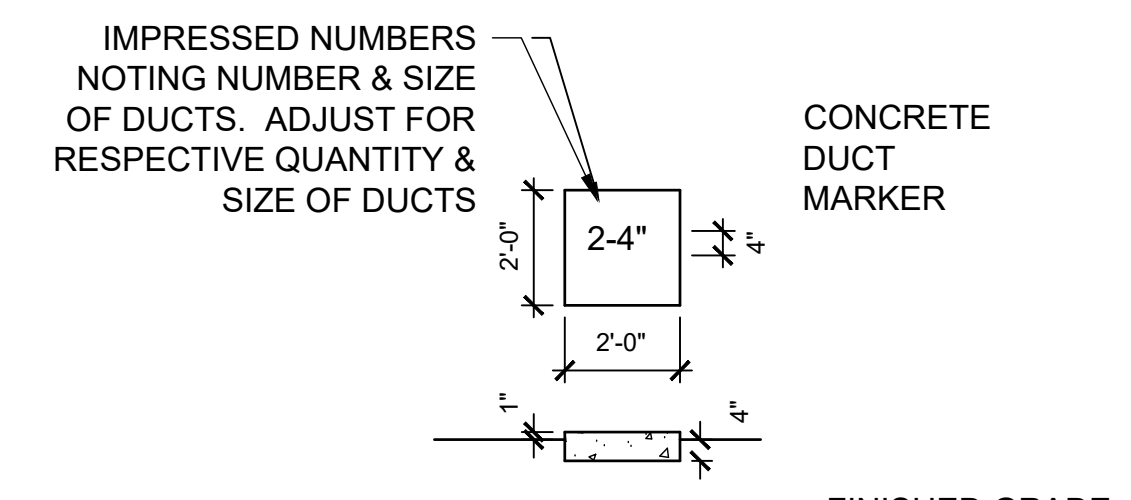
DUCT MARKER DETAIL

"NOT TO SCALE"



TURF CABLE MARKERS

"NOT TO SCALE"



TURF DUCT MARKERS

"NOT TO SCALE"

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

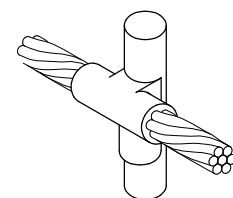
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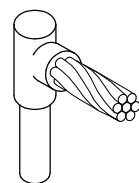
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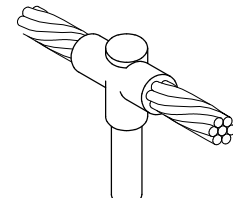
CONDUIT AND DUCT DETAILS



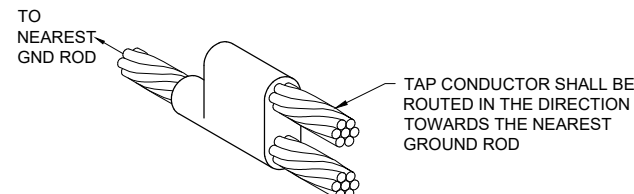
CABLE TO GROUND ROD



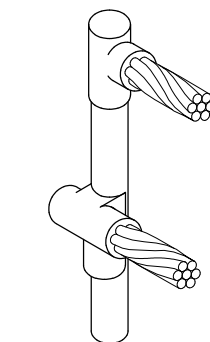
CABLE TO GROUND ROD



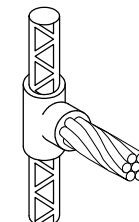
CABLE TO GROUND ROD



CABLE TO CABLE
HORIZONTAL PARALLEL TAP



CABLES TO GROUND ROD

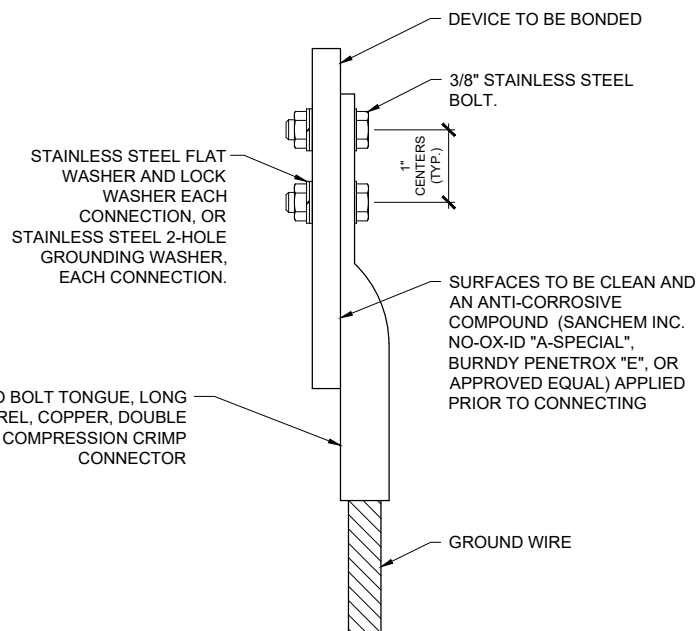


CABLE TO REBAR

DETAIL NOTES

- ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY PENTAIR ERICO PRODUCTS, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES OR APPROVED EQUAL. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 80 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.

EXOTHERMIC WELD DETAILS

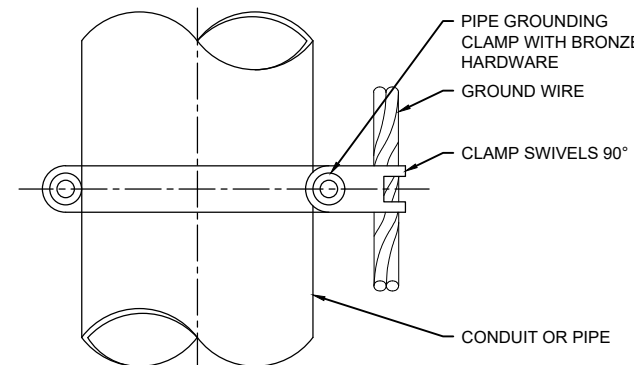
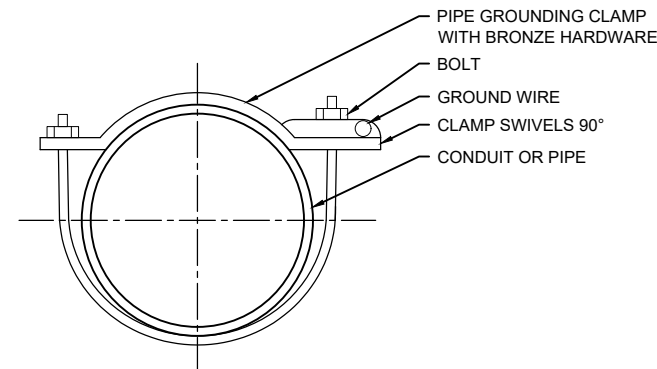


2 HOLE LONG BARREL COMPRESSION LUG TABLE (OR APPROVED EQUAL)			
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#8 AWG STRANDED	YA8C-2TC38	256-30695-1157	BBLU-8D-2TC38
#6 AWG SOLID	YA8C-2TC38 OR YGA6C-2TC38E2G1		
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38	256-30695-1160	BBLU-3D-2TC38
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162	BBLU-1/0D-2TC38
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116	BBLU-2/0D-2TC38
#3/0 AWG STRANDED	YA27-2TC38	54816BE	BBLU-3/0D-2TC38
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117	BBLU-4/0D-2TC38

NOTES

- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIPT MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC APTH FROM ENCIRCLING THE CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR APPROVED EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

GROUNDING LUG CONNECTION DETAIL



PIPE GROUNDING CLAMP TABLE (OR APPROVED EQUAL)		
BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PIPE SIZE
GAR3902-BU	3902BU	1/2" - 1"
GAR3903-BU	3903BU	1 1/4" - 2"
GAR3904-BU	3904BU	2 1/2" - 3 1/2"
GAR3905-BU	3905BU	4" - 5"
GAR3906-BU	3906BU	6"

NOTES

- PIPE GROUNDING CLAMPS SHALL HAVE BRONZE HARDWARE, BE CORROSION RESISTANT, SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE, & UL 467 LISTED.
- PENN-UNION TYPE "GPL" SERIES PIPE GROUNDING CLAMPS PROPERLY SIZED FOR THE RESPECTIVE PIPE AND GROUND WIRE ARE ALSO ACCEPTABLE.
- HARGER CPC AND APC SERIES PIPE GROUNDING CLAMPS PROPERLY SIZED FOR THE RESPECTIVE PIPE AND GROUND WIRE ARE ALSO ACCEPTABLE.

