



**CONTRACT DRAWINGS
FOR THE CONSTRUCTION OF**

TAXILANE L CONSTRUCTION

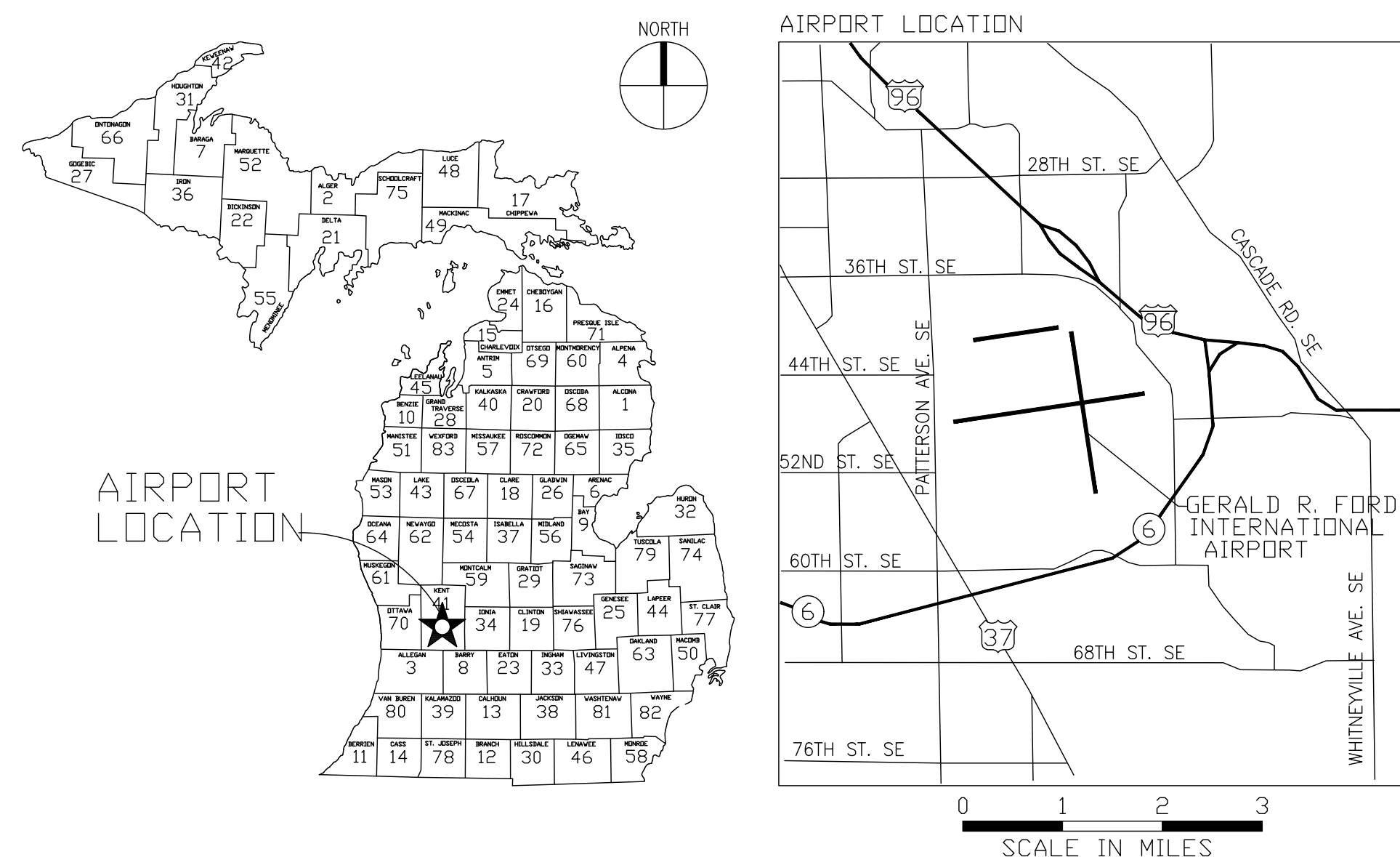
GERALD R. FORD INTERNATIONAL AIRPORT

**GERALD R. FORD INTERNATIONAL AIRPORT AUTHORITY
5500 44TH ST SE, GRAND RAPIDS, MI 49512**

CLIENT PROJECT: C-416
C&S PROJECT: K19.025.001

AUGUST 2025

BIDDING DOCUMENTS




LOCATION MAP



GI001


Aug 01, 2024, 1:48pm
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C	1	GENERAL CONSTRUCTION NOTES		2	3		4			
		1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 70, ATTACHMENT A - CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.			29. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION.					
B	1	2. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON RECORD DRAWINGS AND/OR CAD FILES FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THOSE UTILIZING THE INFORMATION ON THESE DRAWINGS ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY PURPOSE.		2	30. THE CONTRACTOR IS RESPONSIBLE FOR PERMITTING, GRADING, EROSION CONTROL AND SEEDING THE SPOILS SITE, INCIDENTAL TO THIS CONTRACT.		50. VERIFICATION OF EXISTING GRADES, THIS PROJECT WAS DEVELOPED USING A 3D CADD PROGRAM. THE 3D CADD PROGRAM CREATED 3D SURFACE FILES OF THE EXISTING SURFACES, FINISHED SURFACES AND OTHER VARIOUS SURFACES REQUIRED TO COMPLETE THE DESIGN. SOME VOLUMETRIC QUANTITIES WERE CALCULATED BY COMPARING SURFACE FILES OF THE APPLICABLE DESIGN SURFACES AND GENERATING TRIANGLE VOLUME REPORTS. EXISTING GRADES ON THE SURFACE FILES, WHERE THEY DO NOT MATCH THE LOCATIONS OF ACTUAL SPOT ELEVATIONS SHOWN ON THE TOPOGRAPHIC MAP, WERE DEVELOPED BY COMPUTER INTERPOLATION FROM THOSE SPOT ELEVATIONS. PRIOR TO DISTURBING ORIGINAL GRADE, A LICENSED SURVEYOR SHALL VERIFY THE ACCURACY OF THE EXISTING GROUND SURFACE BY VERIFYING SPOT ELEVATIONS AT THE SAME LOCATIONS WHERE ORIGINAL FIELD SURVEY DATA WAS OBTAINED AS INDICATED ON THE TOPOGRAPHIC MAP. FOR THIS PURPOSE, THE RPR WILL PROVIDE THE CONTRACTOR WITH A 3D CADD FILE OF THE TOPOGRAPHIC SURVEY. SURVEYOR SHALL RECOGNIZE THAT, DUE TO THE INTERPOLATION PROCESS, THE ACTUAL GROUND SURFACE AT ANY PARTICULAR LOCATION MAY DIFFER SOMEWHAT FROM THE INTERPOLATED SURFACE SHOWN ON THE DESIGN CROSS SECTIONS OR OBTAINED FROM THE SURFACE FILES. SURVEYOR'S VERIFICATION OF ORIGINAL GROUND SURFACE, HOWEVER, SHALL BE LIMITED TO VERIFICATION OF SPOT ELEVATIONS AS INDICATED HEREIN, AND NO ADJUSTMENTS WILL BE MADE TO THE ORIGINAL GROUND SURFACE UNLESS THE SURVEYOR DEMONSTRATES THAT SPOT ELEVATIONS SHOWN ARE INCORRECT. FOR THIS PURPOSE, SPOT ELEVATIONS WHICH ARE WITHIN 0.1 FOOT OF THE STATED ELEVATIONS FOR GROUND SURFACES, OR WITHIN 0.02 FOOT FOR HARD SURFACES (PAVEMENTS, BUILDINGS, FOUNDATIONS, STRUCTURES, ETC.) SHALL BE CONSIDERED "NO CHANGE". ONLY DEVIATIONS IN EXCESS OF THESE WILL BE CONSIDERED FOR ADJUSTMENT OF THE ORIGINAL GROUND SURFACE. IF SURVEYOR'S VERIFICATION IDENTIFIES DISCREPANCIES IN THE TOPOGRAPHIC MAP, CONTRACTOR SHALL NOTIFY RPR IN WRITING AT LEAST TWO WEEKS BEFORE DISTURBANCE OF EXISTING GRADE TO ALLOW SUFFICIENT TIME TO VERIFY THE SUBMITTED INFORMATION AND MAKE ADJUSTMENTS TO THE DESIGN CROSS SECTIONS OR SURFACE FILES. DISTURBANCE OF EXISTING GRADE IN ANY AREA SHALL CONSTITUTE ACCEPTANCE BY THE CONTRACTOR OF THE ACCURACY OF THE ORIGINAL ELEVATIONS SHOWN ON THE TOPOGRAPHIC MAP FOR THAT AREA.		SUBSTITUTE FOR THE SOUND JUDGMENT OF THE CONTRACTOR.	
		3. EXISTING UTILITIES WERE TAKEN FROM PLANS OF RECORD. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED IN GOOD FAITH SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT ACTUAL LOCATIONS AND MAY NOT BE INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.			31. FOR PAVEMENT SECTIONS, THE CONTOUR INTERVAL EQUALS 0.2 FEET. FOR TURF AREAS, THE CONTOUR INTERVAL EQUALS 1 FOOT.		51. AUTOMATED STAKEOUT AND AUTOMATED MACHINE GUIDANCE OPERATIONS, SHOULD THE CONTRACTOR CHOOSE AUTOMATED METHODS FOR THE ESTABLISHMENT, LAYOUT, MEASUREMENT, EQUIPMENT GUIDANCE OR VERIFICATION OF WORK TO BE CONSTRUCTED, THEY SHALL SUBMIT THEIR PROPOSED AUTOMATED METHODS INCLUDING QUALITY CONTROL MEASURES AS PART OF THEIR CONTRACT CONTROL PLAN FOR ACCEPTANCE BY THE RPR. WHEN UTILIZING THESE METHODS, ALL HORIZONTAL AND VERTICAL SURVEY CONTROL, ROADWAY ALIGNMENT CONTROL AND EXISTING TERRAIN DATA SHALL BE SHARED/EXCHANGED ELECTRONICALLY AND KEPT CURRENT BETWEEN THE CONTRACTOR AND THE RPR. ALL ORIGINAL VERSION FILES OF ELECTRONIC CONTRACT DATA SHALL BE MAINTAINED AND STORED BY THE RPR.			
A	1	4. THE ACTUAL LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.		2	32. ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM. COORDINATES REFER NAD 83 HORIZONTAL DATUM.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		5. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES OR CABLES, THE RPR (RESIDENT PROJECT REPRESENTATIVE) AND OWNER SHALL BE NOTIFIED IMMEDIATELY.			33. THE TOPOGRAPHIC FEATURES SHOWN HEREON WERE COMPILED FROM FIELD SURVEY PERFORMED BY FISHBECK DATED 12/23/2024.					
A1	1	6. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UTILITIES OR CABLES, AS DIRECTED BY THE RPR, IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.		2	34. THE CONTRACTOR SHALL SURVEY UTILITY LOCATES AND REESTABLISH UTILITY MARKINGS THROUGHOUT THE PROJECT.		MINIMUM REQUIRED KINEMATIC ACCURACY RELATIVE TO PRIMARY PROJECT CONTROL (CORS): HORIZONTAL: 0.033 FT. + 1.0 PPM; VERTICAL: 0.065 FT. + 1.0 PPM			
		7. ALL AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S STAGING AND CONSTRUCTION OPERATIONS SHALL BE RESTORED EQUAL TO OR BETTER THAN ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.			35. CONTRACTOR SHALL PERFORM SOFT DIGS TO VERIFY DEPTH OF EXISTING UTILITIES PER ITEM DX-800 SOFT DIGS PRIOR TO CONSTRUCTION START.					
A1	1	8. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.		2	36. THE CONTRACTOR SHALL SURVEY UTILITY LOCATES AND REESTABLISH UTILITY MARKINGS THROUGHOUT THE PROJECT.		ALL NECESSARY HARDWARE AND SOFTWARE SHALL BE INCLUDED (INCLUDING COMMUNICATION DRIVERS) TO CONNECT THE GPS UNIT TO A TABLET PC AND COMMUNICATE/EXCHANGE POSITIONAL DATA WITH CADD SOFTWARE.			
		9. THE CONTRACTOR SHALL MAINTAIN EXISTING ACCESS ROADS AS REQUIRED FOR ACCESS TO THE WORK AREAS.			37. THE TOPOGRAPHIC FEATURES SHOWN HEREON WERE COMPILED FROM FIELD SURVEY PERFORMED BY FISHBECK DATED 12/23/2024.					
A1	1	10. ALL OF THE CONTRACTOR'S OPERATIONS SHALL REMAIN ON AIRPORT PROPERTY AT ALL TIMES. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED ON ADJACENT PROPERTY.		2	38. THE ELECTRICAL CHARACTERISTICS OF PROPOSED EQUIPMENT SHALL BE VERIFIED TO BE COMPATIBLE WITH EXISTING EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		11. THIS CONTRACT DOES NOT ALLOW FOR PRICE INCREASES DUE TO ESCALATION IN COST. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION WHEN PREPARING THEIR BID.			39. ABANDONED CABLES MAY EXIST IN THE VICINITY OF THE PROPOSED WORK. IF ENCOUNTERED, CONTRACTOR SHALL VERIFY THAT THEY ARE ABANDONED PRIOR TO REMOVAL. IF THEY ARE NOT ABANDONED, CABLES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ITEMS OF SPECIFIC MANUFACTURE SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND OR MANUFACTURER'S REPRESENTATIVE DIRECTIONS.					
A1	1	12. THE OWNER RESERVES THE RIGHT TO ELIMINATE ANY ITEMS OF THE CONTRACT AND PERFORM THESE ITEMS WITH ITS FORCES AND MATERIALS.		2	40. ALL GROUND CONNECTIONS SHALL BE MADE AT LIGHT UNITS OR AT ENDS OF DUCT BANKS UNLESS DIRECTED OTHERWISE.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		13. THE OWNER RESERVES THE RIGHT TO SALVAGE FENCE MATERIALS. THE MATERIAL TO BE SALVAGED IS IDENTIFIED IN THE SPECIFICATION. SALVAGED MATERIAL SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER IN GOOD CONDITION. ALL OTHER FENCE MATERIAL SHALL BE SPOILED OFF AIRPORT PROPERTY AT A PROPER DISPOSAL SITE SELECTED BY THE CONTRACTOR.			41. ALL ELECTRICAL EQUIPMENT REMOVED WHICH IS DESIRED BY THE OWNER TO BE SALVAGED SHALL BE TURNED OVER TO THE OWNER. THE EQUIPMENT SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER IN PROPER WORKING CONDITION. ALL OTHER MATERIALS SHALL BE SPOILED OFF AIRPORT PROPERTY AT A PROPER DISPOSAL SITE AT THE CONTRACTOR'S EXPENSE. PROVIDE WATERTIGHT TERMINATION FOR ALL BURIED CONDUIT ENDS.					
A1	1	14. NO EXCAVATED MATERIAL SHALL BE REMOVED FROM AIRPORT PROPERTY. ALL EXCAVATED MATERIAL SHALL BE USED AS EMBANKMENT OR SPOILED ON AIRPORT PROPERTY AT THE LOCATIONS SHOWN ON THE PLANS.		2	42. PERMANENT PAVEMENT MARKINGS REQUIRED AFTER THE 30 DAY WAITING PERIOD SHALL BE PLACED PER SPECIFICATION P-620 (MARKING) AND PLAN SHEETS XM101-XM102.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		15. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL MATERIAL SUITABLE FOR TOPSOILING IN ACCORDANCE WITH ITEM T-905. TOPSOIL SHALL BE PLACED IN THE FINAL LOCATION FOLLOWING GRADING OPERATIONS AND SHALL BE PAID IN ACCORDANCE WITH ITEM T-905. EXCESS TOPSOIL SHALL BE SPOILED ONSITE AT THE LOCATIONS SHOWN ON THE PLANS.			43. THIS PROJECT WAS DEVELOPED USING THREE-DIMENSIONAL DESIGN SOFTWARE.					
A1	1	16. SELECTIVE GRADING SHALL BE REQUIRED AS DIRECTED BY THE RPR.		2	44. AFTER AWARD AND UPON REQUEST, THE SUCCESSFUL BIDDER WILL BE PROVIDED CADD FILES DEVELOPED FROM AUTOCAD AND 3D SURFACE FILES FOR USE. IN ADDITION, SURVEY CONTROL FOR THE PROJECT WILL BE PROVIDED IN ELECTRONIC FORMAT AND THE ALIGNMENTS WILL BE PROVIDED IN XML FORMAT.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		17. THE QUANTITY OF UNCLASSIFIED EXCAVATION, ITEM P-152, INCLUDES 1,260 CY OF UNDERCUT EXCAVATION. UNDERCUT SHALL ONLY BE USED WHEN DIRECTED BY THE RPR.			45. THE CONTRACTOR WILL BE PROVIDED, UPON REQUEST, THE FOLLOWING SURFACES:					
A1	1	18. THE QUANTITY OF CRUSHED AGGREGATE BASE COURSE, ITEM P-209, INCLUDES 1,260 CY FOR REPLACEMENT OF UNDERCUT EXCAVATION. UNDERCUT SHALL ONLY BE USED WHEN DIRECTED BY THE RPR.		2	SURFACE DESCRIPTION		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		19. THE QUANTITY OF UNCLASSIFIED EXCAVATION, ITEM P-152 FOR ADD ON NO. 1, INCLUDES 250 CY OF UNDERCUT EXCAVATION AND SHALL ONLY BE USED WHEN DIRECTED BY THE RPR.			OVERALL PROJECT 3D SURFACE OF PROJECT SITE OVERALL EXISTING GRADE					
A1	1	20. THE QUANTITY OF CRUSHED AGGREGATE BASE COURSE, ITEM P-209 FOR ADD ON NO. 1, INCLUDES 250 CY FOR REPLACEMENT OF UNDERCUT EXCAVATION AND SHALL ONLY BE USED WHEN DIRECTED BY THE RPR.		2	SITE EXISTING GRADE ELEVATIONS PER TOPOGRAPHIC SURVEY PRIOR TO CONSTRUCTION.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		21. THE QUANTITY OF UNCLASSIFIED EXCAVATION, ITEM P-152 FOR ADD ON NO. 2, INCLUDES 80 CY OF UNDERCUT EXCAVATION AND SHALL ONLY BE USED WHEN DIRECTED BY THE RPR.			PROPOSED FINISHED 3D SURFACE REPRESENTATION OF THE PROJECT SITE OVERALL. PROPOSED FINI GRADE GRADE ELEVATIONS PER PROJECT DESIGN. THIS SURFACE INCLUDES PAVEMENT AND TURF GRADES.					
A1	1	22. THE QUANTITY OF CRUSHED AGGREGATE BASE COURSE, ITEM P-209 FOR ADD ON NO. 2, INCLUDES 80 CY FOR REPLACEMENT OF UNDERCUT EXCAVATION AND SHALL ONLY BE USED WHEN DIRECTED BY THE RPR.		2	EXISTING BASE MAP EXISTING TOPOGRAPHIC FEATURES, LIMITS OF PAVEMENT, PHYSICAL FEATURES, EXISTING CONTOURS, EQUIPMENT, STRUCTURES, LIGHTS, SIGNS, KNOWN UTILITIES, FENCE, PIPES, AND CONDUITS, BUILDINGS, ETC.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		23. THE QUANTITY OF OFFSITE BORROW INCLUDES 14,600 CY FOR FILL MATERIAL AND SHALL ONLY BE USED AS WHEN DIRECTED BY THE RPR.			PROPOSED PROPOSED WORK INCLUDING ALIGNMENTS, SURVEY DATA, WORK PHASING LIMITS, LIMITS OF DEMOLITION, LIMITS OF PAVEMENT, PHYSICAL FEATURES, PROPOSED CONTOURS, AND MARKINGS.					
A1	1	24. EMBANKMENTS SHALL BE CONSTRUCTED WITH SUITABLE ON-SITE MATERIAL UNLESS OTHERWISE DIRECTED BY THE RPR AND SHALL BE CONSIDERED INCIDENTAL TO ITEM P-152 UNCLASSIFIED EXCAVATION.		2	46. UNLESS OTHERWISE SHOWN ON THE PLANS, THE CONTRACTOR SHALL ASSUME THAT THE ORIGIN OF PROPOSED CAD SYMBOLS IS AT THE CENTER OF THE LOCATION OF THE FEATURE. CAD SYMBOLS WHICH ARE NOT AT THE CENTER OF ORIGIN INCLUDE THE FOLLOWING:		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		25. THE LIMIT FOR TOPSOILING, SEEDING, AND MULCHING ARE THE LIMITS OF GRADING SHOWN ON THE GRADING PLANS. ALL AREAS OUTSIDE OF THE GRADING LIMITS WHICH ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE, INCLUDING THE STAGING AREA, FIELD OFFICE LOCATION AND SPOILS AREA.			SYMBOL ORIGIN					
A1	1	26. THE COMBINATION OF SILT/CLAY SOILS AND HIGH NATURAL MOISTURE CONTENTS CREATE THE POTENTIAL FOR LOSS OF STRENGTH UNDER REPETITIVE LOADINGS OR VIBRATION. THE CONTRACTOR SHOULD TAKE THESE FACTORS INTO CONSIDERATION WHEN SELECTING EQUIPMENT, METHODS AND MEANS FOR CONSTRUCTION OF THIS PROJECT, AS WELL AS HAULING EQUIPMENT THAT WILL OPERATE IN THE AREA THROUGHOUT CONSTRUCTION. ANY DAMAGE TO THE SUBGRADE CONDITION AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION, AS DIRECTED BY THE RPR AND ALL AT THE CONTRACTOR'S EXPENSE.		2	GUIDANCE SIGNS LONGITUDINAL CENTER AT END OF SIGN CLOSEST TO PAVEMENT EDGE.		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
		27. TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION AND SILTATION CONTROL WORK PERFORMED FOR PROTECTION OF CONSTRUCTION AREAS OUTSIDE THE CONSTRUCTION LIMITS, SUCH AS BORROW AREAS AND WASTE AREAS, HAUL ROADS, EQUIPMENT AND MATERIAL STORAGE SITES, AND TEMPORARY PLANT SITES, WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE CONSIDERED AS A SUBSIDIARY OBLIGATION OF THE CONTRACTOR.			47. THE FILES WERE DEVELOPED FOR THE DESIGN AND DEPICTION OF VARIOUS 2D FEATURES (EXISTING AND PROPOSED) AND 3D FEATURES OF EXISTING, PROPOSED, AND SUBGRADE SURFACES. THE SURFACE FILES ARE DEPICTED ON THE CONTRACT DRAWINGS IN THE FORM OF CONTOURS, PROFILES, TYPICAL SECTIONS, SPOT ELEVATIONS, TABLES, AND OTHER DETAILS. THE SURFACE FILE OF THE EXISTING SURFACE IS THE DATABASE OF POINTS FROM THE DESIGN TOPOGRAPHIC SURVEY. THE SURFACE FILES OF THE OTHER SURFACES ARE THE DATABASE OF POINTS FOR THE SURFACES USED TO DESIGN THE PROJECT.					
A1	1	28. TOPSOILING WILL BE CONSIDERED A NECESSARY AND INCIDENTAL PART OF THE WORK		2	48. THE OWNER ALLOWS USE OF THE CADD AND SURFACE FILES IN THE PERFORMANCE OF ITS WORK AND SERVICES ON THE PROJECT WITH THE FOLLOWING TERMS AND CONDITIONS:		GPS UNIT SHALL INCLUDE DUAL FREQUENCY RECEIVERS.			
					A. THAT THE OWNER DOES NOT WARRANT OR GUARANTEE THE INFORMATION AND DATA IN THE CADD AND SURFACE FILES AND ANY ACCOMPANYING DOCUMENTATION AS A					
A1	1	GENERAL NOTES		2	3		4			
		SCALE: NOT TO SCALE								