PIPE/CONDUIT GROUNDING CLAMP DETAIL

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

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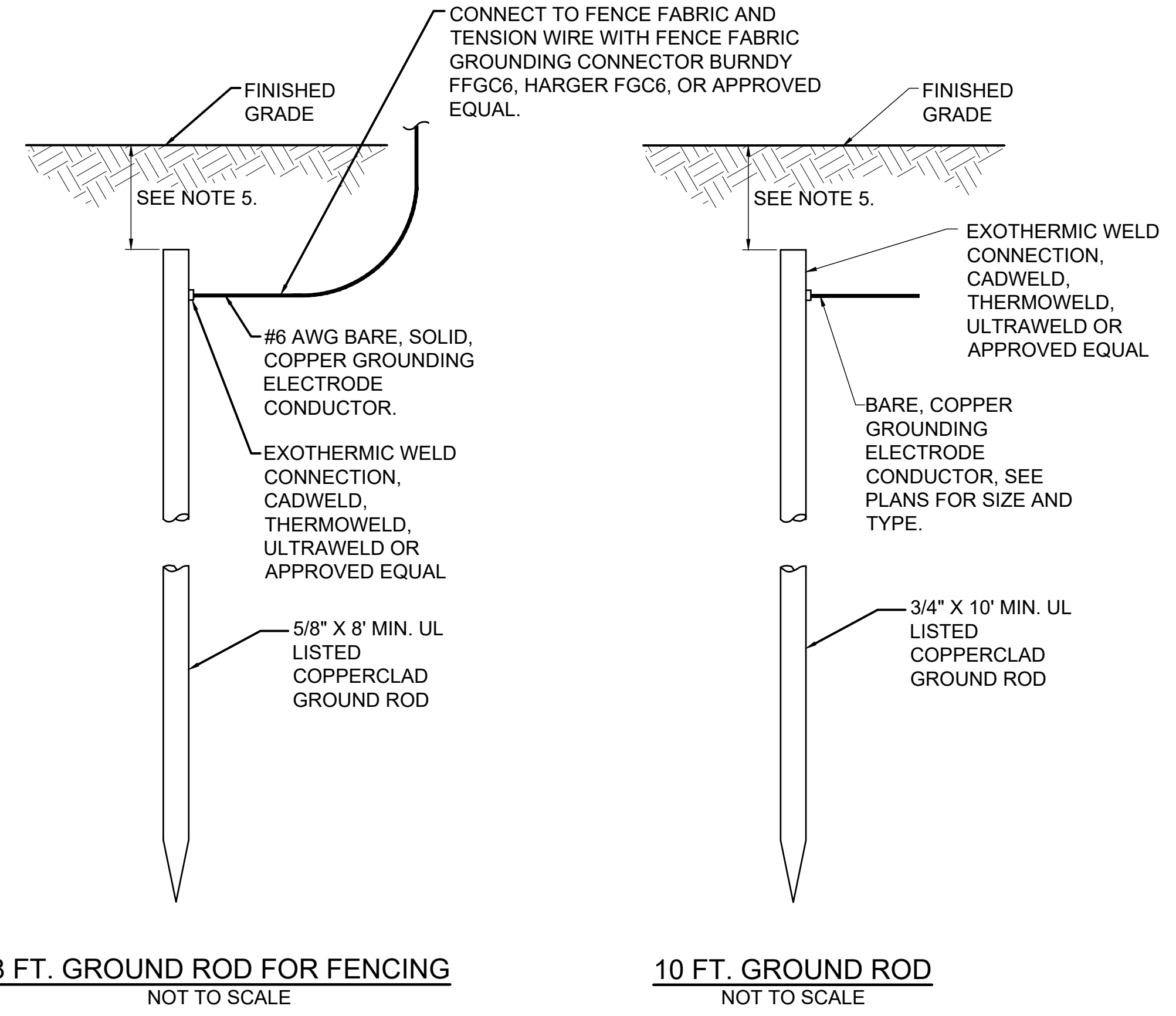
GROUNDING DETAILS

GROUNDING NOTES

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING AS MAY BE NECESSARY OR REQUIRED TO MAKE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE LATEST NATIONAL ELECTRICAL CODE (NFPA 70) IN FORCE AND AS DETAILED HEREIN. THE RELIABILITY OF THE GROUNDING SYSTEM IS DEPENDENT ON CAREFUL, PROPER INSTALLATION AND CHOICE OF MATERIALS. IMPROPER PREPARATION OF SURFACES TO BE JOINED TO MAKE AN ELECTRICAL PATH, LOOSE JOINTS OR CORROSION CAN INTRODUCE IMPEDANCE THAT WILL SERIOUSLY IMPAIR THE ABILITY OF THE GROUND PATH TO PROTECT PERSONNEL AND EQUIPMENT AND TO ABSORB TRANSIENTS THAT CAN CAUSE NOISE IN COMMUNICATIONS CIRCUITS. THE FOLLOWING FUNCTIONS ARE PARTICULARLY IMPORTANT TO ENSURE A RELIABLE GROUND SYSTEM:

- FURNISH AND INSTALL GROUND RODS AS DETAILED HEREIN. GROUND RODS FOR ELECTRICAL INSTALLATIONS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS FOR FENCE GROUNDING SHALL BE MINIMUM 5/8-IN. DIAMETER BY 8-FT. LONG, UL LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS SHALL BE SPACED OR AS DETAILED ON THE RESPECTIVE PLANS, AND IN NO CASE SPACED LESS THAN ONE ROD LENGTH APART. ALL CONNECTIONS TO GROUND RODS, GROUND FIELDS, AND/OR THE GROUND RING SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY PENTAIR ERICO PRODUCTS, INC., THERMOWELD BY CONTINENTAL INDUSTRIES, ULTRAWELD BY HARGER, OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS OR AT BURIED GROUNDING ELECTRODE CONDUCTORS.
- CONTRACTOR SHALL TEST EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND FIELD SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER OF RECORD FOR FURTHER DIRECTION. ALSO REFER TO EOR-047643 FOR ADDITIONAL INFORMATION ON GROUNDING REQUIREMENTS, WHERE APPLICABLE. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/TECHNICIAN AND THE PROJECT ENGINEER OF RECORD.
- ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.
- ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANCHEM INC. "NO-OX-ID "A-SPECIAL" COMPOUND, BURNDY PENETROX E, OR APPROVED EQUAL.
- METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2020 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.
- METALLIC RACEWAY FITTINGS SHALL BE MADE UP TIGHT TO PROVIDE A PERMANENT LOW IMPEDANCE PATH FOR ALL CIRCUITS. METAL CONDUIT TERMINATIONS IN ENCLOSURES SHALL BE BONDED TO THE ENCLOSURE WITH UL-LISTED FITTINGS SUITABLE FOR GROUNDING. PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING SERVICE EQUIPMENT (METER BASE, CT CABINET, MAIN SERVICE BREAKER ENCLOSURE, ETC.). PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING AN ENCLOSURE THROUGH CONCENTRIC OR ECCENTRIC KNOCKOUTS THAT ARE PUNCHED OR OTHERWISE FORMED SO AS TO IMPAIR THE ELECTRICAL CONNECTION TO GROUND. STANDARD LOCKNUTS OR BUSHINGS SHALL NOT BE THE SOLE MEANS FOR BONDING WHERE A CONDUIT ENTERS AN ENCLOSURE THROUGH A CONCENTRIC OR ECCENTRIC KNOCKOUT.
- ALL CONNECTIONS, LOCATED ABOVE GRADE, BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS SHALL BE MADE USING UL-LISTED DOUBLE COMPRESSION CRIMP TYPE CONNECTORS OR UL-LISTED BOLTED GROUND CONNECTORS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, THOMAS AND BETTS, PENN-UNION OR EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.
- PROVIDE ALL BOXES FOR PROPOSED OUTLETS, SWITCHES, CIRCUIT BREAKERS, ETC. WITH GROUNDING SCREWS. PROVIDE ALL PANELBOARD, SWITCHGEAR, ETC., ENCLOSURES WITH GROUNDING BARS WITH INDIVIDUAL SCREWS, LUGS, CLAMPS, ETC., FOR EACH OF THE GROUNDING CONDUCTORS THAT ENTER THEIR RESPECTIVE ENCLOSURES.
- EACH NEW FEEDER CIRCUIT AND/OR BRANCH CIRCUIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. METAL RACEWAY OR CONDUIT SHALL NOT MEET THIS REQUIREMENT. THE EQUIPMENT GROUND WIRE FROM EQUIPMENT SHALL NOT BE SMALLER THAN ALLOWED BY 2020 NEC TABLE 250-122 "MINIMUM SIZE CONDUCTORS OR GROUNDING RACEWAY AND EQUIPMENT." WHEN CONDUCTORS ARE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP, EQUIPMENT-GROUNDING CONDUCTORS SHALL BE ADJUSTED PROPORTIONATELY ACCORDING TO CIRCULAR MIL AREA. ALL EQUIPMENT GROUND WIRES SHALL BE COPPER, EITHER BARE OR INSULATED GREEN IN COLOR. WHERE THE EQUIPMENT GROUNDING CONDUCTORS ARE INSULATED, THEY SHALL BE IDENTIFIED BY THE COLOR GREEN, AND SHALL BE THE SAME INSULATION TYPE AS THE PHASE CONDUCTORS.

- ALL EXTERIOR METAL CONDUIT, WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF MANHOLES, HANDHOLES, NON-METALLIC JUNCTION BOXES, ETC., SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE DUCT RUN, AND AT EACH END, WITH A COPPER-BONDING JUMPER SIZED IN CONFORMANCE WITH 2020 NEC 250-102. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE (SUCH AS A MOTOR CONTROL CENTER, SWITCHBOARD, ETC) WHERE THERE IS NOT ELECTRICAL CONTINUITY WITH THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT SIZED PER 2020 NEC 250-102.
- IT IS THE INTENT OF THIS SPECIFICATION THAT ALL MOTOR FRAMES, PUMP BASES ELECTRICAL EQUIPMENT ENCLOSURES, PANEL HOUSINGS, CONDUITS, BOXES, ETC. HAVE A CONTINUOUS COPPER WIRE GROUND CONNECTION AND SHALL BE POSITIVELY BONDED TO THE RESPECTIVE GROUNDING SYSTEM. CONDUIT CONNECTORS WILL NOT BE CONSIDERED AS ADEQUATE GROUNDING.
- PROVIDE A POSITIVE GROUND BOND FOR ALL OUTLET BOXES, ELECTRICAL EQUIPMENT ENCLOSURES, GROUNDING RECEPTACLES, TOGGLE SWITCHES, ETC. INSTALL A GROUNDING CONDUCTOR IN ALL WIRE AND CABLE RACEWAYS. GROUND CONDUCTOR TO HAVE 600-VOLT INSULATION AND BE IDENTIFIED BY A CONTINUOUS GREEN COLOR COATING. THEY SHALL BE USED SOLELY FOR GROUNDING PURPOSES AND BE ENTIRELY SEPARATE FROM WHITE GROUNDED NEUTRAL CONDUCTOR, EXCEPT AT SUPPLY SIDE OF SERVICE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.
- EACH AND ALL GROUNDED CASED AND METAL PARTS ASSOCIATED WITH ELECTRICAL EQUIPMENT SHALL BE TESTED FOR CONTINUITY OF CONNECTION WITH GROUND BUS SYSTEM BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE.
- ALL CONNECTIONS BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS ABOVE GRADE SHALL BE MADE USING BOLTED GROUND CONNECTORS. GROUND LUGS SHALL BE PROVIDED IN ALL ENCLOSURES AND WIRING TERMINATION JUNCTION BOXES. EQUIPMENT GROUNDS AND GROUNDING CONDUCTOR SHALL BE CONNECTED TO THESE GROUND LUGS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, DOSSERT CORPORATION, ILSCO CORPORATION, PENN-UNION CORPORATION, THOMAS & BETTS, OR APPROVED EQUAL.
- BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.
- BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.
- INSTALL GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS AND SEPARATE GROUND CONDUCTORS IN SCHEDULE 80 PVC CONDUIT OR EXPOSED WHERE ACCEPTABLE TO LOCAL CODES. WHERE GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS OR INDIVIDUAL GROUND CONDUCTORS ARE RUN IN PVC CONDUIT, DO NOT COMPLETELY ENIRCLE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. USE NON-METALLIC REINFORCED FIBERGLASS STRUT SUPPORT. WHERE METAL CONDUIT CLAMPS ARE INSTALLED, USE NYLON BOLTS, NUTS, WASHERS AND SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT. THIS IS REQUIRED TO AVOID GIRDLING OF GROUND CONDUCTORS. GIRDLING OF A GROUND CONDUCTOR IS THE RESULT OF PLACING THE CONDUCTOR IN A RING OF MAGNETIC MATERIAL. THIS RING COULD BE A METALLIC CONDUIT, U-BOLT OR STRUT SUPPORT PIPE CLAMP, OR OTHER SUPPORT HARDWARE. THE RESULT OF GIRDLING GROUND CONDUCTORS SIGNIFICANTLY INCREASES THE INDUCTIVE IMPEDANCE OF THE GROUND CONDUCTOR. INDUCTIVE AND CAPACITIVE IMPEDANCE IS A TYPE OF RESISTANCE THAT OPPOSES THE FLOW OF ALTERNATING CURRENT. ANY INCREASE IN THE IMPEDANCE OF A GROUND CONDUCTOR REDUCES ITS ABILITY TO EFFECTIVELY MITIGATE RADIO FREQUENCY NOISE IN THE GROUND SYSTEM. THE CONDITION WHERE A GROUND CONDUCTOR IS GIRDLING DURING A LIGHTNING STRIKE RESULTS IN PHENOMENA KNOWN AS SURGE IMPEDANCE LOADING. SURGE IMPEDANCE LOADING IS A RESULT OF VOLTAGE AND CURRENT REACHING 500,000 VOLTS AND 10,000 AMPS FOR A SHORT DURATION. GIRDLING FURTHER INCREASES THE IMPEDANCE AT LIGHTNING FREQUENCIES OF 100 KILOHERTZ TO 100 MEGAHERTZ. AT THESE POWER AND FREQUENCY LEVELS ANY INCREASE IN THE IMPEDANCE OF THE GROUND CONDUCTOR MUST BE CONTROLLED. DURING LIGHTNING DISCHARGE CONDITIONS A LOW INDUCTIVE IMPEDANCE PATH IS MORE IMPORTANT THAN A LOW DC RESISTANCE PATH.
- IF LOCAL CODES DICTATE THAT INDIVIDUAL GROUNDING CONDUCTORS MUST BE RUN IN METAL CONDUIT OR RACEWAY, THEN THE CONDUIT OR RACEWAY MUST BE BONDED AT EACH END OF THE RUN WITH A BONDING JUMPER SIZED EQUAL TO THE INDIVIDUAL GROUNDING CONDUCTOR OR AS REQUIRED BY 2020 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.
- NEVER REMOVE, ALTER, OR ATTEMPT TO REPAIR CONDUCTORS OR CONDUIT SYSTEMS PROVIDING GROUNDING OR ELECTRICAL BONDING FOR ANY ELECTRICAL EQUIPMENT UNTIL ALL POWER IS REMOVED FROM EQUIPMENT. WARN ALL PERSONNEL OF THE UNGROUNDED CONDITION OF THE EQUIPMENT. DISPLAY APPROPRIATE WARNING SIGNS, SUCH AS DANGER TAGS TO WARN PERSONNEL OF THE POSSIBLE HAZARDS.
- GROUNDING WORK AND MODIFICATIONS SHALL NOT BE PERFORMED DURING A THUNDERSTORM OR WHEN A THUNDERSTORM IS PREDICTED IN THE AREA.
- WHERE A CONFLICT IS DETERMINED WITH RESPECT TO GROUNDING REQUIREMENTS PER MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE PROJECT ENGINEER OF RECORD FOR FURTHER DIRECTIONS.
- GROUND RODS SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA FROM 100 PERCENT DOMESTIC STEEL TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENTS, AND/OR THE STEEL PRODUCTS PROCUREMENT ACT (30 ILS 565).