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GERALD R. FORD International Airport

TAXILANE L CONSTRUCTION

GERALD R. FORD INTERNATIONAL AIRPORT GRAND RAPIDS, MI

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
CHECKED BY: K.J. JOST		
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

GENERAL NOTES

G1002

SHEET NO. 2 OF 36

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ITEM NO	SPEC	DESCRIPTION	QUANTITY	QUANTITY	QUANTITY	UNITS
			SCHEDULE 1*	SCHEDULE 2*	GRAND	
1	C-100	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	1	-	1	LS
2	C-102	INSTALLATION AND REMOVAL OF STORM DRAIN INLET PROTECTION	6	-	6	EA
3	C-102	INSTALLATION AND REMOVAL OF SILT FENCE	8,200	-	8,200	LF
4	C-102	INSTALLATION AND REMOVAL OF STABILIZED CONSTRUCTION ENTRANCE	2	-	2	EACH
5	C-105	MOBILIZATION (10% MAX.)	1	-	1	LS
6	C-105	FIELD OFFICE	1	-	1	LS
7	C-105	FIELD OFFICE EQUIPMENT	1	-	1	LS
8	CX-106	SAFETY, SECURITY AND MAINTENANCE OF TRAFFIC	1	-	1	LS
9	CX-106	INSTALLATION AND REMOVAL OF TEMPORARY FENCE ON CONCRETE BARRIER	1,270	-	1,270	LF
10	CX-106	TEMPORARY HAUL ROUTE	360	-	360	SY
11	CX-106	STABILIZED CONSTRUCTION ENTRANCE	2	-	2	EA
12	P-101	CONCRETE PAVEMENT REMOVAL	400	-	400	SY
13	P-101	ASPHALT PAVEMENT REMOVAL	5,000	-	5,000	SY
14	P-101	REMOVAL OF PIPE ALL TYPES AND SIZES	660	-	660	LF
15	P-101	REMOVAL OF STRUCTURE	3	-	3	EACH
16	P-101	REMOVAL OF WATER MAIN	300	-	300	LF
17	P-101	REMOVAL OF LIGHT POLE AND FOUNDATION	2	-	2	EACH
18	P-101	SPALL REPAIR	50	-	50	SF
19	P-152	UNCLASSIFIED EXCAVATION	13,600	1,300	14,900	CY
20	P-152	BORROW EXCAVATION (OBTAINED ONSITE)	14,600	-	14,600	CY
21	P-152	BORROW EXCAVATION (OBTAINED OFFSITE)	14,600	-	14,600	CY
22	P-154	SUBBASE COURSE	6,600	1,200	7,800	CY
23	P-209	CRUSHED AGGREGATE BASE COURSE	4,200	900	5,100	CY
24	P-304	CEMENT-TREATED BASE COURSE (6")	11,600	5,200	16,800	SY
25	P-501	CONCRETE PAVEMENT (15')	3,600	3,200	6,800	CY
26	P-501	CONCRETE PAVEMENT (10')	230	-	230	CY
27	P-620	MARKING	18,100	-	18,100	SF
28	P-620	MARKING REMOVAL	4,800	-	4,800	SF
29	P-620	REFLECTIVE MEDIA	460	-	460	LB
30	D-701	36 INCH RCP CLASS IV	280	-	280	LF
31	D-701	30 INCH RCP CLASS IV	300	-	300	LF
32	D-705	6 INCH PERFORATED SMOOTH INTERIOR CORRUGATED PVC COMPLETE, INCLUDING POROUS BACKFILL AND FILTER FABRIC	3,900	-	3,900	LF
33	D-705	6 INCH NON-PERFORATED SMOOTH INTERIOR CORRUGATED PVC COMPLETE, INCLUDING POROUS BACKFILL AND FILTER FABRIC	420	-	420	LF
34	D-751	CLEANOUTS	17	-	17	EACH
35	D-751	CATCH BASINS	3	-	3	EACH
36	D-751	MODIFICATION OF EXISTING STRUCTURE	1	-	1	EACH
37	DX-800	SOFT DIGS	3	-	3	DAYS
38	F-162	REMOVE FENCE AND GATE	630	-	630	LF
39	F-162	CHAIN-LINK FENCE	3,800	-	3,800	LF
40	L-110	FIBER OPTIC CABLE AND CONDUIT LOWERING	220	-	220	LF
41	L-115	ELECTRICAL HANDHOLE	1	-	1	EA
42	L-115	ADJUST ELECTRICAL STRUCTURE TO GRADE	2	-	2	EA
43	L-125	REMOVE TAXIWAY EDGE LIGHT	8	-	8	EA
44	L-125	REMOVE TAXIWAY GUIDANCE SIGN	1	-	1	EA
45	L-125	RETROREFLECTIVE MARKER	21	-	21	EACH
46	L-125	TAXIWAY GUIDANCE SIGN	2	-	2	EACH
47	L-125	TAXIWAY ENDING MARKER	1	-	1	EACH
48	L-125	STAKE MOUNTED GUIDANCE SIGN	4	-	4	EACH
49	T-901	SEEDING	17	-	17	ACRE
50	T-905	TOPSOIL (OBTAINED ONSITE OR REMOVED FROM STOCKPILE)	13,000	-	13,000	CY
51	T-908	MULCHING	17	-	17	ACRE
52	4.3.001	WATER MAIN, RESTRAINED DI, CL56 12 INCH	300	-	300	LF
53	4.3.013	VALVE AND BOX 12 INCH	4	-	4	EACH
54	4.3.018	TEE 12 INCH BY 12 INCH BY 12 INCH	2	-	2	EACH
55	4.3.021	HORIZONTAL BEND 45 DEGREE 12 INCH	4	-	4	EACH
56	4.3.021	VERTICAL BEND 45 DEGREE 12 INCH	4	-	4	EACH
57	4.3.023	PLUG, 12 INCH	2	-	2	EACH
LOCALLY FUNDED ADD-ON NO. 1						
1	C-105	MOBILIZATION (6% MAX.)	-	1	1	LS
2	CX-106	SAFETY, SECURITY AND MAINTENANCE OF TRAFFIC	-	1	1	LS
3	P-101	CONCRETE PAVEMENT REMOVAL	-	2,000	2,000	SY
4	P-101	SPALL REPAIR	-	100	100	SF
5	P-101	REMOVAL OF PIPE ALL TYPES AND SIZES	-	150	150	LF
6	P-152	UNCLASSIFIED EXCAVATION	-	800	800	CY
7	P-209	BASE COURSE	-	450	450	CY
8	P-304	CEMENT TREATED BASE (10")	-	1,900	1,900	SY
9	P-501	CEMENT CONCRETE PAVEMENT (14")	-	740	740	CY
10	D-702	REMOVE SLOTTED PIPE DRAIN	-	570	570	LF
11	D-702	18 INCH SLOTTED PIPE DRAIN	-	490	490	LF
12	D-751	MODIFICATION OF EXISTING STRUCTURE	-	1	1	EACH
LOCALLY FUNDED ADD-ON NO. 2						
1	C-105	MOBILIZATION (6% MAX.)	-	1	1	LS
2	CX-106	SAFETY, SECURITY AND MAINTENANCE OF TRAFFIC	-	1	1	LS
3	P-101	CONCRETE PAVEMENT REMOVAL	-	650	650	SY
4	P-101	SPALL REPAIR	-	100	100	SF
5	P-152	UNCLASSIFIED EXCAVATION	-	300	300	CY
6	P-209	BASE COURSE	-	150	150	CY
7	P-304	CEMENT TREATED BASE (10")	-	640	640	SY
8	P-501	CEMENT CONCRETE PAVEMENT (14")	-	250	250	CY
*AWARD OF CONTRACT WILL BE BASED UPON THE LOW BID OF TOTAL COST OF SCHEDULE 1. COSTS ARE BROKEN OUT INTO SCHEDULE 1 AND 2 FOR FUNDING REQUIREMENTS. BIDS WILL BE CHECKED FOR IRREGULARITIES AND IMBALANCES PER SECTION 20-09.						
A1						
QUANTITIES FOR CANVASS OF BID						
SCALE: NOT TO SCALE						



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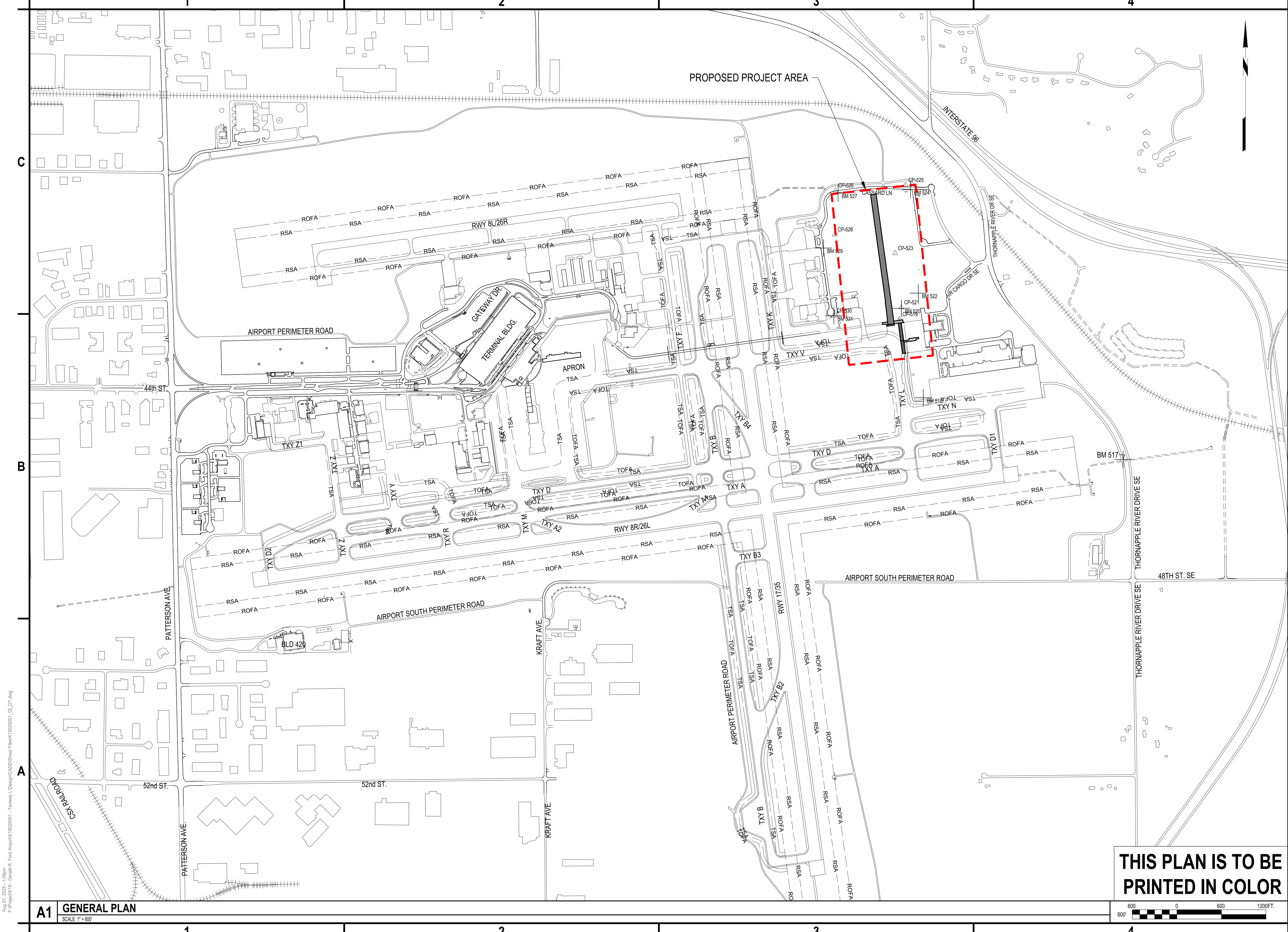


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GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

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DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
CHECKED BY: K.J. JOST		
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

QUANTITIES FOR
CANVASS OF BID

GI004



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38777 Six Mile Road, Suite 202
Livonia, Michigan 48152
Phone: 734-953-2571
Fax: 734-206-7973
www.cscos.com



TAXILANE L CONSTRUCTION
GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
CHECKED BY: K.J. JOST		
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

GENERAL PLAN

GI005

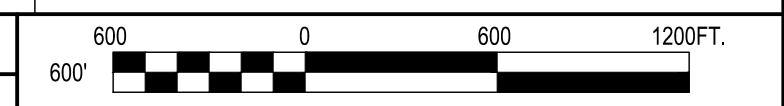
SHEET NO. 5 OF 36

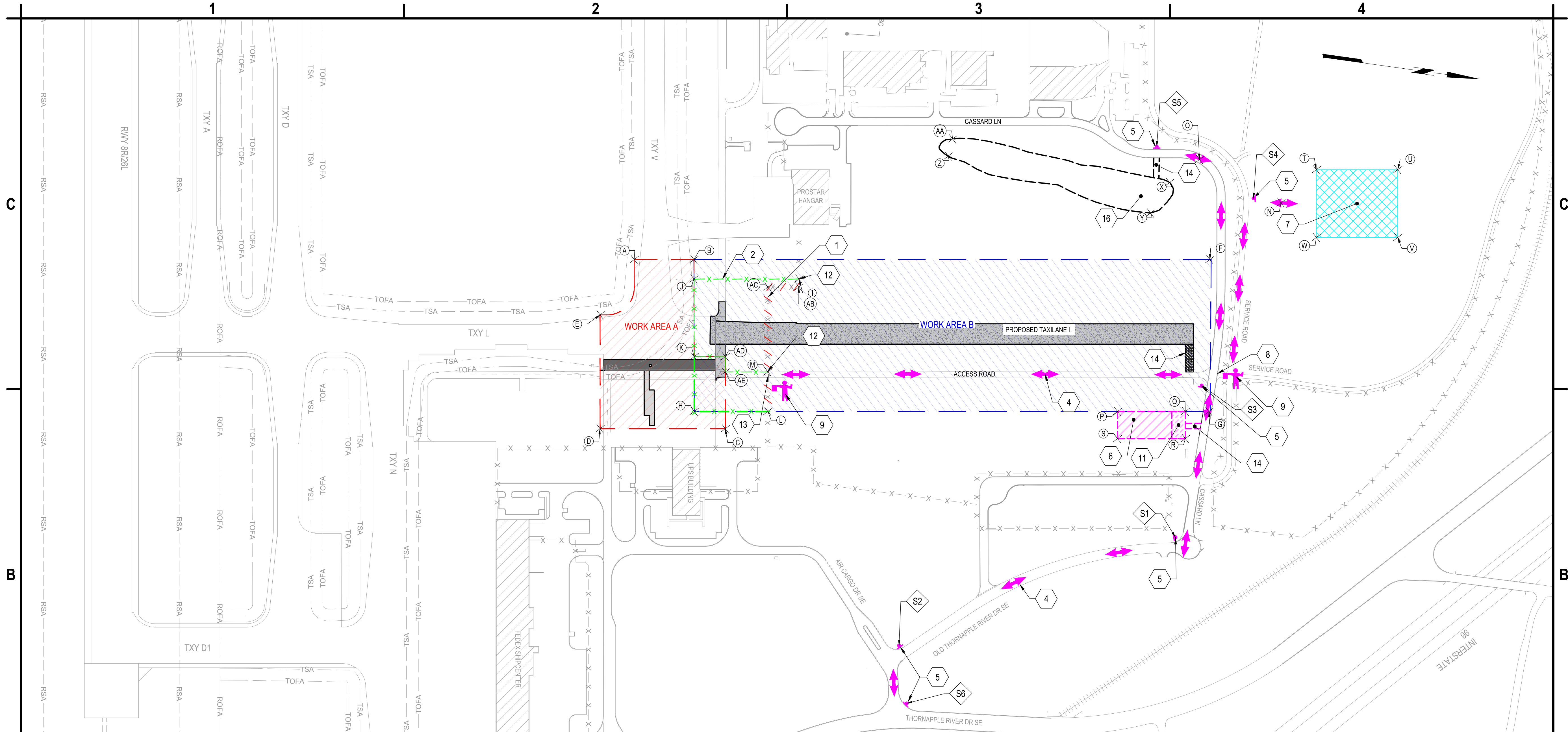
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A1 GENERAL PLAN
SCALE: 1"=600'