8 FT. GROUND ROD FOR FENCING
NOT TO SCALE

10 FT. GROUND ROD
NOT TO SCALE

NOTES

- TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
- THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
- COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
- GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.
- TOP OF GROUND RODS FOR ELECTRICAL INSTALLATIONS SHALL BE 12" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN. TOP OF GROUND RODS FOR FENCING APPLICATIONS (NON-ELECTRICAL INSTALLATIONS) SHALL BE 6" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN.
- GROUND RODS FOR FENCING SHALL BE A MINIMUM 5/8-INCH DIAMETER BY 8-FT LONG UL LISTED COPPER CLAD.
- GROUND RODS FOR GATE OPERATORS AND OTHER ELECTRICAL EQUIPMENT SHALL BE A MINIMUM 3/4-INCH DIAMETER BY 10-FT LONG UL LISTED COPPER CLAD.
- CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT IN URBAN AREAS AND 1,000 FT IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 FT TO 50 FT AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED FENCE FABRIC GROUND CLAMPS; BURNDY CAT. NO. FFGC6, HARGER CAT NO. FGC6, OR APPROVED EQUAL. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED CONNECTORS SUITABLE FOR DIRECT BURY IN EARTH OR EXOTHERMIC WELD TYPE CONNECTORS. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG BARE SOLID COPPER CONDUCTOR.

GROUND RODS
NOT TO SCALE



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REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

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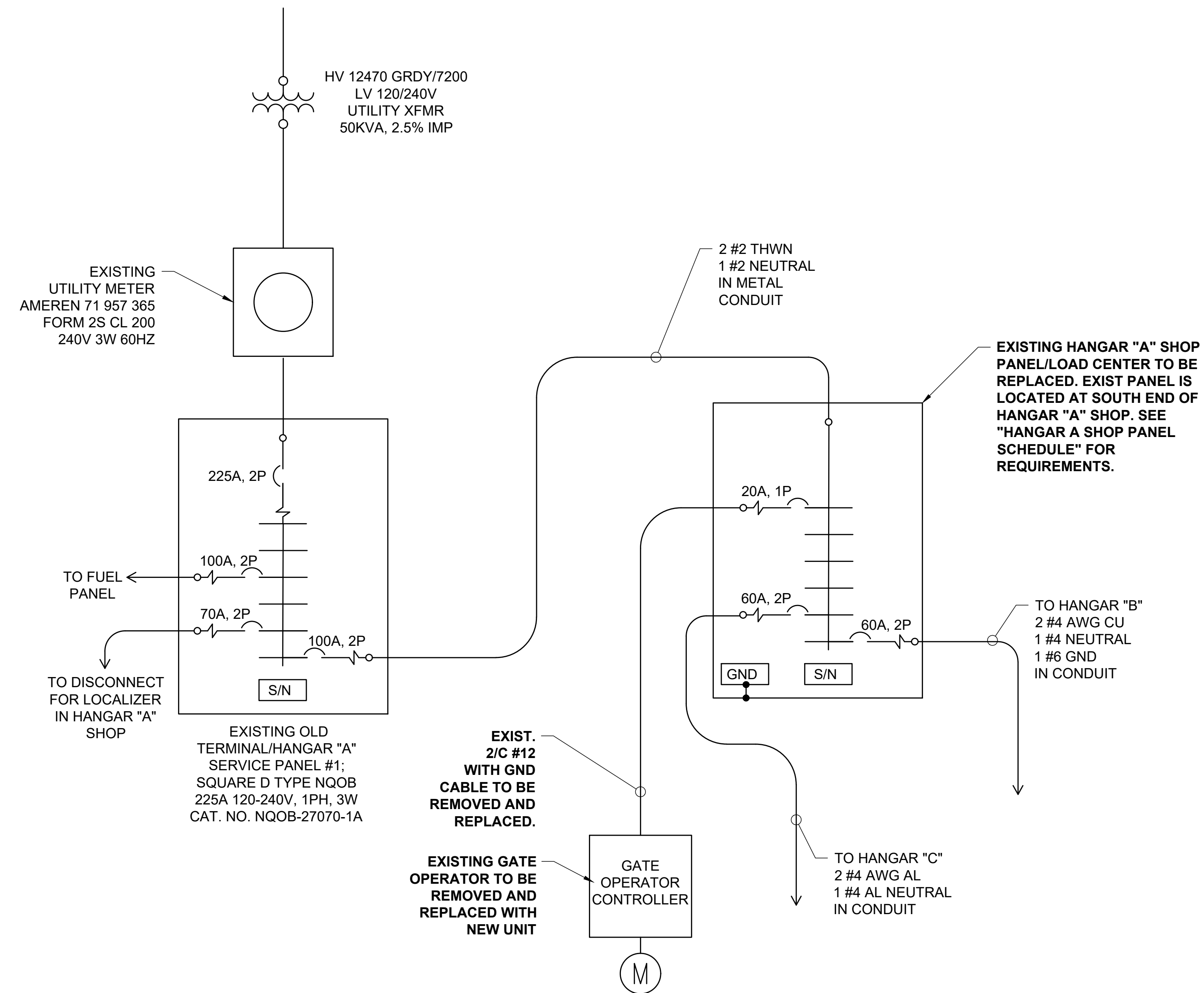
GROUNDING NOTES

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NOTES:

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT). SAFETY OF PERSONNEL IS THE PRIORITY.
2. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, RELOCATING, ADJUSTING, WORKING ON, INSTALLING, OR CONNECTING THE RESPECTIVE PANEL, EQUIPMENT, LIGHT, GATE OPERATOR, OR OTHER DEVICE.
4. REMOVAL OF EXISTING ELECTRIC SLIDE GATE WILL BE PAID FOR UNDER ITEM AR162908 - REMOVE ELECTRIC GATE.