**THIS PLAN IS TO BE
PRINTED IN COLOR**





B1 CONSTRUCTION SAFETY AND PHASING PLAN - OVERALL
SCALE: 1" = 200'



1. REMOVE EXISTING AOA FENCE, ITEM F-162
2. INSTALL TEMPORARY FENCE ON CONCRETE BARRIER, ITEM CX-106, SEE DETAIL B1/GC501
4. CONTRACTOR HAUL ROUTE
5. INSTALL CONSTRUCTION ACCESS SIGN PER DETAIL B3/GC501
6. CONTRACTORS STAGING AREA.
7. APPROXIMATE LOCATION OF SPOILS AREA TO BE DETERMINED BY THE OWNER, SEE NOTE 10.
8. CONTRACTOR'S ACCESS TO SPOILS LOCATION
9. CONTRACTOR PROVIDED GATE GUARD (ONLY REQUIRED DURING CONSTRUCTION ON WORK AREA A)
11. CONTRACTOR'S AND ENGINEERS FIELD OFFICE LOCATION
12. TRANSITION EXISTING FENCE TO TEMPORARY FENCE ON CONCRETE BARRIER, ITEM CX-106, SEE DETAIL B1/GC501.
13. CONTRACTOR'S ACCESS TO WORK AREA A, GATE 72
14. STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL C3/GC501. CONTRACTOR SHALL PROVIDE RUBBER RAMP AT EXISTING CURB INCIDENTAL TO ITEM C-105
16. BORROW AREA

- WORK AREA A
-
- WORK AREA B

A1 KEYED NOTES AND LEGEND
SCALE: NOT TO SCALE

1. THE CONTRACTOR MAY USE THE EXISTING ACCESS ROAD FOR THE DURATION OF THE PROJECT. THE EXISTING ACCESS ROAD SHALL BE REMOVED AT THE END OF THE PROJECT AS SHOWN IN THE CONTRACT DRAWINGS.
2. WORK AREA A SHALL OCCUR CONCURRENTLY WITH WORK AREA B AND SHALL OCCUR WITHIN THE TOFA OF TAXIWAYS V AND L AND WILL RESULT IN TEMPORARY CLOSURES OF THE TAXIWAY PAVEMENTS. WORK SHALL CONSIST OF MARKING, ELECTRICAL MODIFICATION, DRAINAGE, GRADING, AND PAVING ITEMS. WORK AREA A SHALL BE CONCURRENT WITH WORK AREA B AND IS LIMITED TO 30 CALENDAR DAYS.
3. WORK AREA B SHALL OCCUR OUTSIDE OF THE AOA TO MINIMIZE IMPACT ON AIRPORT OPERATIONS. WORK AREA B SHALL CONSIST OF THE EXCAVATION, GRADING, PAVING, AND MARKING OF TAXILANE L. THERE ARE NO ANTICIPATED CLOSURES TO AIRFIELD PAVEMENTS DURING CONSTRUCTION IN WORK AREA B. WORK AREA B IS LIMITED TO 82 CALENDAR DAYS.
4. TEMPORARY FENCE TO BE INSTALLED PRIOR TO REMOVAL OF EXISTING FENCE. ALL WORK REQUIRED TO INSTALL AND REMOVE TEMPORARY AOA FENCE SHALL BE UNDER GRR OPERATIONS ESCORT. TEMPORARY AOA FENCE LIMITS SHALL BE APPROVED BY GRR OPERATIONS AND TSA. AFTER THE TEMPORARY FENCE IS APPROVED THE ENTIRE WORK AREA B WILL BECOME NON-AOA FOR 82 CALENDAR DAYS.
5. THE TEMPORARY FENCING LIMITS SHALL BE SUBMITTED TO TSA AT LEAST 45 DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. THE PLAN SHALL BE APPROVED BY TSA PRIOR TO CONSTRUCTION COMMENCING. ALL CHANGES TO THE FENCING ALIGNMENT SHALL BE COORDINATED WITH TSA, THE OWNER AND THE ENGINEER.
6. WHILE WORK IS OCCURRING IN WORK AREA A, THE CONTRACTOR SHALL POST A GATE GUARD AT THE GATE DURING ALL WORK HOURS TO MAINTAIN A SECURE AIRPORT PROPERTY.
7. WHILE SPOILING OPERATIONS ARE OCCURRING THE CONTRACTOR SHALL POST A GATE GUARD AT GATE 72 AND 79 DURING ALL WORK HOURS TO MAINTAIN SECURE AIRPORT PROPERTY AND LOCK THE GATE AT THE END OF EACH WORK SHIFT. NO MATERIAL SHALL BE HAULED OFFSITE, ALL MATERIAL SHALL REMAIN ON AIRPORT PROPERTY.
8. CONTRACTOR SHALL RESTORE THE STAGING AREA AND CONSTRUCTION ENTRANCE AREA TO EQUAL OR BETTER THAN ORIGINAL CONDITION FOLLOWING COMPLETION OF THE PROJECT. RESTORATION SHALL BE CONSIDERED INCIDENTAL TO ITEM C-105 MOBILIZATION.
9. PRIOR TO CONSTRUCTION THE CONTRACTOR AND ENGINEER SHALL VIDEOTAPE/PHOTOGRAPH ALL HAUL ROADS TO BE USED DURING THE PROJECT. THE INFORMATION SHALL BE PROVIDED TO THE OWNER PRIOR TO NOTICE TO PROCEED. ANY DAMAGE TO THE PAVEMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, AT THE DISCRETION OF THE RPR. ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. FINAL SPOILS LOCATION SHALL BE COORDINATED WITH THE RPR AND OWNER. THE CONTRACTOR SHALL PROVIDE A SURVEY FILE AND PROPOSED GRADING PLAN OF THE PROPOSED SPOILS AREA 30 DAYS PRIOR TO CONSTRUCTION STARTING. GRADING OF THE SPOILS AREA SHALL BE CONSIDERED INCIDENTAL TO ITEMS P-152 AND T-905. PRIOR TO STOCKPILING IN THE PROPOSED LOCATION THE TOPSOIL SHALL BE STRIPPED.

A2 GENERAL NOTES AND AIRSPACE COORDINATES
SCALE: NOT TO SCALE

POINT TABLE				
POINT NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
A	506,961.90	12,816,457.27	780.90	WORK AREA A
AA	508,063.66	12,815,855.60	781.72	BORROW AREA
AB	507,577.01	12,816,474.22	779.07	TEMP FENCE
AC	507,464.41	12,816,490.00	780.51	TEMP FENCE
AD	507,343.78	12,816,765.64	783.32	TEMP FENCE
AE	507,351.57	12,816,821.53	782.99	TEMP FENCE
B	507,180.09	12,816,426.97	779.00	WORK AREA A & B
C	507,380.36	12,817,028.78	780.00	WORK AREA A
D	506,922.96	12,817,092.31	780.00	WORK AREA A
E	506,865.23	12,816,676.70	783.03	WORK AREA A
F	509,063.86	12,816,165.32	780.63	WORK AREA B
G	509,137.37	12,816,720.53	777.90	WORK AREA B
H	507,258.22	12,816,981.54	780.00	WORK AREA B
I	507,573.21	12,816,444.77	779.00	TEMP FENCE
J	507,189.96	12,816,498.00	778.62	TEMP FENCE
K	507,230.03	12,816,781.48	783.57	TEMP FENCE
L	507,527.01	12,816,944.21	780.00	TEMP FENCE
M	507,507.11	12,816,799.93	782.67	TEMP FENCE

POINT TABLE				
POINT NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
N	509,295.00	12,815,922.30	770.00	HAUL ROUTE
O	508,975.57	12,815,805.17	784.43	HAUL ROUTE
P	508,804.05	12,816,766.83	778.00	STAGING AREA
Q	509,051.67	12,816,732.44	778.00	STAGING AREA
R	509,065.43	12,816,831.49	778.00	STAGING AREA
S	508,817.81	12,816,865.88	778.00	STAGING AREA
T	509,407.24	12,815,783.02	769.00	SPOIL AREA
U	509,704.38	12,815,741.75	769.00	SPOIL AREA
V	509,738.78	12,815,989.37	769.00	SPOIL AREA
W	509,441.63	12,816,030.65	769.00	SPOIL AREA
X	508,877.92	12,815,904.56	781.72	BORROW AREA
Y	508,823.71	12,816,025.52	781.72	BORROW AREA
Z	508,056.28	12,815,919.98	781.72	BORROW AREA

MAX EQUIPMENT HEIGHT AT ALL LOCATIONS SHALL BE 25'

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TAXILANE L CONSTRUCTION
GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
CHECKED BY: K.J. JOST		
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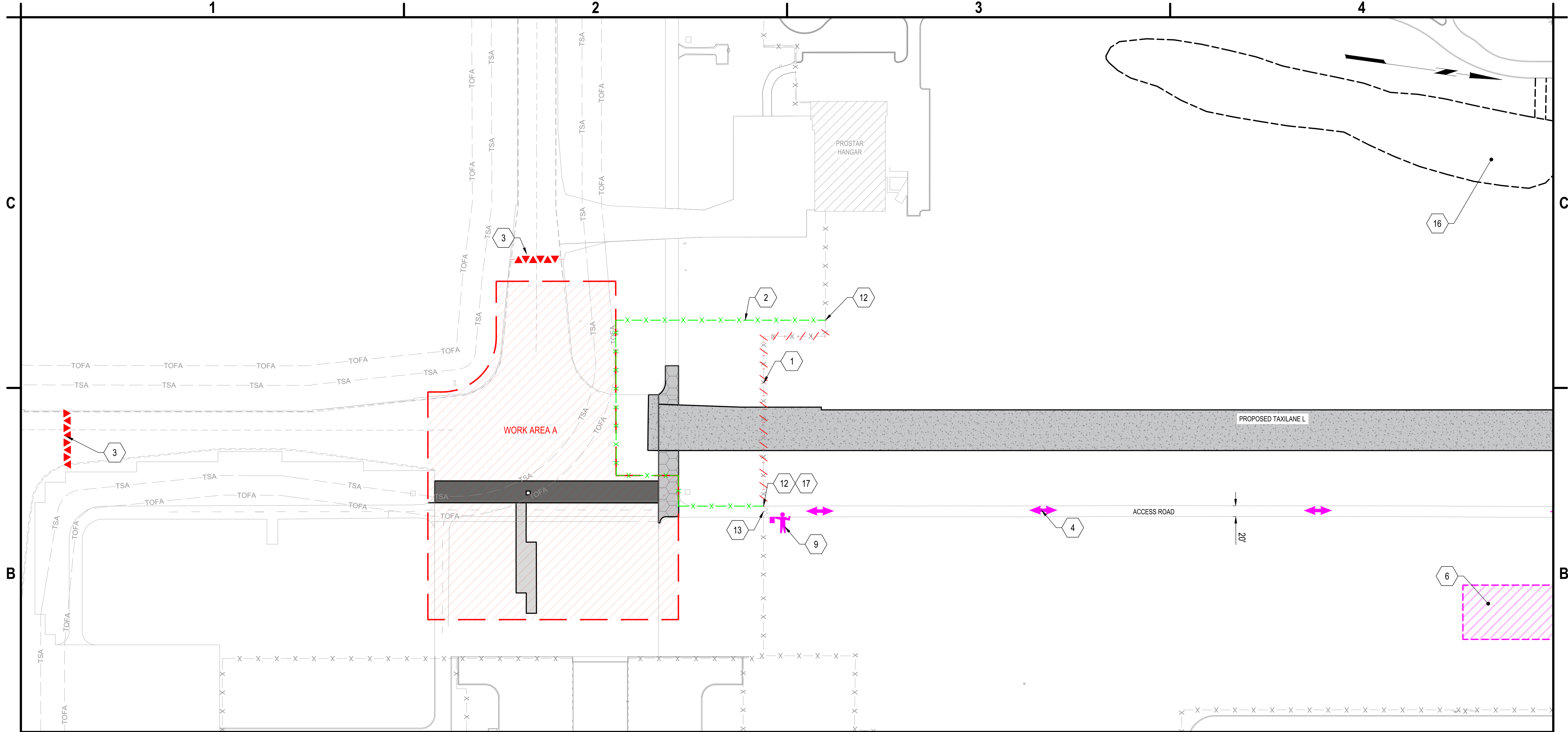
**CONSTRUCTION
SAFETY AND
PHASING PLAN -
OVERALL**

GC100

SHEET NO. 6 OF 36






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B1 CONSTRUCTION SAFETY AND PHASING PLAN - WORK AREA A
SCALE: 1" = 100'

1. REMOVE EXISTING AOA FENCE, ITEM F-162
2. INSTALL TEMPORARY FENCE ON CONCRETE BARRIER, ITEM CX-106, SEE DETAIL B1/GC501
3. INSTALL INTERLOCKING AIRFIELD BARRIERS PER DETAIL A1/GC501
4. CONTRACTOR HAUL ROUTE
6. CONTRACTORS STAGING AREA.
9. CONTRACTOR PROVIDED GATE GUARD (ONLY REQUIRED DURING CONSTRUCTION ON WORK AREA A)
12. TRANSITION EXISTING FENCE TO TEMPORARY FENCE ON CONCRETE BARRIER, ITEM CX-106, SEE DETAIL B1/GC501.
13. CONTRACTOR'S ACCESS TO WORK AREA A, GATE 72
16. BORROW AREA
17. LIMIT OF FENCE REMOVAL DURING WORK IN AREA A

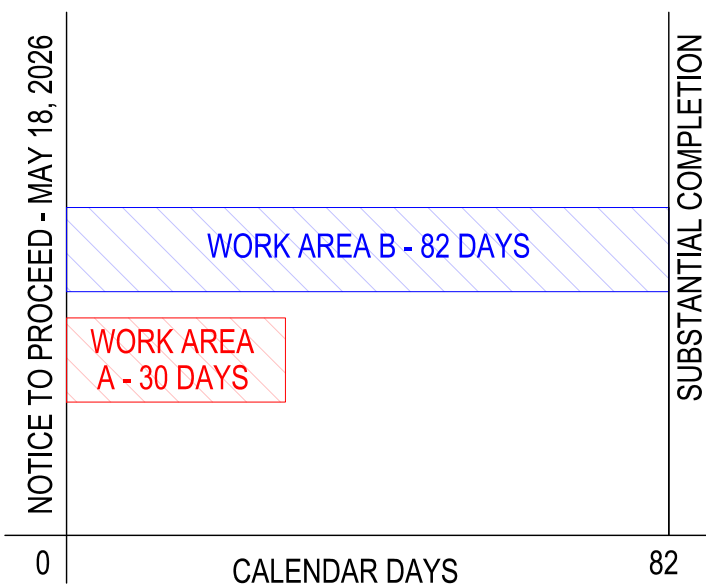
-  WORK AREA A
-  CONTRACTOR STAGING AREA
-  FIELD OFFICE LOCATION
-  INTERLOCKING AIRFIELD BARRICADE
-  TEMPORARY FENCE

NOTES:

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 70, ATTACHMENT A - CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.
2. CONTRACTOR SHALL PROVIDE ADEQUATE SIGNAGE FOR ALL CONSTRUCTION ENTRANCES AND HAUL ROUTES.
3. WHILE WORK IS OCCURRING IN WORK AREA A, THE CONTRACTOR SHALL POST A GATE GUARD AT THE GATE DURING ALL WORK HOURS TO MAINTAIN A SECURE AIRPORT PROPERTY.
4. FINAL SPOILS LOCATION SHALL BE COORDINATED WITH THE RPR AND OWNER. THE CONTRACTOR SHALL PROVIDE A SURVEY FILE AND PROPOSED GRADING PLAN OF THE PROPOSED SPOILS AREA 30 DAYS PRIOR TO CONSTRUCTION STARTING. GRADING OF THE SPOILS AREA SHALL BE CONSIDERED INCIDENTAL TO ITEMS P-152 AND T-905.

ALLOWED CONSTRUCTION TIME (CALENDAR DAYS): 82

WORK AREA A: 82 CALENDAR DAYS
WORK AREA B: 30 CALENDAR DAYS



NOTES

1. WORK AREA A SHALL OCCUR CONCURRENTLY WITH WORK AREA B AND SHALL OCCUR WITHIN THE TOFA OF TAXIWAYS V AND L AND WILL RESULT IN TEMPORARY CLOSURES OF THE TAXIWAY PAVEMENTS. WORK SHALL CONSIST OF MARKING, ELECTRICAL MODIFICATION, AND ANY NECESSARY DRAINAGE, GRADING, AND PAVING ITEMS. WORK AREA A SHALL BE CONCURRENT WITH WORK AREA B AND IS LIMITED TO 30 CALENDAR DAYS.
2. WORK AREA B SHALL OCCUR OUTSIDE OF THE AOA TO MINIMIZE IMPACT ON AIRPORT OPERATIONS. WORK AREA B SHALL CONSIST OF THE EXCAVATION, GRADING, PAVING, AND MARKING OF TAXILANE L. THERE ARE NO ANTICIPATED CLOSURES TO AIRFIELD PAVEMENTS DURING CONSTRUCTION IN WORK AREA B. WORK AREA B IS LIMITED TO 82 CALENDAR DAYS.