**EXISTING ELECTRICAL ONE-LINE DIAGRAM FOR
SOUTH ACCESS GATE OPERATOR**

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
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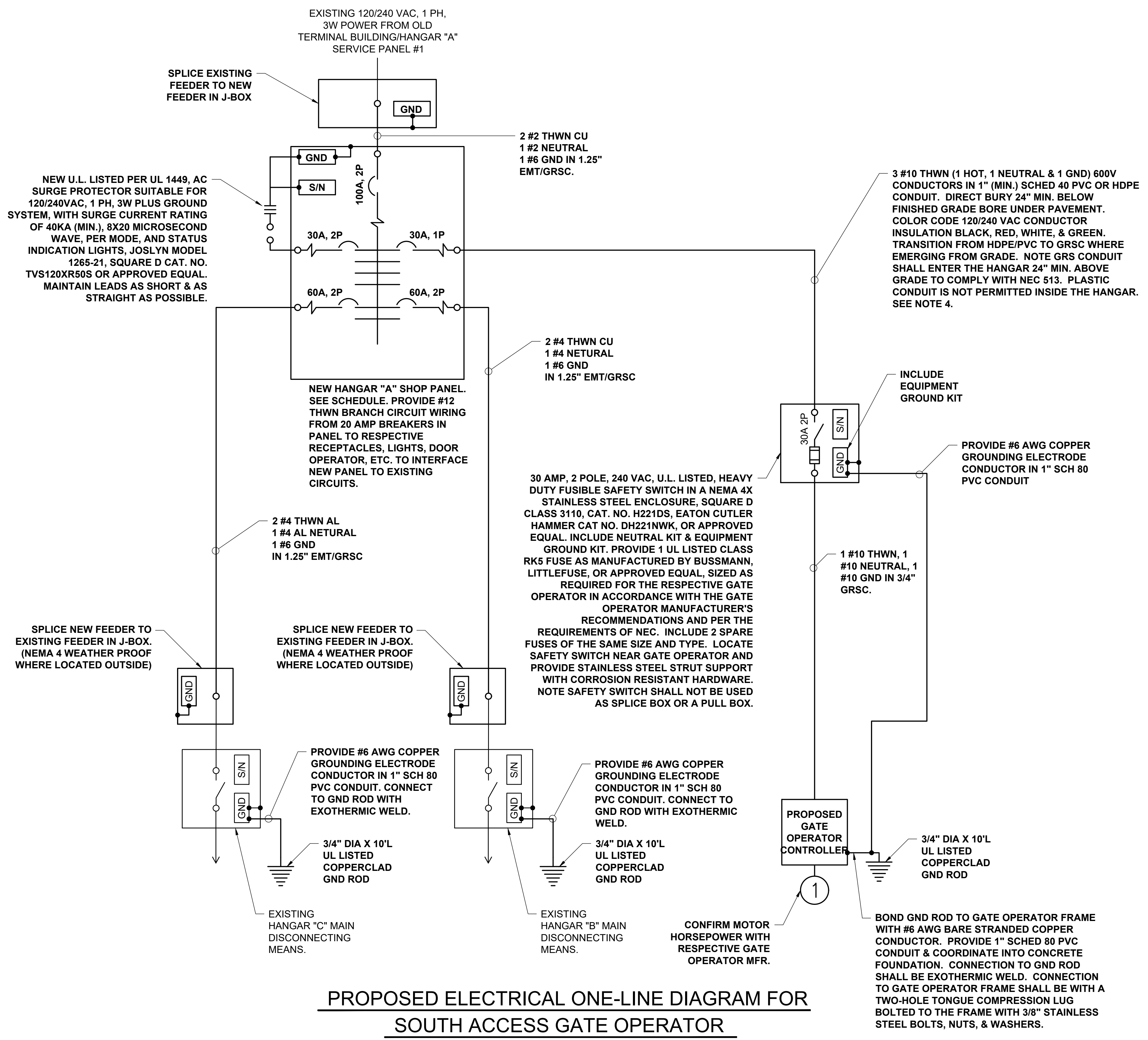
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EXISTING ELEC
ONE-LINE DIAGRAM
FOR SOUTH ACCESS
GATE OPERATOR



ELECTRICAL NOTES

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PER NEC 513 THE ENTIRE AREA OF THE HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLE CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS 1, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR. AREAS IN THE VICINITY OF AIRCRAFT ARE ALSO CLASSIFIED AS HAZARDOUS AS DEFINED BY NEC 513. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS ANY OTHER APPLICABLE CODES AND REQUIREMENTS.
- ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX/DUPLEX RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.
- FIELD VERIFY CONDUIT & CABLE ROUTING.
- REPLACEMENT OF HANGAR "A" SHOP PANEL AND ASSOCIATED EQUIPMENT, MATERIALS, CONDUIT, WIRING, GROUNDING AND INCIDENTALS WILL BE PAID FOR UNDER ITEM AR109922 REPLACE ELECTRICAL EQUIPMENT PER L. SUM.
- NEW ELECTRIC SLIDE GATE AND ALL ASSOCIATED EQUIPMENT, MATERIALS, CONDUITS, WIRING, GROUNDING, LABOR, TESTING, RESTORATION, AND INCIDENTALS WILL BE PAID FOR UNDER ITEM AR162716 ELECTRIC GATE - 16' PER. EACH.



PROPOSED ELECTRICAL ONE-LINE DIAGRAM FOR SOUTH ACCESS GATE OPERATOR

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

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PROPOSED ELEC ONE-LINE DIAGRAM FOR SOUTH ACCESS GATE



HANGAR "A" SHOP PANEL						
CKT #	DUTY	SIZE		SIZE	DUTY	CKT #
1	AC SURGE PROTECTOR	30A, 2P		20A, 2P	(UNKNOWN FIELD VERIFY)	2
3				20A, 1P	RECEPTACLES	4
5	SOUTH ACCESS GATE OPERATOR	20A, 1P		20A, 1P	(UNKNOWN FIELD VERIFY)	6
7	SHOP LIGHTS	20A, 1P		20A, 1P	RECEPTACLES	8
9	(UNKNOWN FIELD VERIFY)	20A, 1P		60A, 2P	HANGAR "B" FEEDER	10
11	(UNKNOWN FIELD VERIFY)	20A, 1P			BLANK	12
13	OH DOOR OPERATOR	20A, 1P			BLANK	14
15	(UNKNOWN FIELD VERIFY)	20A, 1P			BLANK	16
17	HANGAR "C" FEEDER	60A, 2P			BLANK	18
19					BLANK	20
21	BLANK				BLANK	22
23	BLANK				BLANK	24



100AMP (MIN), 120/240VAC, 1 PHASE, 3 WIRE 24 CIRCUIT (MIN.) PANELBOARD OR LOAD CENTER WITH 100AMP, 2 POLE MAIN BREAKER RATED 22,000 AIC AT 240VAC IN A NEMA 1 ENCLOSURE UL-LISTED SUITABLE FOR SERVICE ENTRANCE. PANEL SHALL ACCOMMODATE FEEDER AND BRANCH BREAKERS UP TO 100AMP, 2 POLE FRAME & TRIP RATING.