**THIS PLAN IS TO BE
PRINTED IN COLOR**

A1 KEYED NOTES AND LEGEND
SCALE: NOT TO SCALE

A2 GENERAL NOTES
SCALE: NOT TO SCALE

A3 CONSTRUCTION SEQUENCING
SCALE: NOT TO SCALE



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TAXILANE L CONSTRUCTION
GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
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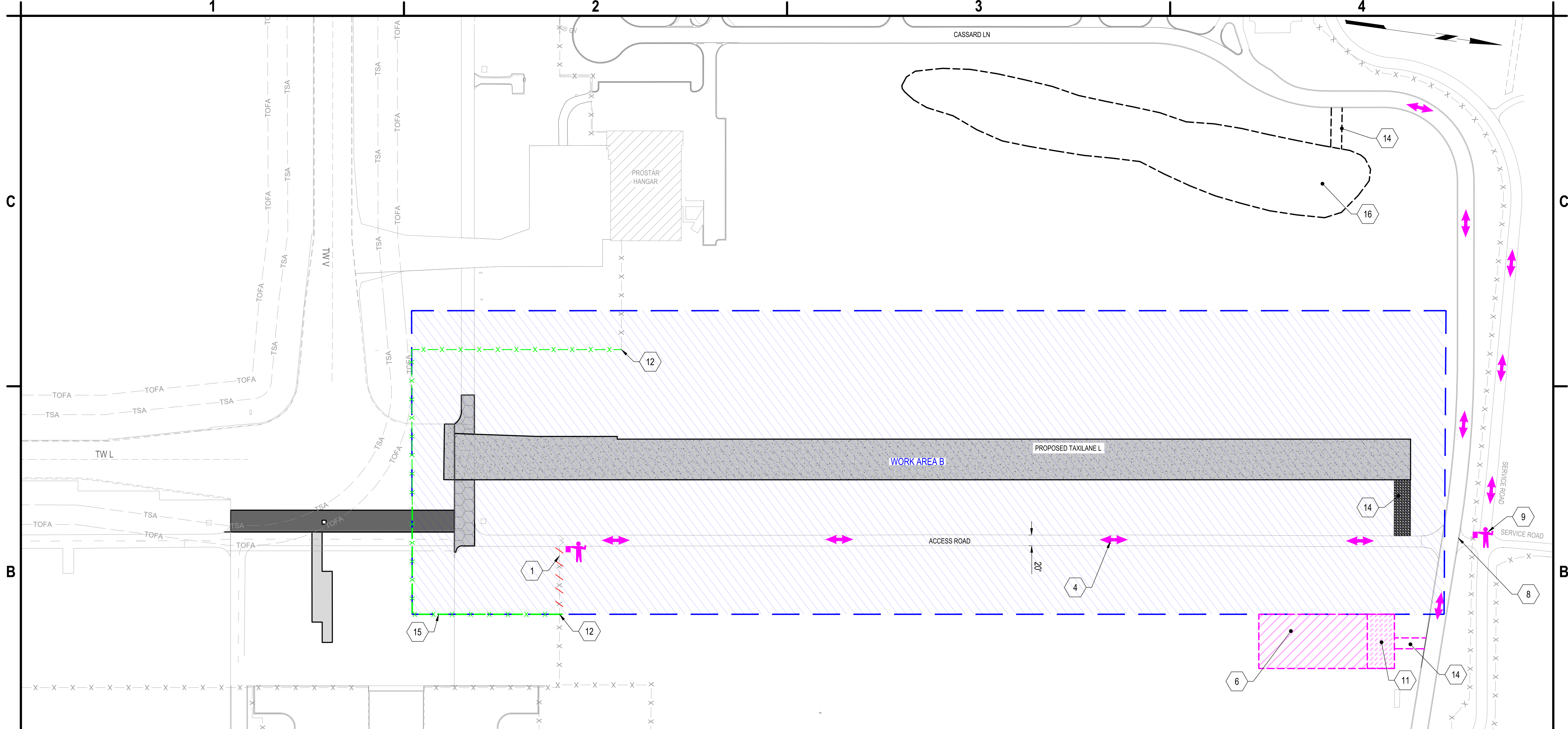
CONSTRUCTION
SAFETY AND
PHASING PLAN -
WORK AREA A

GC101

SHEET NO. 7 OF 36

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B1 CONSTRUCTION SAFETY AND PHASING PLAN - WORK AREA B
SCALE: 1" = 100'

1. REMOVE EXISTING AOA FENCE, ITEM F-162
4. CONTRACTOR HAUL ROUTE
6. CONTRACTORS STAGING AREA.
8. CONTRACTOR'S ACCESS TO SPOILS LOCATION
9. CONTRACTOR PROVIDED GATE GUARD (ONLY REQUIRED DURING CONSTRUCTION ON WORK AREA A)
11. CONTRACTOR'S AND ENGINEERS FIELD OFFICE LOCATION
12. TRANSITION EXISTING FENCE TO TEMPORARY FENCE ON CONCRETE BARRIER, ITEM CX-106, SEE DETAIL B1/GC501.
14. STABILIZED CONSTRUCTION ENTRANCE, SEE DETAIL C3/GC501. CONTRACTOR SHALL PROVIDE RUBBER RAMP AT EXISTING CURB INCIDENTAL TO ITEM C-105
15. RELOCATE TEMPORARY FENCE ON CONCRETE BARRIER TO NEW LOCATION SHOWN ON PLANS. RELOCATION SHALL ONLY OCCUR AFTER WORK AREA A IS COMPLETE. MOVEMENT OF TEMPORARY FENCE SHALL BE INCIDENTAL TO ITEM CX-106.
16. BORROW AREA

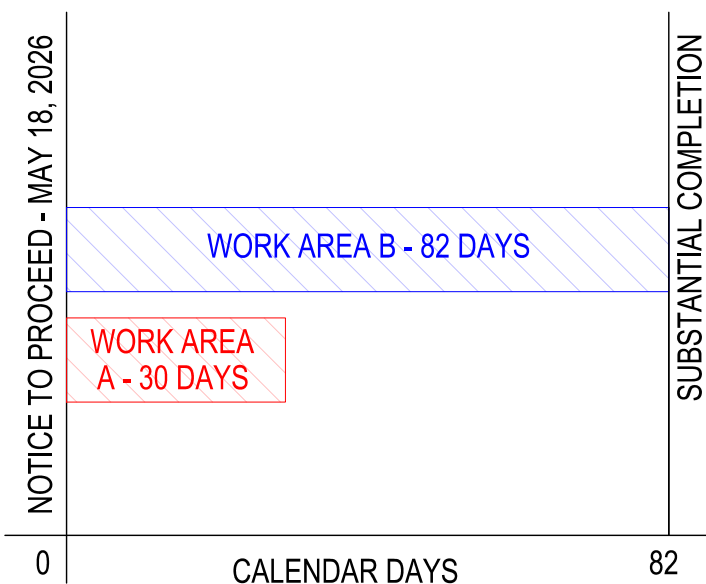
- WORK AREA B
- CONTRACTOR STAGING AREA
- FIELD OFFICE LOCATION
- TEMPORARY FENCE

NOTES:

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 70, ATTACHMENT A - CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.
2. CONTRACTOR SHALL PROVIDE ADEQUATE SIGNAGE FOR ALL CONSTRUCTION ENTRANCES AND HAUL ROUTES.
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ALLOWED CONSTRUCTION TIME (CALENDAR DAYS): 82

WORK AREA A: 82 CALENDAR DAYS
WORK AREA B: 30 CALENDAR DAYS



NOTES

1. WORK AREA A SHALL OCCUR CONCURRENTLY WITH WORK AREA B AND SHALL OCCUR WITHIN THE TOFA OF TAXIWAYS V AND L AND WILL RESULT IN TEMPORARY CLOSURES OF THE TAXIWAY PAVEMENTS. WORK SHALL CONSIST OF MARKING, ELECTRICAL MODIFICATION, AND ANY NECESSARY DRAINAGE, GRADING, AND PAVING ITEMS. WORK AREA A SHALL BE CONCURRENT WITH WORK AREA B AND IS LIMITED TO 30 CALENDAR DAYS.
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**THIS PLAN IS TO BE
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A1 KEYED NOTES AND LEGEND
SCALE: NOT TO SCALE

A2 GENERAL NOTES
SCALE: NOT TO SCALE

A3 CONSTRUCTION SEQUENCING
SCALE: NOT TO SCALE



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TAXILANE L CONSTRUCTION
GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
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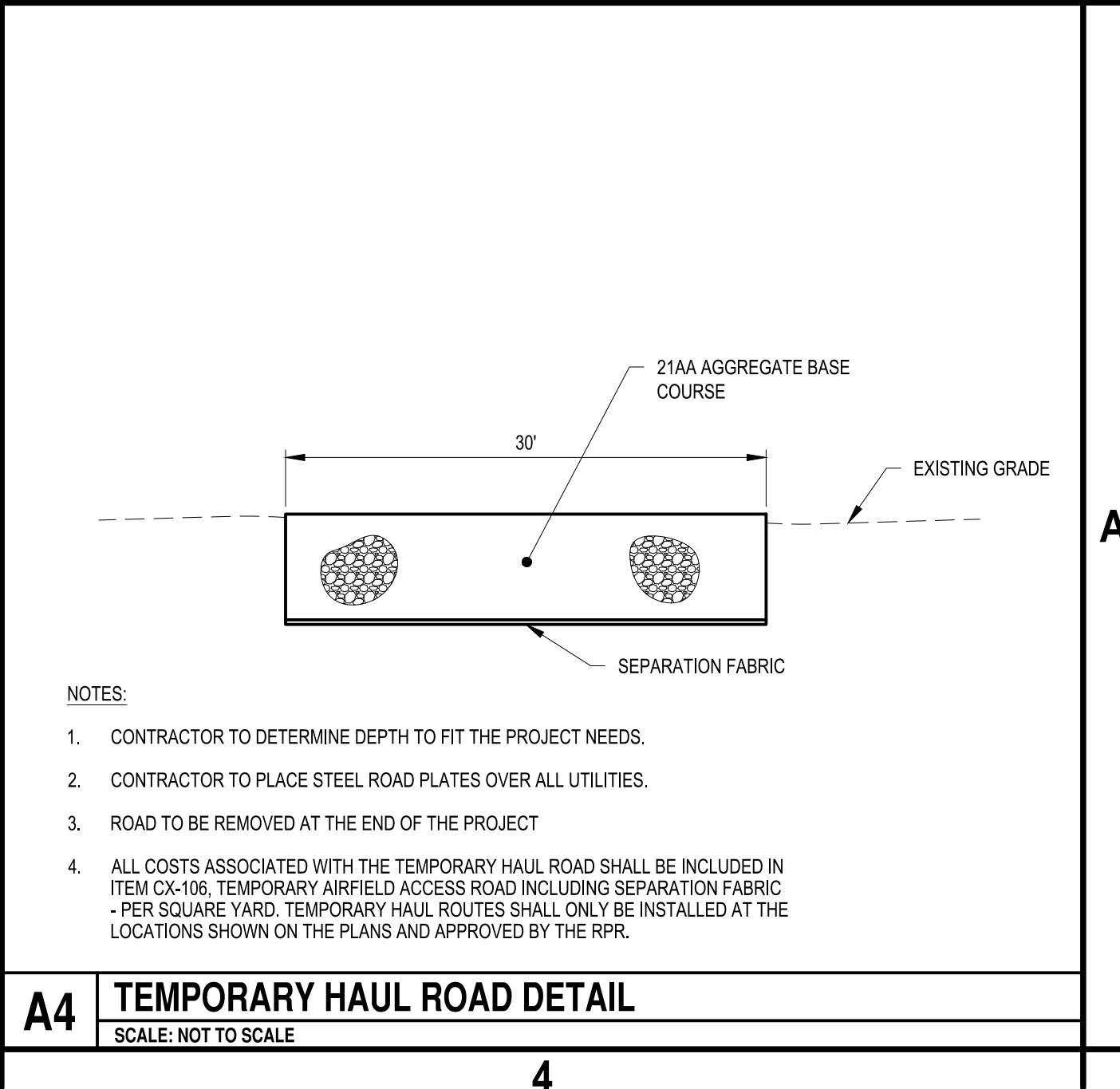
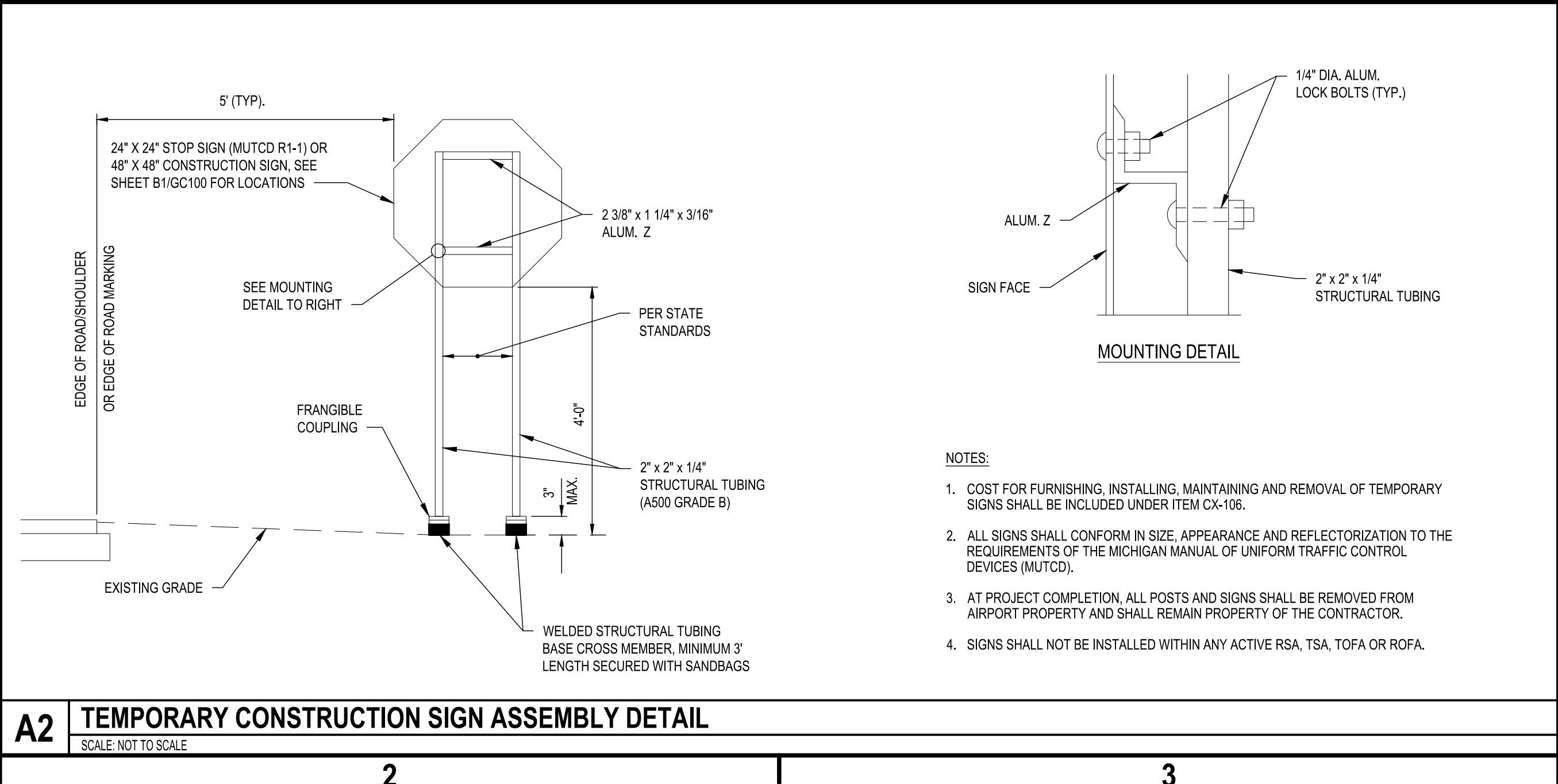
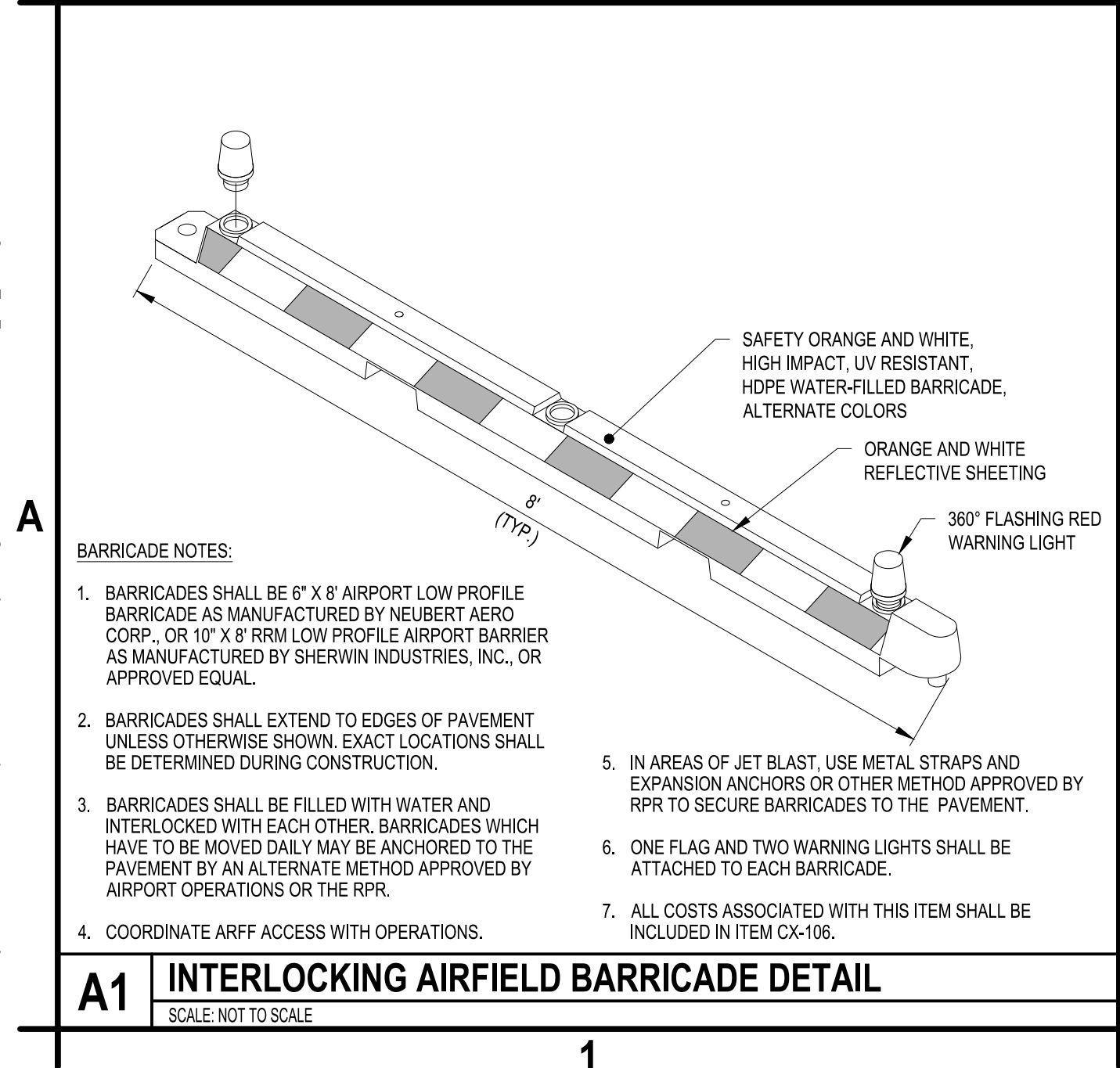
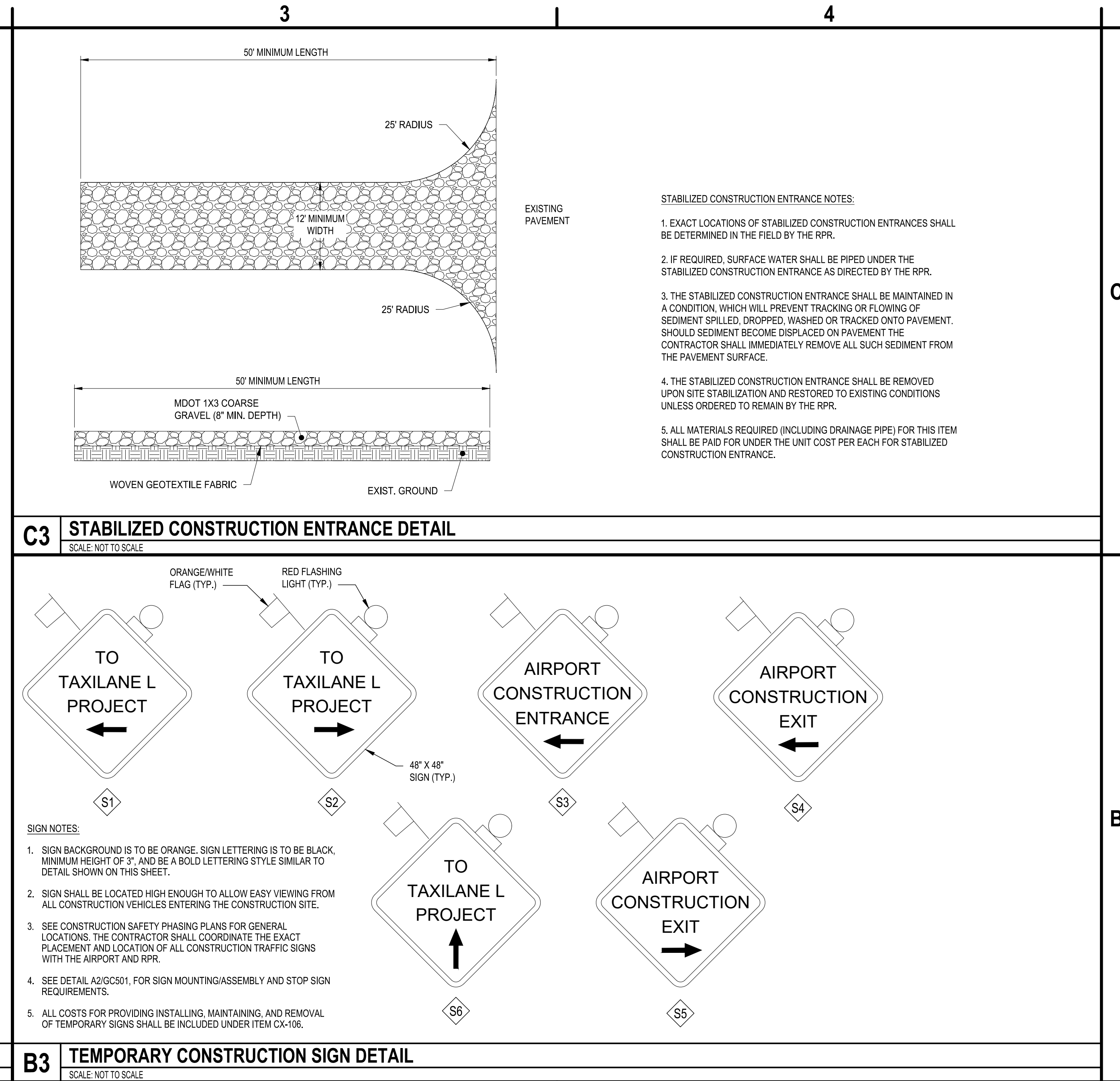
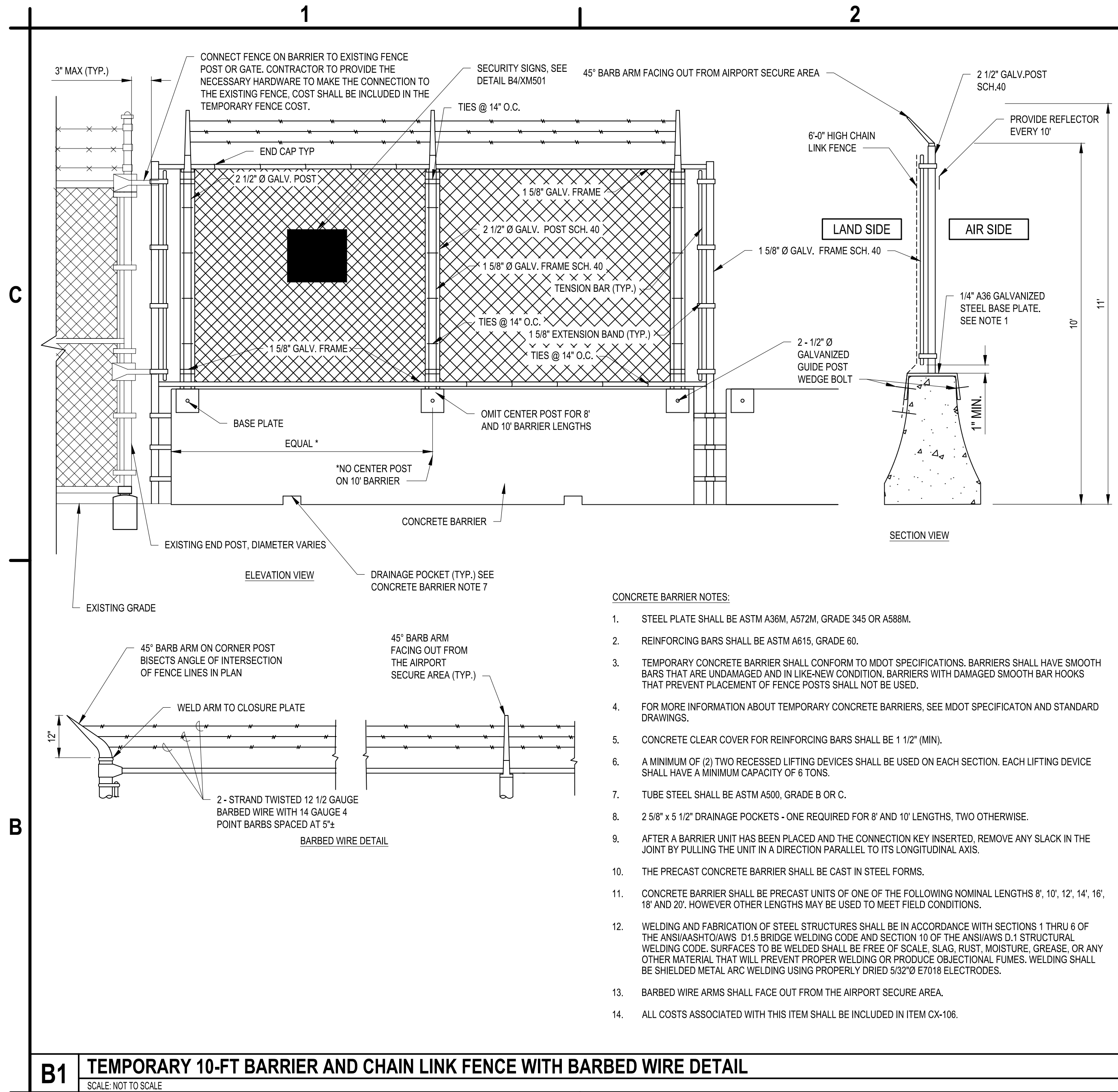
CONSTRUCTION
SAFETY AND
PHASING PLAN -
WORK AREA B

GC102

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www.cscos.com

Kelly J. Galt
Professional Engineer
620105634

GERALD R. FORD International Airport

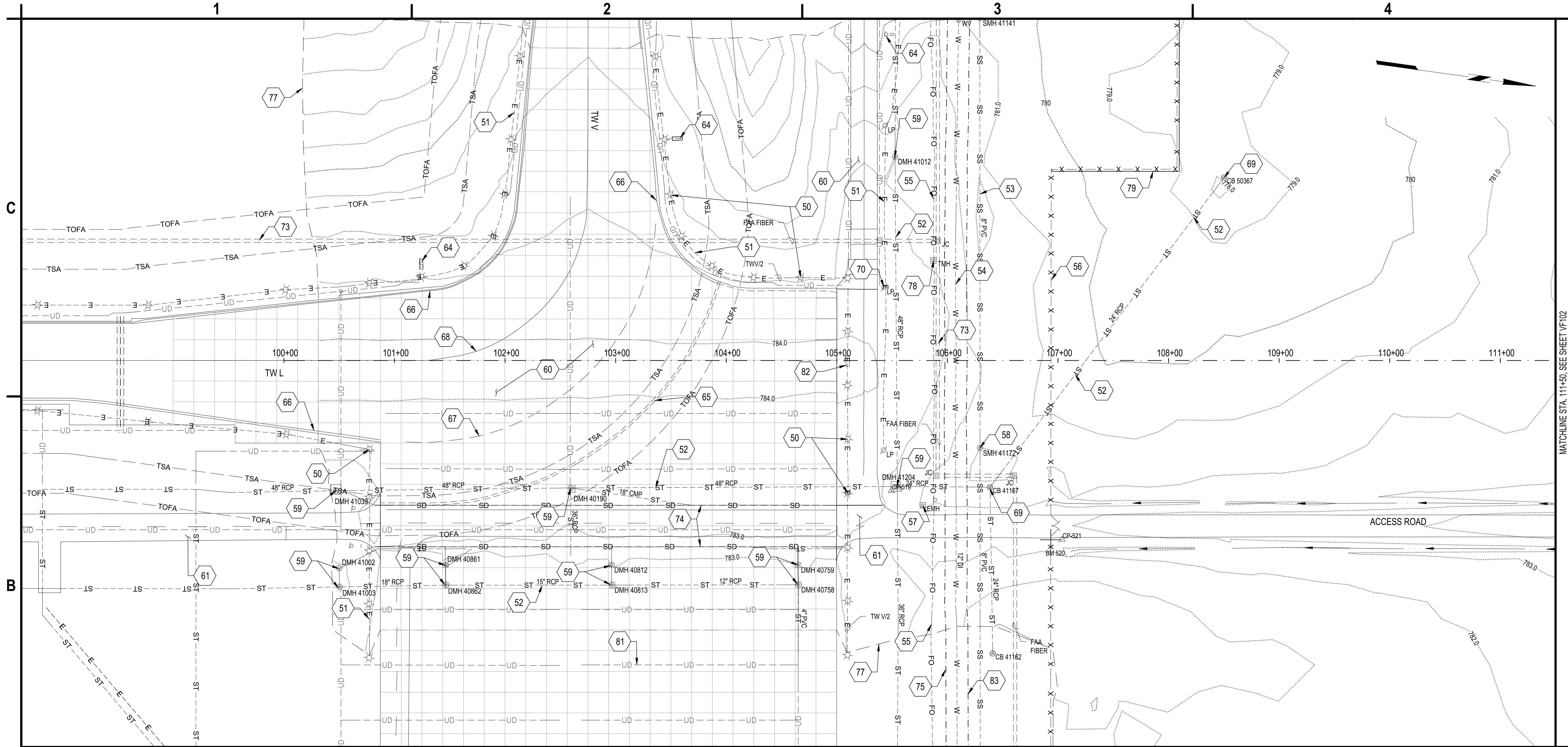
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CONSTRUCTION SAFETY AND PHASING PLAN DETAILS

GC501
SHEET NO. 9 OF 36

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B1 EXISTING CONDITIONS

- | | |
|---|--|
| 50. EXISTING EDGE LIGHT (TYP.) | 74. EXISTING SLOT DRAIN |
| 51. EXISTING ELECTRICAL CONDUIT | 75. EXISTING CITY OF GRAND RAPIDS EASEMENT |
| 52. EXISTING STORM DRAIN LINE | 77. TOPOGRAPHICAL SURVEY LIMIT |
| 53. EXISTING SANITARY SEWER LINE | 78. EXISTING TELECOMMUNICATIONS HANDHOLE |
| 54. EXISTING WATER LINE | 79. EXISTING 4' CONCRETE MOW STRIP |
| 55. EXISTING FIBER OPTIC LINE IN 3" HDPE CONDUIT | 81. EXISTING UNDERDRAIN |
| 56. EXISTING AOA FENCE | 82. EXISTING CONCRETE FOUNDATION |
| 57. EXISTING ELECTRICAL HANDHOLE | |
| 58. EXISTING SANITARY SEWER MANHOLE | |
| 59. EXISTING STORM DRAIN MANHOLE | |
| 60. EXISTING PCC PAVEMENT | |
| 61. EXISTING AC PAVEMENT | |
| 64. EXISTING GUIDANCE SIGN | |
| 65. EXISTING NON-MOVEMENT BOUNDARY MARKING | |
| 66. EXISTING CONTINUOUS TAXIWAY EDGE MARKING | |
| 67. EXISTING DASHED TAXIWAY EDGE MARKING | |
| 68. EXISTING TAXIWAY CENTERLINE MARKING | |
| 69. EXISTING STORM DRAIN CATCH BASIN | |
| 70. EXISTING LIGHT POLE | |
| 73. ELECTRICAL DUCT BANK TO BE INSTALLED BY OTHERS. CONSTRUCTION EXPECTED TO BE COMPLETED BY SUMMER 2025. | |

NOTES:

- UNDERGROUND UTILITIES ARE DEPICTED FROM SURVEY AND RECORD DRAWINGS, BUT ARE NOT KNOWN TO BE COMPLETELY ACCURATE OR COMPLETE. IF UNDOCUMENTED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, NOTIFY THE ENGINEER IMMEDIATELY

A1 KEYED NOTES

SCALE: NOT TO SCALE

A3 GENERAL NOTES

SCALE: NOT TO SCALE



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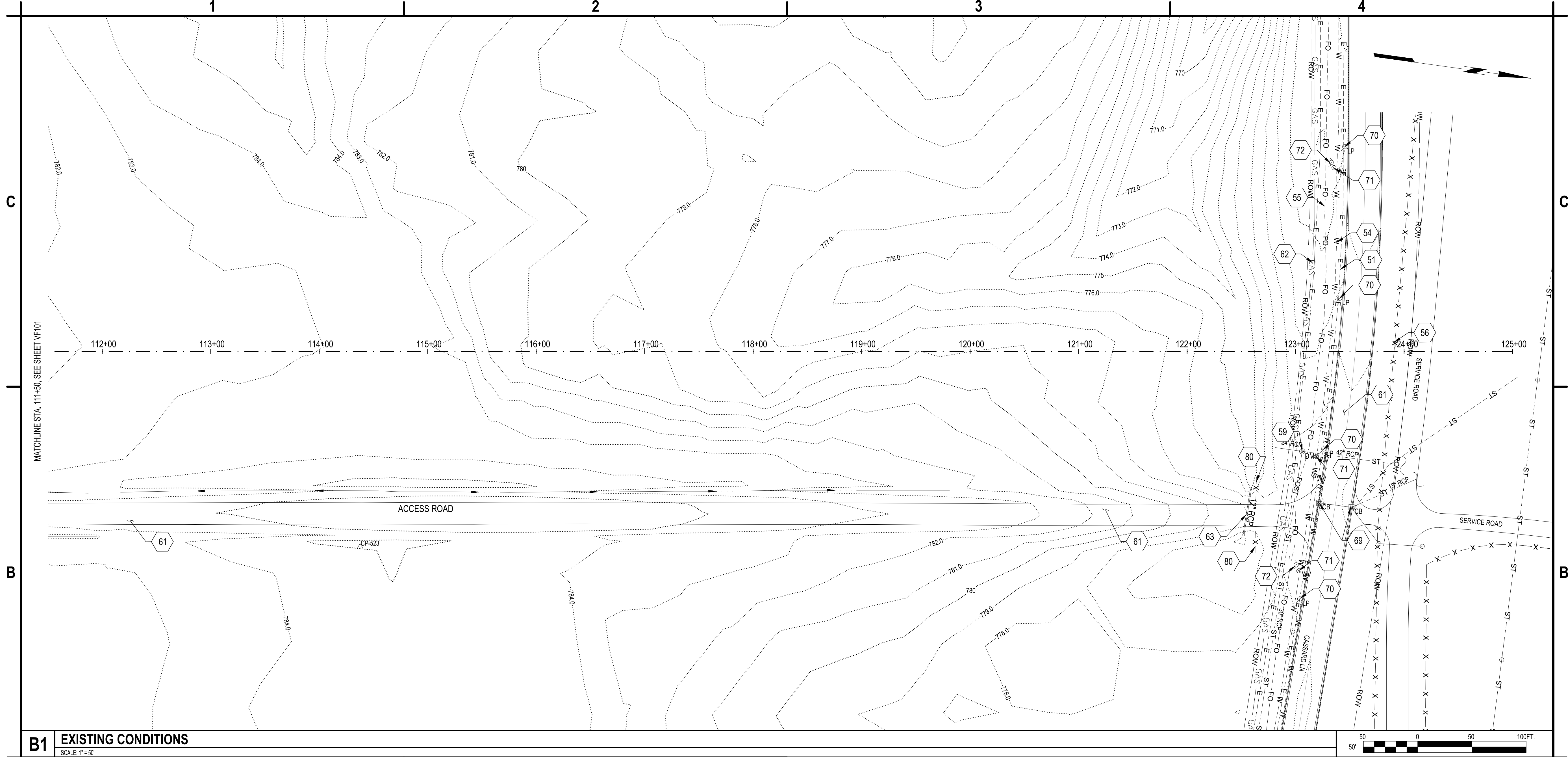
EXISTING
CONDITIONS

VF101

SHEET NO. 10 OF 36

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B1 EXISTING CONDITIONS

- 51. EXISTING ELECTRICAL CONDUIT
- 54. EXISTING WATER LINE
- 55. EXISTING FIBER OPTIC LINE IN 3" HDPE CONDUIT
- 56. EXISTING AOA FENCE
- 59. EXISTING STORM DRAIN MANHOLE
- 61. EXISTING AC PAVEMENT
- 62. EXISTING GAS LINE
- 63. EXISTING DRAINAGE CULVERT
- 69. EXISTING STORM DRAIN CATCH BASIN
- 70. EXISTING LIGHT POLE
- 71. EXISTING WATER VALVE
- 72. EXISTING HYDRANT
- 80. EXISTING 4' STEEL FENCE

NOTES:

1. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE FIELD SURVEY REFLECTED IN THE PLAN.
2. UNDERGROUND UTILITIES ARE DEPICTED FROM SURVEY AND RECORD DRAWINGS, BUT ARE NOT KNOWN TO BE COMPLETELY ACCURATE OR COMPLETE. IF UNDOCUMENTED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, NOTIFY THE ENGINEER IMMEDIATELY

A1 KEYED NOTES

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A2 GENERAL NOTES

SCALE: NOT TO SCALE



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GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