NOTES

- ALL BRANCH CIRCUIT & FEEDER BREAKERS SHALL HAVE 10,000 AIC (MIN.) AT 120/240 VAC.
- CIRCUIT BREAKERS AND WIRING SHALL BE SIZED FOR THE ACTUAL EQUIPMENT FURNISHED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S RECOMMENDATION AND N.E.C. CONTRACTOR SHALL ADJUST CIRCUIT BREAKER SIZES & WIRING WHERE APPLICABLE TO CONFORM WITH THE MANUFACTURER'S RECOMMENDATIONS AND N.E.C.
- FOR A BOTTOM FEED PANEL, MOVE AC SURGE PROTECTOR BREAKER DOWN TO POSITIONS 21 AND 23 OR 22 AND 24.
- LOCATE REPLACEMENT PANEL MINIMUM OF 30 INCHES FROM CORNER TO PROVIDE PROPER WORKING CLEARANCE. PANEL TOP SHALL NOT EXCEED 6 FEET ABOVE FLOOR. PANEL BOTTOM SHALL NOT BE LESS THAN 24 INCHES ABOVE FLOOR, TO COMPLY WITH NEC 513.
- INCLUDE WITH THE PANELBOARD A U.L. LISTED PER U.L. 1449, AC SURGE PROTECTOR SUITABLE FOR 120/240 VAC, 1 PH 3W PLUS GROUND SYSTEM, WITH SURGE CURRENT RATING OF 40KA (MIN.) 8X20 MICROSECOND WAVE, AND STATUS INDICATION LIGHTS, JOSLYN MODEL 1265-21, SQUARE D CAT. NO. TVS120XR50S OR APPROVED EQUAL. INSTALL THE CIRCUIT BREAKER FOR THE SURGE PROTECTOR DEVICE AS CLOSE AS POSSIBLE TO THE PANELBOARD MAIN BREAKER OR MAIN LUGS. MAINTAIN LEADS AS SHORT & AS STRAIGHT AS POSSIBLE.
- INTERCEPT EXISTING 100AMP, 120/240VAC, 1PH, 3-WIRE FEEDER FROM OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL, SPLICE TO NEW FEEDER AND EXTEND TO REPLACEMENT PANEL. REPLACEMENT OF FEEDER IS ALSO ACCEPTABLE.
- INTERCEPT EXISTING 60AMP, 120/240VAC, 1PH, 3-WIRE FEEDER FROM EXISTING SHOP PANEL TO HANGAR "B", SPLICE IN J-BOX AND EXTEND IN METAL CONDUIT TO REPLACEMENT PANEL. J-BOX LOCATED OUTDOORS SHALL BE RATED NEMA 4 OR NEMA 3R WITH HINGED COVER.
- INTERCEPT EXISTING 60AMP, 120/240VAC, 1PH, 3-WIRE FEEDER FROM EXISTING SHOP PANEL TO HANGAR "C", SPLICE IN J-BOX AND EXTEND IN METAL CONDUIT TO REPLACEMENT PANEL. J-BOX LOCATED OUTDOORS SHALL BE RATED NEMA 4 OR NEMA 3R WITH HINGED COVER.
- PROVIDE REPLACEMENT 20AMP, 120VAC, 240VAC, AND/OR 120/240VAC BRANCH CIRCUIT WIRING (MIN. #12 THWN CU) IN EMT FROM REPLACEMENT PANEL TO EACH FIRST RESPECTIVE RECEPTACLE, LIGHT, SWITCH, OH DOOR OPERATOR, OR OTHER DEVICE TO INTERFACE TO EXISTING BRANCH CIRCUITS. INCLUDE EQUIPMENT GROUND WIRES WITH BRANCH CIRCUITS.

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

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DESIGN BY: KNL 09/09/2023
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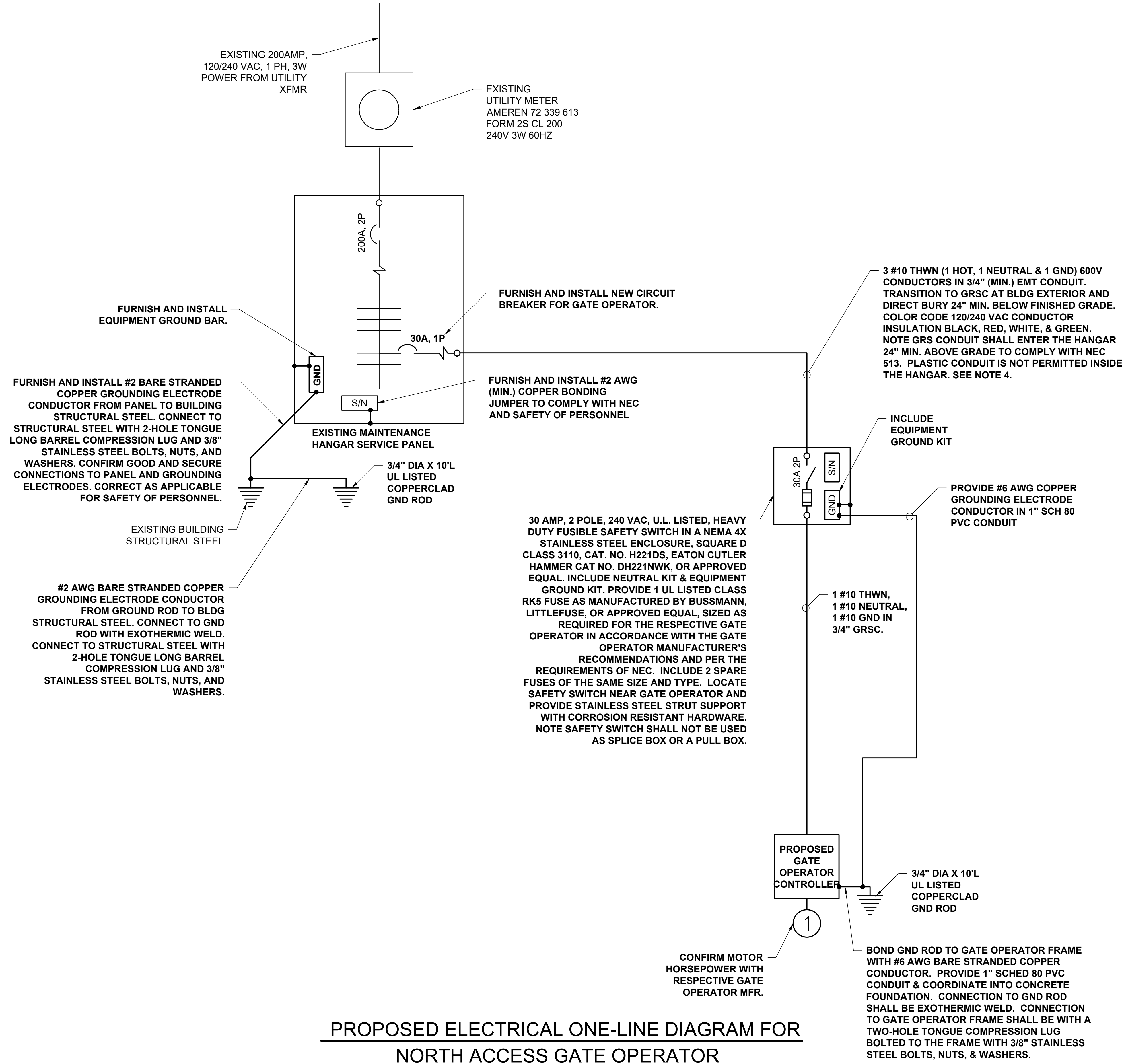
SHEET TITLE

HANGAR A SHOP PANEL SCHEDULE



ELECTRICAL NOTES

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PER NEC 513 THE ENTIRE AREA OF THE HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLE CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS 1, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR. AREAS IN THE VICINITY OF AIRCRAFT ARE ALSO CLASSIFIED AS HAZARDOUS AS DEFINED BY NEC 513. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS ANY OTHER APPLICABLE CODES AND REQUIREMENTS.
- ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX/DUPLEX RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.
- FIELD VERIFY CONDUIT & CABLE ROUTING.
- NEW ELECTRIC SLIDE GATE AND ALL ASSOCIATED EQUIPMENT, MATERIALS, CONDUITS, WIRING, GROUNDING, LABOR, TESTING, RESTORATION, AND INCIDENTALS WILL BE PAID FOR UNDER ITEM AR162716 ELECTRIC GATE - 16' PER. EACH.