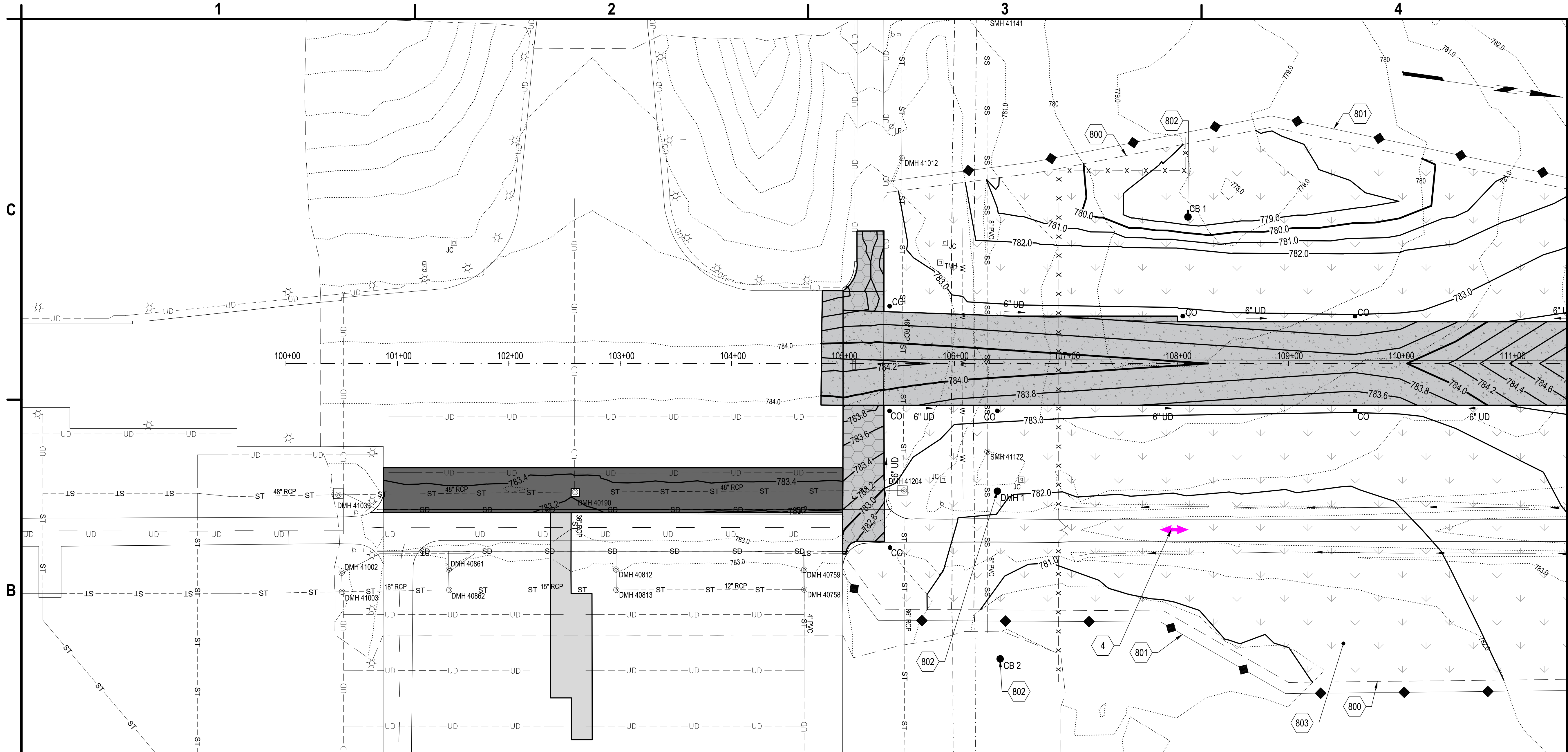
MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
CHECKED BY: K.J. JOST		
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

EXISTING
CONDITIONS

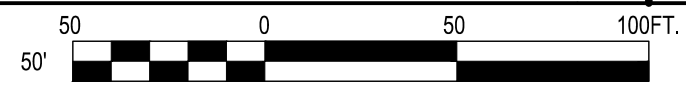
VF102

SHEET NO. 11 OF 36

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B1 SEDIMENT AND EROSION CONTROL PLAN
SCALE: 1"=50'



4. CONTRACTOR HAUL ROUTE
800. GRADING LIMIT LINE (TYP.)
801. INSTALLATION AND REMOVAL OF SILT FENCE, ITEM C-102, SEE DETAIL A1/CE501
802. INSTALLATION AND REMOVAL OF INLET PROTECTION, ITEM C-102, SEE DETAIL A3/CE501
803. SEEDING AND MULCHING, ITEM T-901 AND ITEM T-908

- THE FOLLOWING EROSION CONTROL PROCEDURE SHALL BE ADHERED TO BY THE CONTRACTOR:
1. INSTALL TEMPORARY SILT FENCE BARRIERS AS SHOWN ON THE PLAN AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
 2. THE TOPSOIL SHALL BE STRIPPED & STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. NO TOPSOIL SHALL LEAVE THE AIRPORT PROPERTY.
 3. ALL SILT FENCES SHALL BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE & REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
 5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AND WATER APPLIED AS NECESSARY AND AS DIRECTED BY THE OWNER AND/OR THE RPR IN ORDER TO CONTROL DUST.
 6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED & ROAD SURFACES CLEANED BY THE CONTRACTOR ON A CONTINUOUS BASIS.
 7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH & SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE & AS SOON AS PHYSICALLY POSSIBLE.
 8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM

- SEWERS, DITCHES & CULVERTS. SILT BUILD-UP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN.
9. IN ADDITION TO STORM WATER DISCHARGES, THE FOLLOWING NON-STORM WATER DISCHARGES MAY CONTRIBUTE TO THE RUN-OFF FROM THE SITE:
 - WATER FROM WATER SERVICE FLUSHINGS
 - WATER USED TO WASH DOWN CONSTRUCTION VEHICLES (NO DETERGENTS)
 - WATER USED FOR DUST CONTROL
 - UNCONTAMINATED GROUNDWATER
 10. THE ABOVE NON-STORM WATER FLOWS SHALL BE TREATED IN THE SAME MANNER AS STORM WATER FLOWS INDICATED HEREIN.
 11. CONTRACTOR TO INSTALL CONCRETE WASHOUT AREA. LOCATION SHALL BE DETERMINED BY RPR AND OWNER.

**THIS PLAN IS TO BE
PRINTED IN COLOR**

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 SOIL EROSION NOTES
SCALE: NOT TO SCALE

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AIRPORT GRAND RAPIDS, MI

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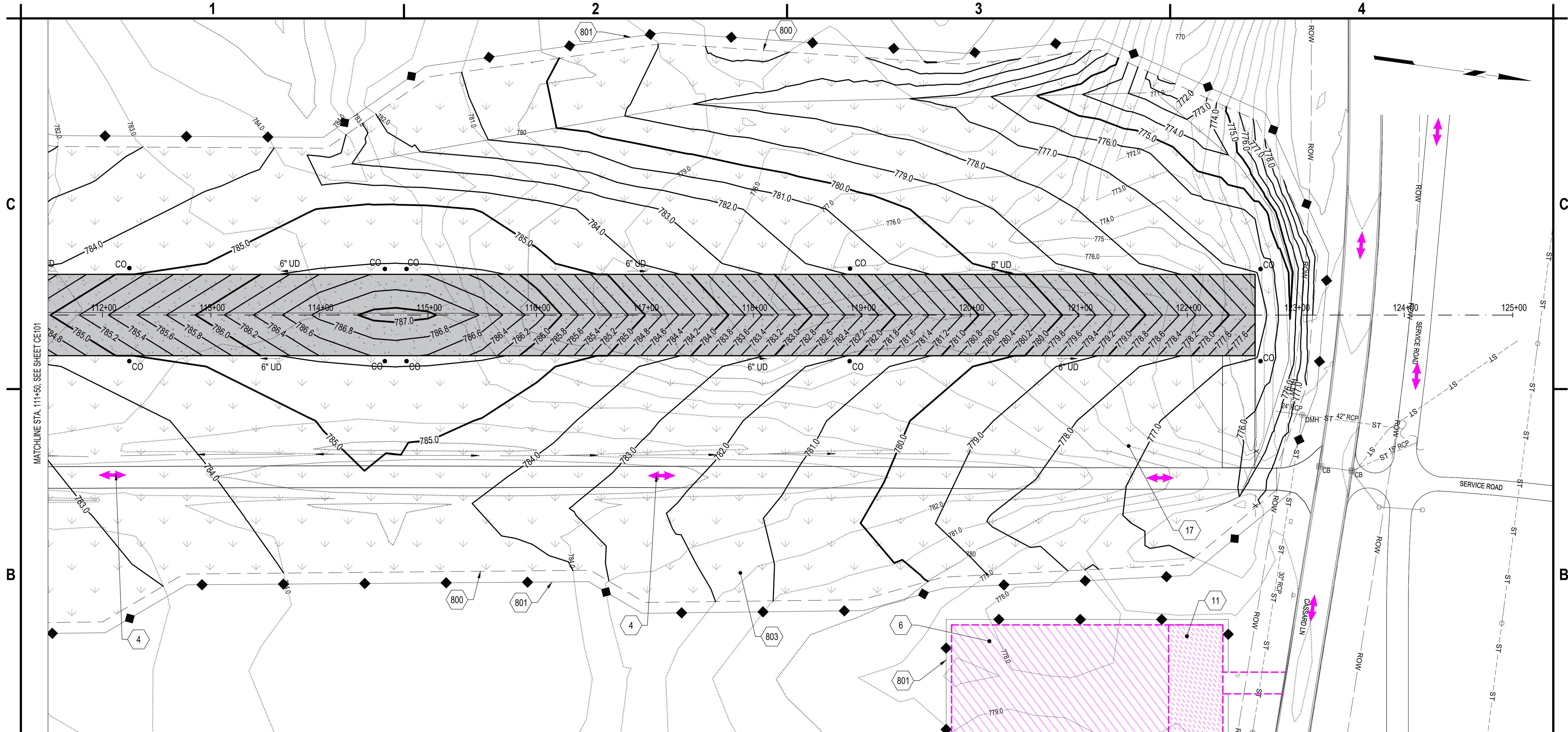
**SEDIMENT AND
EROSION CONTROL
PLAN**

CE101

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B1 SEDIMENT AND EROSION CONTROL PLAN

SCALE: 1" = 50'



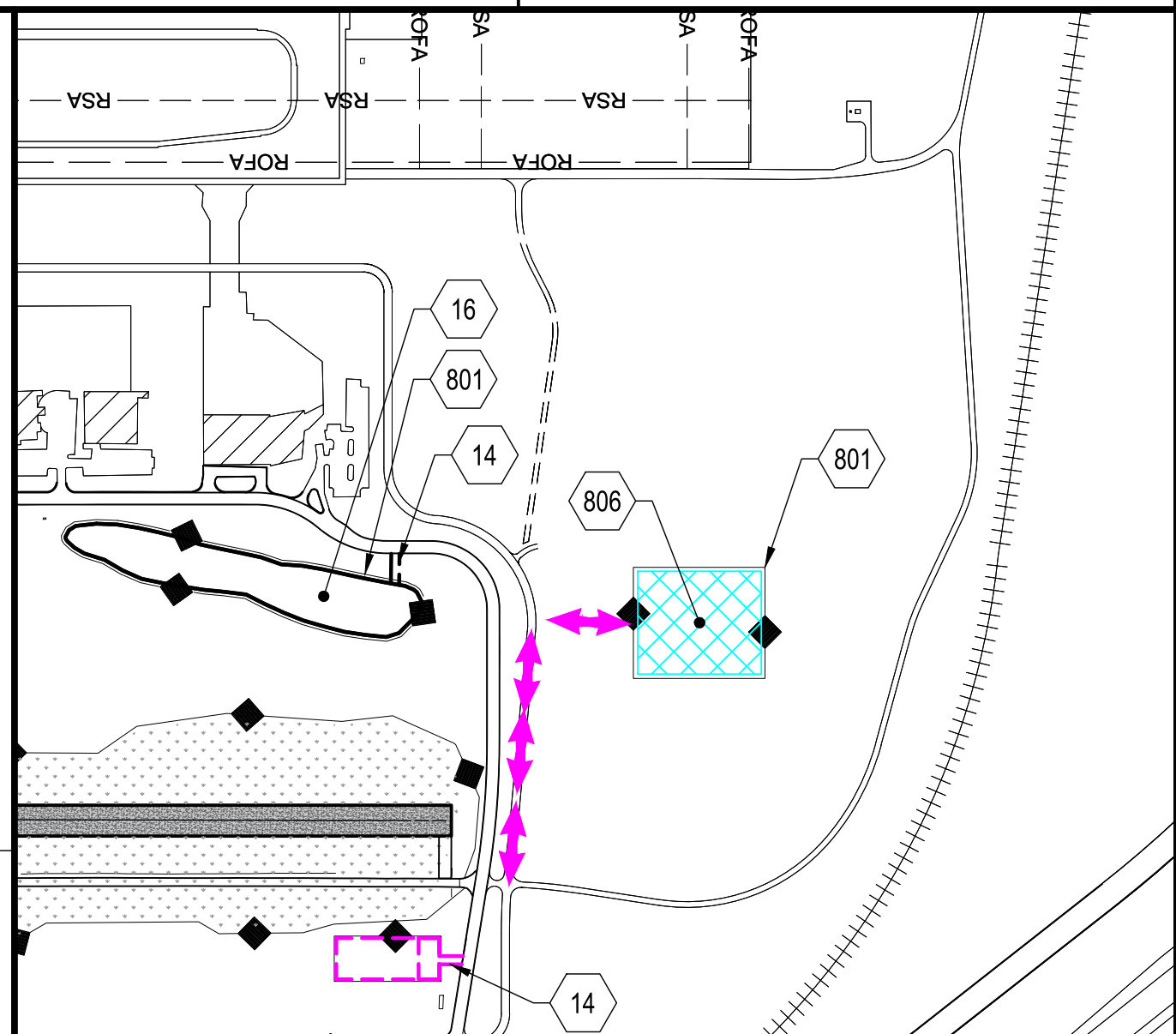
4. CONTRACTOR HAUL ROUTE
6. CONTRACTORS STAGING AREA
11. CONTRACTOR'S AND ENGINEERS FIELD OFFICE LOCATION
14. STABILIZED CONSTRUCTION ENTRANCE, SEE DETAIL A4/GC501. CONTRACTOR SHALL PROVIDE RUBBER RAMP AT EXISTING CURB INCIDENTAL TO ITEM C-105
16. BORROW AREA
17. LIMIT OF FENCE REMOVAL DURING WORK IN AREA A
800. GRADING LIMIT LINE (TYP.)
801. INSTALLATION AND REMOVAL OF SILT FENCE, ITEM C-102, SEE DETAIL A1/CE501
803. SEEDING AND MULCHING, ITEM T-901 AND ITEM T-908
806. SPOIL LOCATION FOR PROJECT (MAXIMUM ALLOWABLE HEIGHT IN SPOIL AREA IS 20'). ALL SPOILS SHALL BE GRADED IN A MANNER THAT ALLOWS FOR DRAINAGE.

THE FOLLOWING EROSION CONTROL PROCEDURE SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT FENCE BARRIERS AS SHOWN ON THE PLAN AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. THE TOPSOIL SHALL BE STRIPPED & STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE AND/OR REMOVAL OF TOPSOIL FROM THE SITE MUST BE FOLLOWED.
3. ALL SILT FENCES SHALL BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE & REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AND WATER APPLIED AS NECESSARY AND AS DIRECTED BY THE OWNER AND/OR THE RPR IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED & ROAD SURFACES CLEANED BY THE CONTRACTOR ON A CONTINUOUS BASIS.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH & SEEDDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE & AS SOON AS PHYSICALLY POSSIBLE.

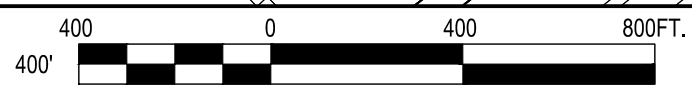
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES & CULVERTS. SILT BUILD-UP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN.
9. IN ADDITION TO STORM WATER DISCHARGES, THE FOLLOWING NON-STORM WATER DISCHARGES MAY CONTRIBUTE TO THE RUN-OFF FROM THE SITE:
 - WATER FROM WATER SERVICE FLUSHINGS
 - WATER USED TO WASH DOWN CONSTRUCTION VEHICLES (NO DETERGENTS)
 - WATER USED FOR DUST CONTROL
 - UNCONTAMINATED GROUNDWATER
10. THE ABOVE NON-STORM WATER FLOWS SHALL BE TREATED IN THE SAME MANNER AS STORM WATER FLOWS INDICATED HEREIN.

**THIS PLAN IS TO BE
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A4 SPOILS/BORROW AREA

SCALE: 1" = 400'



A1 KEYED NOTES

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A2 SOIL EROSION NOTES

SCALE: NOT TO SCALE



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**SEDIMENT AND
EROSION CONTROL
PLAN**

CE102

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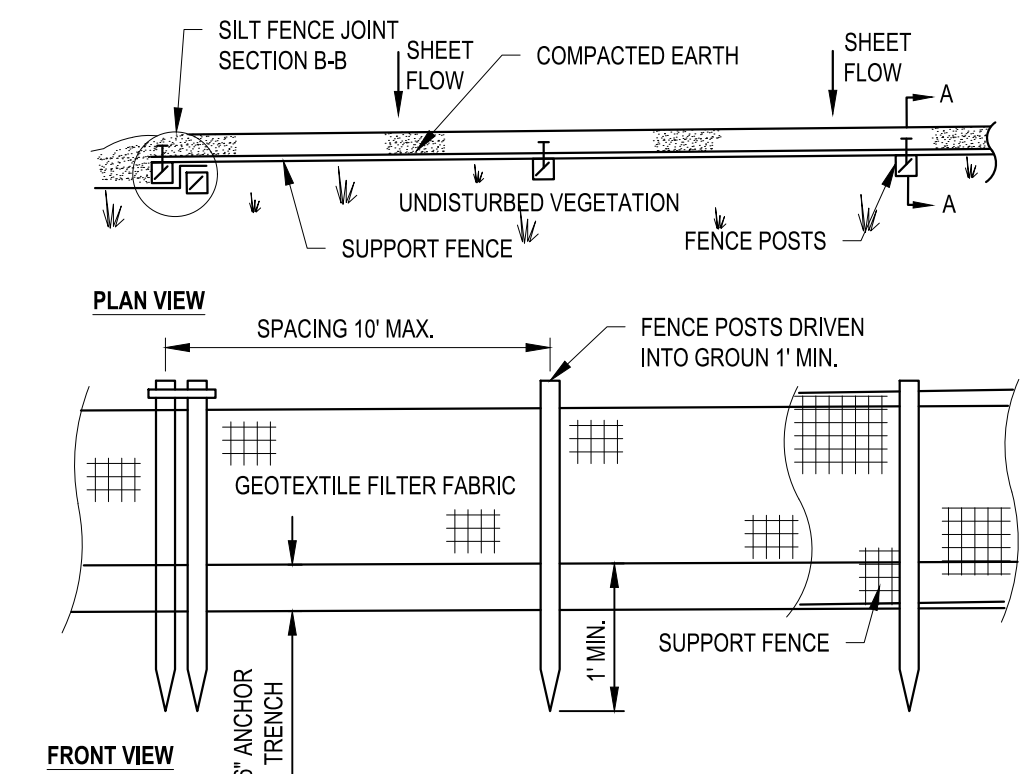