**PROPOSED ELECTRICAL ONE-LINE DIAGRAM FOR
NORTH ACCESS GATE OPERATOR**

NOV 16, 2023 9:25 AM PEARC00397 1:22JOBS22A0125DCADAIRPORTSHEETE-604.DWG

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

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PROPOSED ELEC
ONE-LINE DIAGRAM
FOR NORTH ACCESS
GATE



FENCING SIGN DETAIL

NOT TO SCALE

SIZED TO ACCOMMODATE TEXT, CONSTRUCTED OF DURABLE MATERIALS, CONTRASTING COLORS, AND REFLECTIVE MATERIAL SIGN BLANK 0.080" ALUMINUM

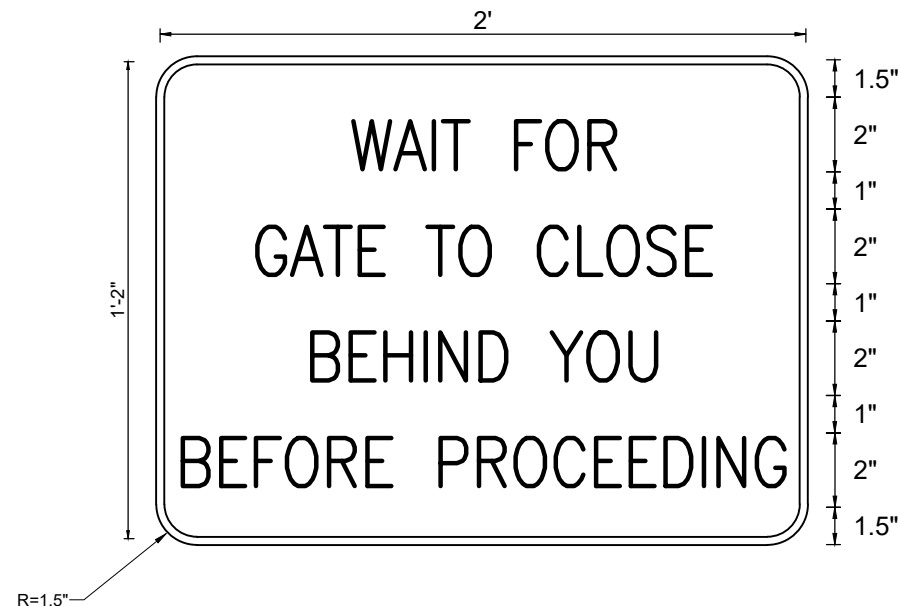
COLORS:
LEGEND FOR "NO TRESPASSING" - RED TEXT
BACKGROUND - WHITE (RETROREFLECTIVE)

LEGEND FOR REMAINING - BLACK TEXT
BACKGROUND - WHITE (RETROREFLECTIVE)

TEXT:
MUTCD/FHWA (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES/FEDERAL HIGHWAY ADMINISTRATION)
"SERIES C 2000" OR EQUIVALENT

SIGN NOTES

1. INSTALL SIGNS AT EACH ACCESS GATE AND ALONG FENCE AT SPACING NOT TO EXCEED 100 FEET. SIGNS ALONG FENCE LINE SHALL BE LOCATED SUCH THAT WHEN STANDING AT ONE SIGN, THE OBSERVER IS ABLE TO SEE THE NEXT SIGN IN BOTH DIRECTIONS.
2. TOP OF SIGN SHALL BE INSTALLED APPROXIMATELY ONE FOOT BELOW THE TOP RAIL OF THE FENCE. CONFIRM MOUNTING HEIGHT WITH OWNER REPRESENTATIVE.
3. MOUNT SIGNS TO THE FENCE WITH COMPATIBLE MOUNTING HARDWARE, SUCH AS BRACKETS, BOLTS WASHERS, AND NUTS. THERE IS NO SEPARATE PAY ITEM FOR FURNISHING AND INSTALLING THE SIGNS TO THE FENCE. MOUNTING IS INCLUDED IN THE PAY ITEMS FOR FENCE AND GATES.



ELECTRIC SLIDE GATE SIGN DETAIL

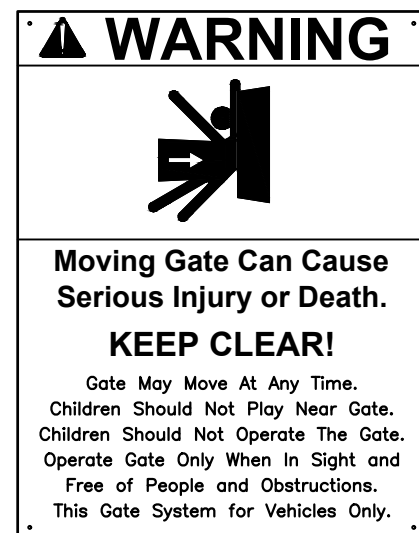
NOT TO SCALE

24" X 14" (MINIMUM)
SIGN BLANK
0.080" ALUMINUM

COLORS:
LEGEND - RED
BACKGROUND - WHITE (RETROREFLECTIVE)

TEXT: MUTCD/FHWA "SERIES C 2000"

INSTALL SIGNS ON EACH SIDE OF ELECTRIC SLIDE GATE



NOTES

1. WARNING SIGNS/PLACARDS AS DETAILED ABOVE OR SIMILAR, SHALL BE INSTALLED WHERE CLEARLY VISIBLE ON BOTH SIDES OF EACH ELECTRIC SLIDE GATE. WARNING SIGNS SHALL BE WEATHERPROOF, CORROSION RESISTANT METAL, AS DETAILED ABOVE (OR SIMILAR), AND IN A ACCORDANCE WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER'S RECOMMENDATIONS. PROVIDE SIGNS FOR EACH ELECTRIC SLIDE GATE (EXISTING AND NEW), ON EACH SIDE OF EACH GATE.