TABLE 1: MATERIALS AND PROPERTIES FOR SILT FENCE CONSTRUCTION

WOVEN GEOTEXTILE FABRIC WIDTH	MIN. HARDWOOD POST LENGTH*	MIN. GRAB TENSILE (ASTM D 4632)	MIN. TRAPEZOIDAL TEAR STRENGTH (ASTM D 4533)	MIN. PERMITTIVITY (ASTM D 4491)	MAX. APPARENT OPENING SIZE (ASTM D 4751)
24"	36"	100 LBS	45 LBS	0.1 SEC* -1	0.6 MM
36"	42"	100 LBS	45 LBS	0.1 SEC* -1	0.6 MM

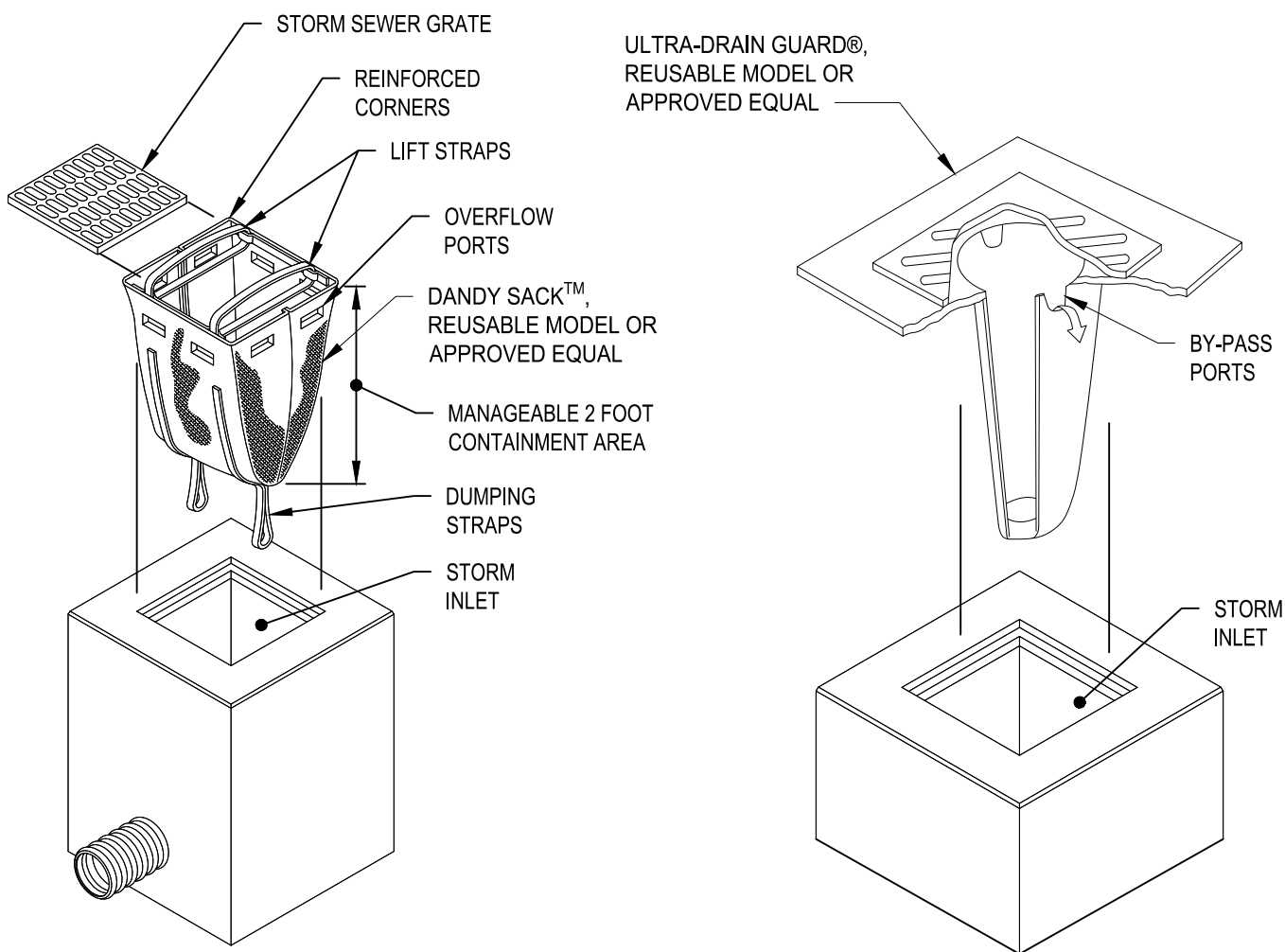
*HARDWOOD POSTS SHALL BE A MINIMUM OF 1 3/8" X 1 3/8" THICKNESS

NOTES:

- SILT FENCE SHOULD BE INSTALLED AT THE DOWNSLOPE EDGE AREAS, ALONG A LINE OF EQUAL ELEVATION (PARALLEL TO CONTOUR LINES). PLACE BEYOND THE TOE OF STEEPER SLOPES IF POSSIBLE TO INCREASE THE "PONDING" OR SETTLING EFFECT.
- FABRIC ATTACHED TO POST BY STAPLING OR NAILING LATH AND INTO HARDWOOD POSTS, AT A MINIMUM OF FOUR LOCATIONS, EVENLY SPACED ALONG LATH TO PREVENT FABRIC TEAR OUT.
- 6" LOOSE BURY FLAP UNATTACHED TO POST AT BOTTOM OF LATH.
- MAXIMUM POST SPACING: 10'
- WHENEVER POSSIBLE, PLACE SILT FENCE IN FLAT AREAS AT LEAST 10' FROM THE TOE OF SLOPES (SILT FENCE IS NOT AN APPROPRIATE MEASURE FOR PLACEMENT ON STEEP SLOPES).
- MAXIMUM CONTRIBUTING DRAINAGE AREA IS 1/2 ACRE PER 100 LINEAR FEET OF FENCE.
- SILT FENCE SHOULD BE INSPECTED AT LEAST WEEKLY, IMMEDIATELY BEFORE A FORECASTED RUNOFF EVENT, AND AFTER EACH RUNOFF EVENT FROM RAIN OR SNOWMELT.
- FABRIC TEARS, POST FAILURES, VEHICLE DAMAGE, AND/OR UNDERMINING SHOULD BE REPAIRED IMMEDIATELY
- FABRIC TEARS, POST FAILURES, VEHICLE DAMAGE, AND/ OR UNDERMINING SHOULD BE REPAIRED IMMEDIATELY.
- SEDIMENT BUILD UP SHOULD BE REMOVED WHEN IT REACHES 1/2 TO 1/2 THE HEIGHT OF THE SILT FENCE ABOVE GROUND ELEVATION.
- OVERTOPPING AND SIDE CUTTING ARE SIGNS THAT THE SILT FENCE IS EITHER NOT APPROPRIATELY PLACED OR THAT ADDITIONAL MEASURES ARE NECESSARY DUE TO SIDE RUNOFF CONDITIONS.
- REMOVE THE SILT FENCE AFTER THE SITE HAS BEEN STABILIZED WITH PERMANENT SOIL EROSION/ SEDIMENTATION CONTROL MEASURES.

A1 SILT FENCE DETAIL

SCALE: NOT TO SCALE



CATCH BASIN INSERT INLET PROTECTION NOTES:

- CONTRACTOR SHALL VERIFY DIMENSIONS OF STRUCTURES WITH MANUFACTURER PRIOR TO ORDERING FOR CORRECT SIZING.
- THE CATCH BASIN INSERT SHALL BE INSTALLED, MAINTAINED AND REMOVED PER MANUFACTURER RECOMMENDATIONS.
- THE LOCATIONS SHOWN ON THE PLAN FOR PLACEMENT OF THIS DEVICE MAY VARY FROM WHERE THEY ARE ACTUALLY INSTALLED. THE DEVICES SHALL BE PLACED IN CATCH BASINS DURING CONCRETE SAW CUTTING AND DRILLING OPERATIONS, DURING REMOVAL OF CURING COMPOUND, AND AT ALL OTHER TIMES THAT THERE WILL BE WATER FLOWING INTO THE CATCH BASINS WHICH MAY CONTAIN DUST, DIRT OR OTHER FINE MATERIAL WHICH MAY CAUSE SILTATION DOWNSTREAM OF THE CONSTRUCTION SITE.
- ALL STORM WATER THAT NEEDS TO BE PUMPED FROM THE SITE SHALL BE PUMPED INTO ONE OF THESE DEVICES. THE FLOW RATE PUMPED INTO THIS DEVICE SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDED TREATMENT FLOW RATE. DURING THE PUMPING PROCESS, THE DEVICE SHALL BE MONITORED IN ORDER TO DETERMINE THAT IT IS TREATING THE WATER. IF THE WATER IS UTILIZING THE OVERFLOW PORT AND IS NOT BEING CLEANED BY THE DEVICE, THE PUMPING SHALL BE STOPPED AND THE DEVICE SHALL BE CLEANED PER MANUFACTURER'S RECOMMENDATIONS AND THEN REINSTALLED.
- MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR WHEN THE CAPACITY IS REDUCED BY APPROXIMATELY 50 PERCENT OR DIRECTED BY THE ENGINEER.
- THE MEASUREMENT OF THE CATCH BASIN INSERT INLET PROTECTION FOR INSTANCES OF A PROPOSED / MODIFIED STRUCTURE BEING INSTALLED IN THE SAME LOCATION AS AN EXISTING ONE SHALL BE CONSIDERED AS ONE DEVICE AND ANY ADDITIONAL COSTS SHALL BE CONSIDERED INCIDENTAL.
- THIS DEVICE SHALL BE PAID FOR UNDER THE UNIT COST PER EACH FOR CATCH BASIN INSERT INLET PROTECTION. THIS COST SHALL INCLUDE ALL THE COSTS FOR MAINTENANCE, INSTALLATION, REPLACEMENT, IF NEEDED, AND ALL LABOR, EQUIPMENT AND TOOLS AND INCIDENTALS TO INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS AND REMOVAL.

A3 STORM DRAIN INLET PROTECTION

SCALE: NOT TO SCALE

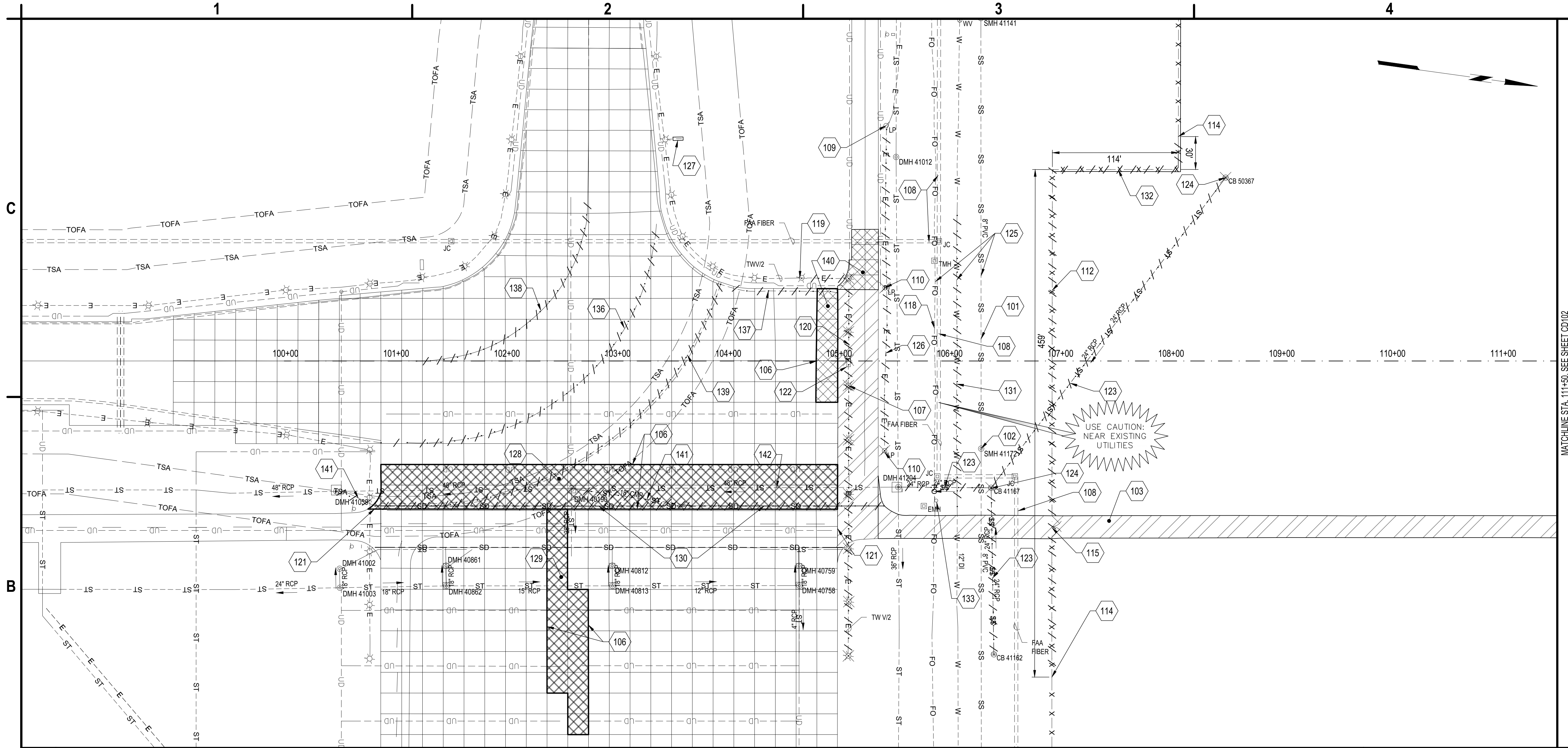


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TAXILANE L CONSTRUCTION
GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

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SOIL EROSION AND SEDIMENT CONTROL DETAILS		
CE501		
SHEET NO. 14 OF 36		



B1 DEMOLITION PLAN
SCALE: 1"=50'



101. PROTECT EXISTING PRIVATE SANITARY SEWER (8" PVC) IN PLACE (TYP.)
102. EXISTING SANITARY MANHOLE TO BE ADJUSTED TO GRADE, ITEM D-751, SEE CG SERIES
103. EXISTING ASPHALT TO BE REMOVED, ITEM P-101, UNDERLAIN BASE COURSE SHALL BE REMOVED AS NEEDED TO MEET PROPOSED GRADE. REMOVAL OF ANY BASE MATERIAL SHALL BE REMOVED PER ITEM P-152, SEE NOTE 2.
106. SAWCUT EXISTING CONCRETE PAVEMENT, INCIDENTAL TO ITEM P-101, SEE DETAIL A4/CD501
107. REMOVE EXISTING STAKE OR BASE MOUNTED LIGHT, ITEM L-125 (TYP.) SALVAGE LIGHT FIXTURES AND TRANSPORT TO A LOCATION DETERMINED BY AIRPORT MAINTENANCE
108. FAA FIBER OPTIC CABLE TO BE INSTALLED BY OTHERS, SEE DETAIL A3/CD501
109. LIMIT OF LIGHT POLE CABLE REMOVAL. SEE NOTE 1
110. EXISTING LIGHT POLE, FIXTURE AND FOUNDATION TO BE REMOVED, ITEM P-101. SEE NOTE 1. CONDUIT SHALL BE ABANDONED IN PLACE AND IF ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED, INCIDENTAL TO ITEM P-152. LIGHT POLES AND FIXTURES SHALL BE SALVAGED AND TRANSPORTED TO A LOCATION DETERMINED BY AIRPORT MAINTENANCE
112. REMOVAL OF EXISTING 10 FOOT FENCE, ITEM F-162, SEE NOTE 4
114. LIMIT OF FENCE REMOVAL
115. REMOVAL OF EXISTING 20 FOOT DOUBLE SWING GATE, ITEM F-162, SEE NOTE 3
118. EXISTING FIBER OPTIC LINE TO BE LOWERED, ITEM L-110 SEE XM SERIES

119. EXISTING EDGE LIGHT TO BE REMAIN, CONTRACTOR SHALL INSTALL FAA APPROVED CONNECTOR KITS TO ENSURE CONTINUITY OF THE TAXIWAY EDGE LIGHT CIRCUIT AND PLUG ABANDONED CONDUIT HUB WATERTIGHT, PER SPECIFICATION L-108, INCIDENTAL TO OTHER WORK ITEMS
120. EXISTING CONDUIT AND CABLE TO BE REMOVED IF ENCOUNTERED, INCIDENTAL TO ITEM P-152
121. SAWCUT EXISTING ASPHALT PAVEMENT, INCIDENTAL TO ITEM P-101
122. EXISTING CONCRETE FOUNDATION TO BE REMOVED INCIDENTAL TO ITEM P-152
123. REMOVAL OF EXISTING 24" RCP STORM SEWER PIPE, ITEM P-101
124. REMOVAL OF EXISTING DRAINAGE STRUCTURE, ITEM P-101
125. SOFT DIG PER SPECIFICATION DX-800 TO IDENTIFY THE DEPTH OF THE EXISTING UTILITY. NO MATERIAL SHALL BE HAULED OFFSITE
126. REMOVAL OF EXISTING LIGHT POLE CABLE AND CONDUIT, INCIDENTAL TO ITEM P-152
127. REMOVAL OF EXISTING SIGN, ITEM L-125
128. REMOVAL OF EXISTING CONCRETE PAVEMENT, ITEM P-101 (ADD ON NO. 1), SEE DETAIL A1/CP503
129. REMOVAL OF EXISTING CONCRETE PAVEMENT, ITEM P-101 (ADD ON NO. 2), SEE DETAIL A1/CP503
130. REMOVAL OF EXISTING SLOT DRAIN, ITEM P-101, (ADD ON NO. 1) SEE DETAIL B4/CD501

131. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE DEPTH OF THE EXISTING WATER MAIN PRIOR TO THE START OF CONSTRUCTION ACTIVITIES VIA SOFT DIGS, ITEM DX-800. RESULTS OF THE DEPTH VERIFICATION SHALL BE PROVIDED TO THE ENGINEER. IF, UPON INSPECTION, THE ENGINEER DETERMINES THAT THE EXISTING WATER MAIN IS AT A SUFFICIENT DEPTH BENEATH THE PROPOSED SURFACE, THE WATER MAIN SHALL REMAIN IN PLACE AND WILL NOT REQUIRE REMOVAL OR LOWERING. IN SUCH A CASE, ALL ASSOCIATED WORK ITEMS RELATED TO THE REMOVAL OR LOWERING OF THE WATER MAIN SHALL BE NON-PERFORMED. IF THE DEPTH VERIFICATION DETERMINES THE WATER MAIN IS AT AN INSIGNIFICANT DEPTH. THE WATERMAIN SHALL BE REMOVED AND LOWERED PER PLAN. SEE THE CU SERIES.
132. SAW CUT AND REMOVE THE EXISTING FENCE CONCRETE APRON, INCIDENTAL TO THE FENCE REMOVAL, ITEM F-162.
133. REMOVE EXISTING ROAD SIGN, INCIDENTAL TO OTHER WORK ITEMS. SIGN SHALL BE SALVAGED AND TRANSPORTED TO A LOCATION DETERMINED BY AIRPORT MAINTENANCE
136. REMOVAL OF EXISTING DASHED TAXIWAY EDGE MARKING
137. REMOVAL OF EXISTING CONTINUOUS TAXIWAY EDGE MARKING
138. REMOVAL OF EXISTING TAXIWAY CENTERLINE MARKING
139. REMOVAL OF EXISTING NON-MOVEMENT MARKING
140. REMOVAL OF EXISTING CONCRETE PAVEMENT, ITEM P-101, SEE DETAIL A1/CP503
141. REMOVAL OF EXISTING 18" CMP STORM SEWER PIPE, ITEM P-101 (ADD ON NO. 1)
142. PROTECT EXISTING 48" RCP STORM SEWER PIPE IN PLACE

NOTES:

1. THE CONTRACTOR SHALL CONDUCT A FIELD VERIFICATION OF ALL EXISTING CIRCUITS PRIOR TO COMMENCING WORK. FOR CIRCUITS WHERE A PORTION IS BEING REMOVED AS PART OF THE DEMOLITION, CONTINUITY MUST BE MAINTAINED FOR THE REMAINING CIRCUIT. ENSURING CONTINUITY SHALL BE CONSIDERED INCIDENTAL TO THE CIRCUIT REMOVAL.
2. THE CONTRACTOR MAY USE THE EXISTING ACCESS ROAD FOR THE DURATION OF THE PROJECT. THE EXISTING ACCESS ROAD SHALL BE REMOVED AT THE END OF THE PROJECT.
3. THE EXISTING 20 FOOT DOUBLE SWING GATE SHALL SERVE AS THE CONTRACTOR'S ACCESS TO WORK AREA B DURING THE PROJECT. SEE THE GC SERIES. THE CONTRACTOR SHALL NOT REMOVE THE ACCESS GATE UNTIL THE WORK AREA B IS COMPLETED AND THE GATE IS NO LONGER NEEDED FOR CONSTRUCTION ACCESS TO THE SITE AND THE PERMANENT FENCE HAS BEEN INSTALLED AND ACCEPTED BY GRR AND TSA.
4. TEMPORARY FENCE PER THE GC SERIES SHALL BE INSTALLED PRIOR TO THE FENCE REMOVAL. REFER TO THE GC SERIES FOR MORE INFORMATION.