WARNING SIGN DETAIL

REHABILITATE ENTRANCE ROAD AND AUTOMOBILE PARKING LOT; REPLACE FENCE AND GATES

IDA No: MQB-5007
SBGP No: N/A
Contract No.: MB035

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SHEET TITLE

SIGNAGE DETAILS



LEGEND PLATE SCHEDULE	
DEVICE	LABEL
OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #1	OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #1 120/240 VAC, 1-PHASE, 3-WIRE NOTE: THERE IS A SECOND SERVICE PANEL LOCATED ADJACENT TO THIS PANEL
OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #1	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 8,334 AMPS LINE TO LINE 12,501 AMPS LINE TO NEUTRAL ON 9/9/2023 MAX AVAILABLE FAULT CURRENT AT HANGAR "A" SERVICE PANEL #1 WAS CALCULATED TO BE: 7,038 AMPS LINE TO LINE 8,052 AMPS LINE TO NEUTRAL ON 9/9/2023
OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #2	OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #2 120/240 VAC, 1-PHASE, 3-WIRE NOTE: THERE IS A SECOND SERVICE PANEL LOCATED ADJACENT TO THIS PANEL
OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #2	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 8,334 AMPS LINE TO LINE 12,501 AMPS LINE TO NEUTRAL ON 9/9/2023 MAX AVAILABLE FAULT CURRENT AT HANGAR "A" SERVICE PANEL #2 WAS CALCULATED TO BE: 5,669 AMPS LINE TO LINE 5,186 AMPS LINE TO NEUTRAL ON 9/9/2023
HANGAR "A" SHOP PANEL	HANGAR "A" SHOP PANEL 120/240 VAC, 1-PHASE, 3-WIRE FED FROM OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #1
HANGAR "A" SHOP PANEL	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 8,334 AMPS LINE TO LINE 12,501 AMPS LINE TO NEUTRAL ON 9/9/2023 MAX AVAILABLE FAULT CURRENT AT HANGAR "A" SHOP PANEL WAS CALCULATED TO BE: 2,211 AMPS LINE TO LINE 1,343 AMPS LINE TO NEUTRAL ON 9/9/2023
FUEL FACILITY PANELBOARD	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 8,334 AMPS LINE TO LINE 12,501 AMPS LINE TO NEUTRAL ON 9/9/2023 MAX AVAILABLE FAULT CURRENT AT FUEL PANEL WAS CALCULATED TO BE: 4,074 AMPS LINE TO LINE 3,022 AMPS LINE TO NEUTRAL ON 9/9/2023
MAINTENANCE HANGAR SERVICE PANEL	MAINTENANCE HANGAR SERVICE PANEL 120/240 VAC, 1-PHASE, 3-WIRE NOTE: THE TERMINAL BUILDING/FBO HANGAR HAS A SEPARATE ELECTRIC UTILITY SERVICE LOCATED AT THE SOUTH SIDE OF THE BUILDING
MAINTENANCE HANGAR SERVICE PANEL	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 8,334 AMPS LINE TO LINE 12,501 AMPS LINE TO NEUTRAL ON 9/9/2023 MAX AVAILABLE FAULT CURRENT AT MAINTENANCE HANGAR SERVICE PANEL WAS CALCULATED TO BE: 4,768 AMPS LINE TO LINE 3,853 AMPS LINE TO NEUTRAL ON 9/9/2023

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
TERMINAL BUILDING/FBO HANGAR SERVICE PANEL	TERMINAL BUILDING/FBO HANGAR SERVICE PANEL 120/240 VAC, 1-PHASE, 3-WIRE NOTE: THE MAINTENANCE HANGAR HAS A SEPARATE ELECTRIC UTILITY SERVICE LOCATED AT THE WEST SIDE OF THE BUILDING
TERMINAL BUILDING/FBO HANGAR SERVICE PANEL	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 4,167 AMPS LINE TO LINE 6,251 AMPS LINE TO NEUTRAL ON 9/9/2023
TERMINAL BUILDING OFFICE PANEL	TERMINAL BUILDING OFFICE PANEL 120/240 VAC, 1-PHASE, 3-WIRE FED FROM TERMINAL BUILDING/FBO HANGAR SERVICE PANEL
TERMINAL BUILDING OFFICE PANEL	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 4,167 AMPS LINE TO LINE 6,251 AMPS LINE TO NEUTRAL ON 9/9/2023
AIRPORT ELECTRICAL VAULT SERVICE PANEL	AIRPORT ELECTRICAL VAULT SERVICE AND DIST. PANEL 120/240 VAC, 1-PHASE, 3-WIRE
AIRPORT ELECTRICAL VAULT SERVICE PANEL	MAX AVAILABLE FAULT CURRENT AT UTILITY TRANSFORMER SECONDARY WAS CALCULATED TO BE: 11,771 AMPS LINE TO LINE 17,657 AMPS LINE TO NEUTRAL ON 9/9/2023 MAX AVAILABLE FAULT CURRENT AT VAULT SERVICE PANEL WAS CALCULATED TO BE: 6,900 AMPS LINE TO LINE 5,663 AMPS LINE TO NEUTRAL ON 9/9/2023
NORTH ACCESS GATE OPERATOR DISCONNECT	NORTH ACCESS GATE OPERATOR 120 VAC 1 PHASE, 2-WIRE FED FROM MAINTENANCE HANGAR SERVICE PANEL
SOUTH ACCESS GATE OPERATOR DISCONNECT	SOUTH ACCESS GATE OPERATOR 120 VAC 1 PHASE, 2-WIRE FED FROM HANGAR "A" SHOP PANEL

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

NOTES:

- ARC FLASH RISK LABELS ARE BASED ON FAULT CURRENT FROM UTILITY TRANSFORMER THAT IS LESS THAN 25,000 AMPS AT 240 VAC.
- FAULT CURRENT INFORMATION TO BE PROVIDED BY SERVING ELECTRIC UTILITY COMPANY OR FROM DATA OBTAINED FROM UTILITY TRANSFORMER NAMEPLATE. CONTACT PROJECT ENGINEER TO CONFIRM FAULT CURRENT CALCULATIONS.
- CONTRACTOR SHALL PROVIDE APPROPRIATE LABELS ON ELECTRICAL EQUIPMENT, IN ACCORDANCE WITH NFPA 70E ARTICLE 130 WORK INVOLVING ELECTRICAL HAZARDS, PART 130.5 ARC FLASH RISK ASSESSMENT, (H) EQUIPMENT LABELING. WHERE MAXIMUM CALCULATED FAULT CURRENT EXCEEDS 25,000 AMPS CONTACT PROJECT ENGINEER.
- ALL LABELING WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE ELECTRIC SLIDE GATE WORK PAY ITEM

ARC FLASH RISK LABELS	
EQUIPMENT	LABEL
OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #1	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
OLD TERMINAL BUILDING/HANGAR "A" SERVICE PANEL #2	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
HANGAR "A" SHOP PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
FUEL FACILITY PANELBOARD	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
MAINTENANCE HANGAR SERVICE PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
TERMINAL BUILDING/FBO HANGAR SERVICE PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
TERMINAL BUILDING OFFICE PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
AIRPORT ELECTRICAL VAULT SERVICE PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
AIRPORT ELECTRICAL VAULT LIGHTING CONTACTOR CONTROL PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
AIRPORT ELECTRICAL VAULT RELAY INTERFACE CONTROL PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120 VAC, 1-PHASE, 2-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
AIRPORT ELECTRICAL VAULT L-854 RADIO CONTROLLER	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120 VAC, 1-PHASE, 2-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
NORTH ACCESS GATE OPERATOR DISCONNECT	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120 VAC, 1-PHASE, 2-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
SOUTH ACCESS GATE OPERATOR DISCONNECT	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120 VAC, 1-PHASE, 2-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
HANGAR "B" MAIN DISCONNECTING MEANS	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1
HANGAR "C" MAIN DISCONNECTING MEANS	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED. NOMINAL VOLTAGE: 120/240 VAC, 1-PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC FLASH PPE CATEGORY: 1

REHABILITATE
ENTRANCE ROAD AND
AUTOMOBILE PARKING
LOT; REPLACE FENCE
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LEGEND PLATE
SCHEDULE