A1 KEYED NOTES
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A4 GENERAL NOTES
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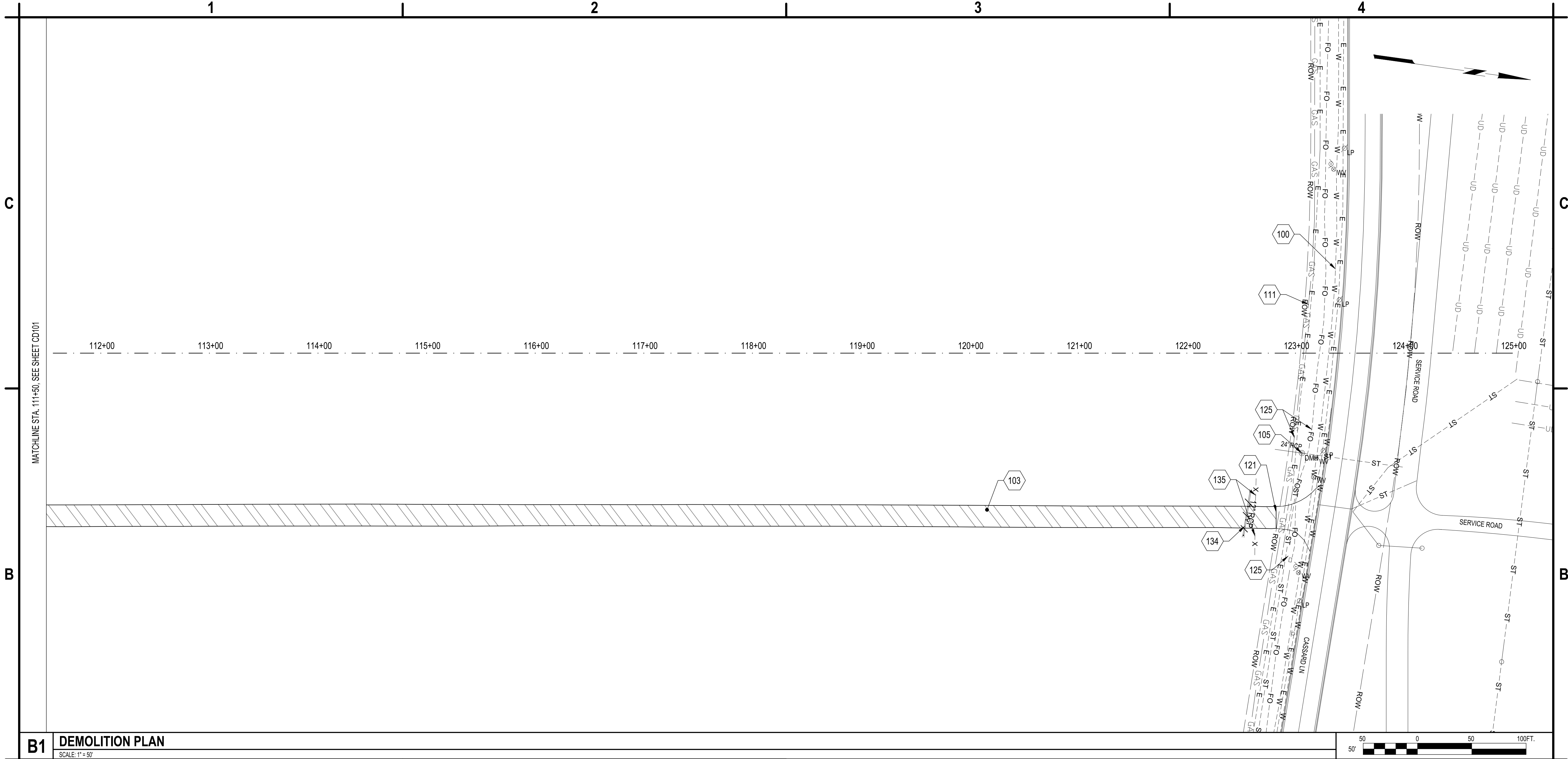
DEMOLITION PLAN

CD101

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B1 DEMOLITION PLAN
SCALE: 1" = 50'

100. PROTECT EXISTING PUBLIC WATERLINE IN PLACE (TYP.)
103. EXISTING ASPHALT TO BE REMOVED, ITEM P-101, UNDERLAIN BASE COURSE SHALL BE REMOVED AS NEEDED TO MEET PROPOSED GRADE. REMOVAL OF ANY BASE MATERIAL SHALL BE REMOVED PER ITEM P-152, SEE NOTE 2.
105. PROTECT EXISTING STORM SEWER STRUCTURE IN PLACE (TYP.)
111. EXISTING GAS LINE, PROTECT IN PLACE (TYP.)
121. SAWCUT EXISTING ASPHALT PAVEMENT, INCIDENTAL TO ITEM P-101
125. SOFT DIG PER SPECIFICATION DX-800 TO IDENTIFY THE DEPTH OF THE EXISTING UTILITY. NO MATERIAL SHALL BE HAULED OFFSITE
134. REMOVAL OF EXISTING 12" RCP STORM SEWER, ITEM P-101, REMOVAL COST SHALL INCLUDE REMOVAL OF THE PIPE END SECTIONS
135. REMOVAL OF EXISTING 4" STEEL FENCE, PER ITEM F-162

NOTES:

1. THE CONTRACTOR SHALL CONDUCT A FIELD VERIFICATION OF ALL EXISTING CIRCUITS PRIOR TO COMMENCING WORK. FOR CIRCUITS WHERE A PORTION IS BEING REMOVED AS PART OF THE DEMOLITION, CONTINUITY MUST BE MAINTAINED FOR THE REMAINING CIRCUIT. ENSURING CONTINUITY SHALL BE CONSIDERED INCIDENTAL TO THE CIRCUIT REMOVAL.
2. THE CONTRACTOR MAY USE THE EXISTING ACCESS ROAD FOR THE DURATION OF THE PROJECT. THE EXISTING ACCESS ROAD SHALL BE REMOVED AT THE END OF THE PROJECT.

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A2 GENERAL NOTES
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DEMOLITION PLAN

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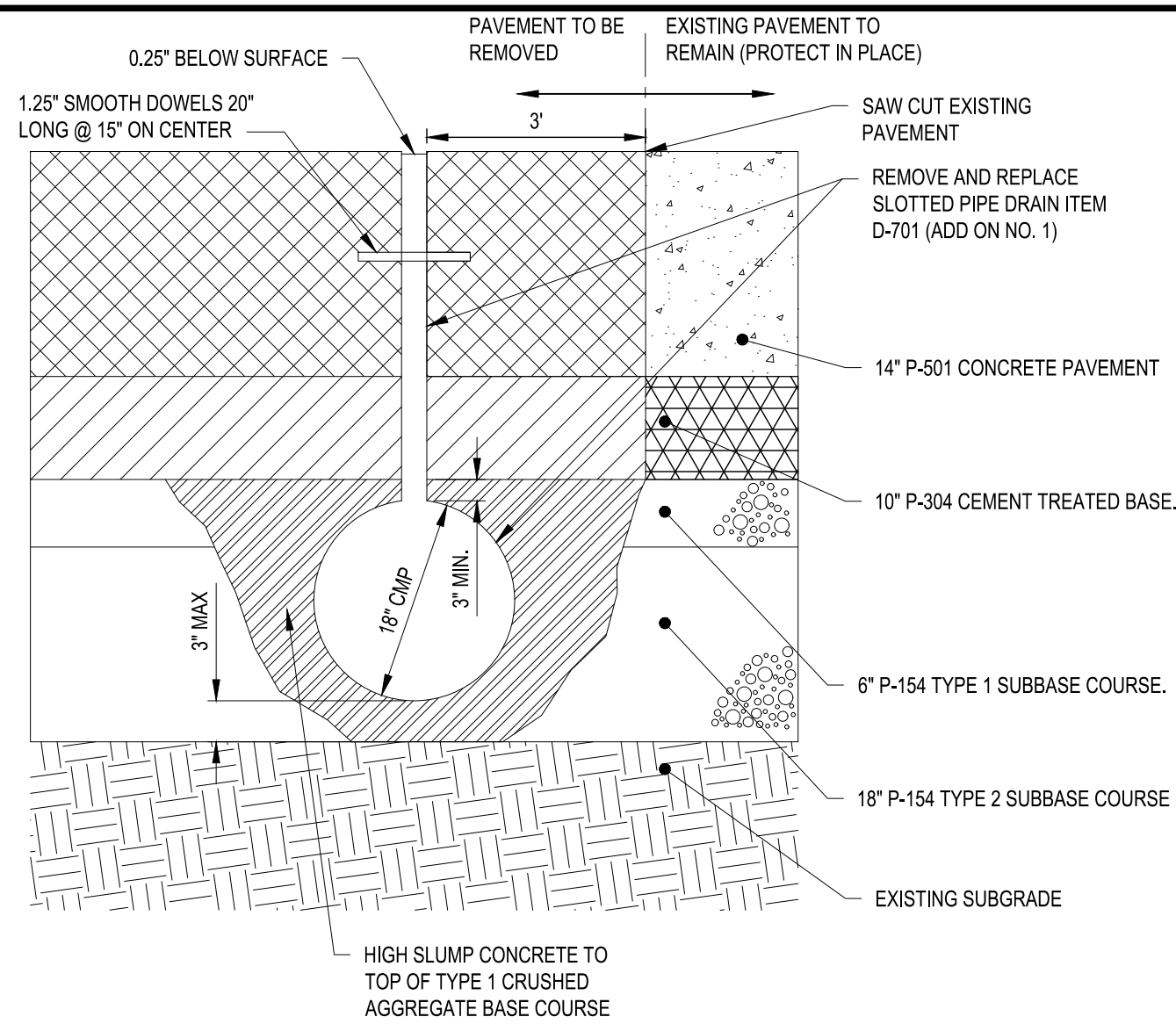
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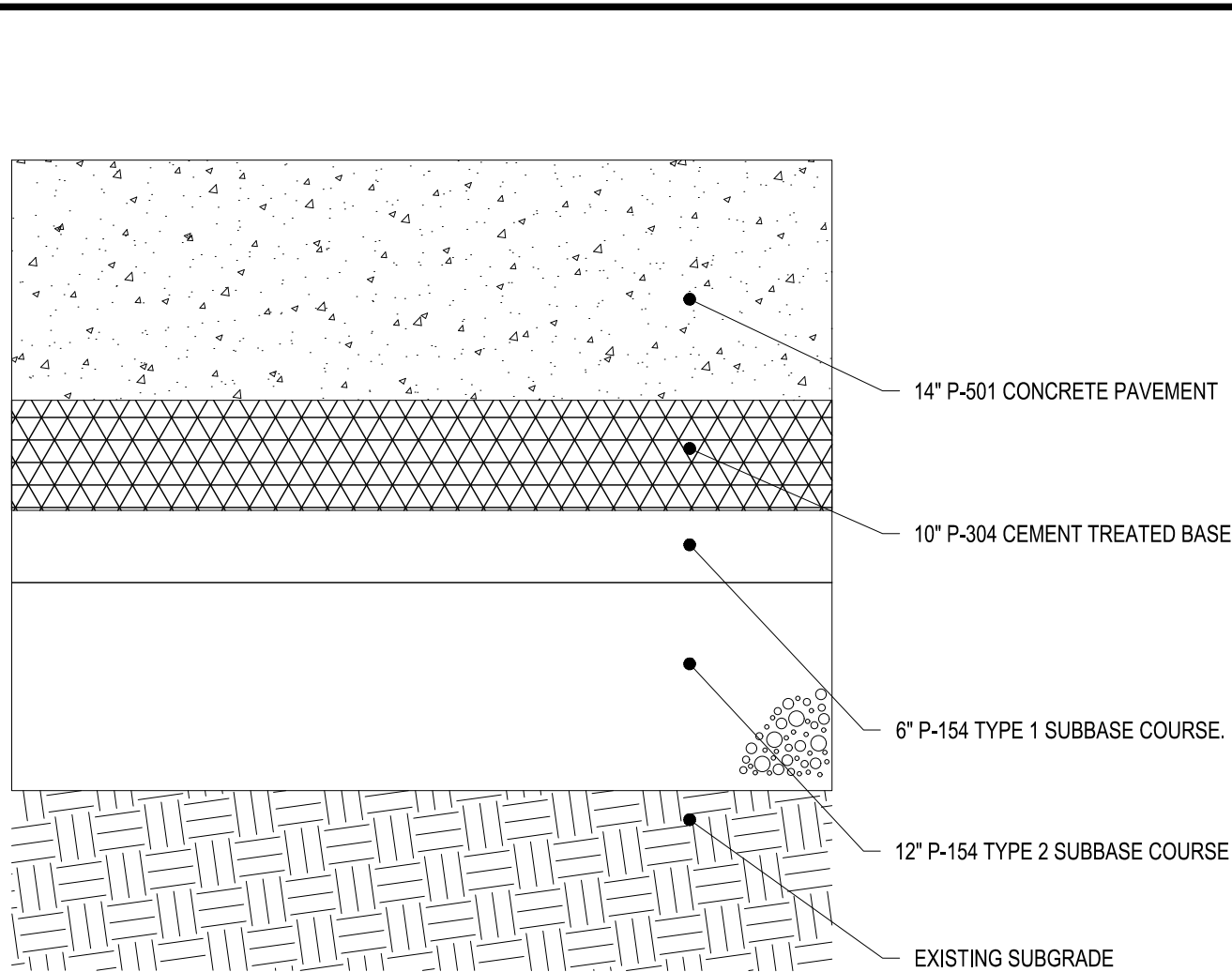
B

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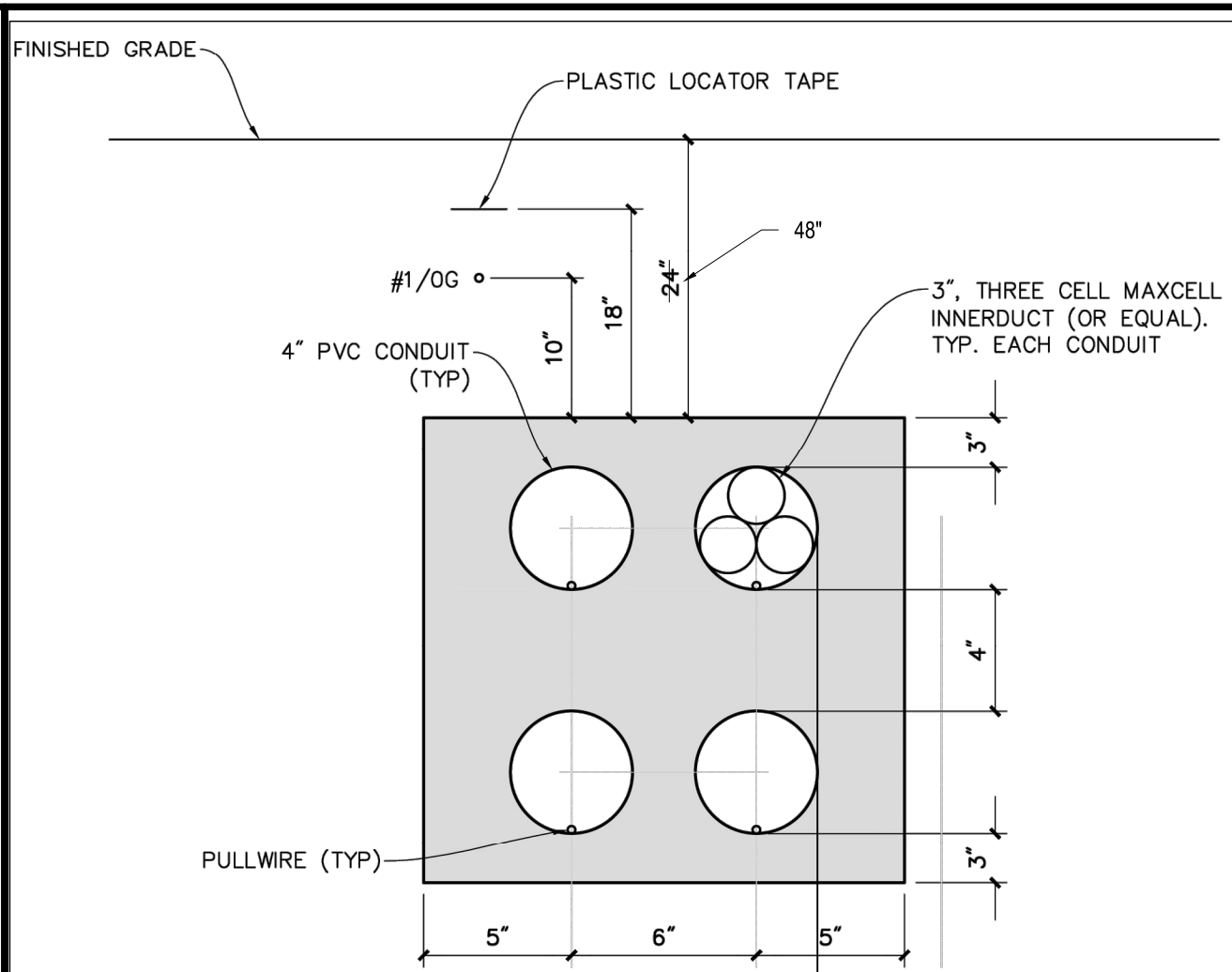
B4 EXISTING SLOT DRAIN

SCALE: NOT TO SCALE



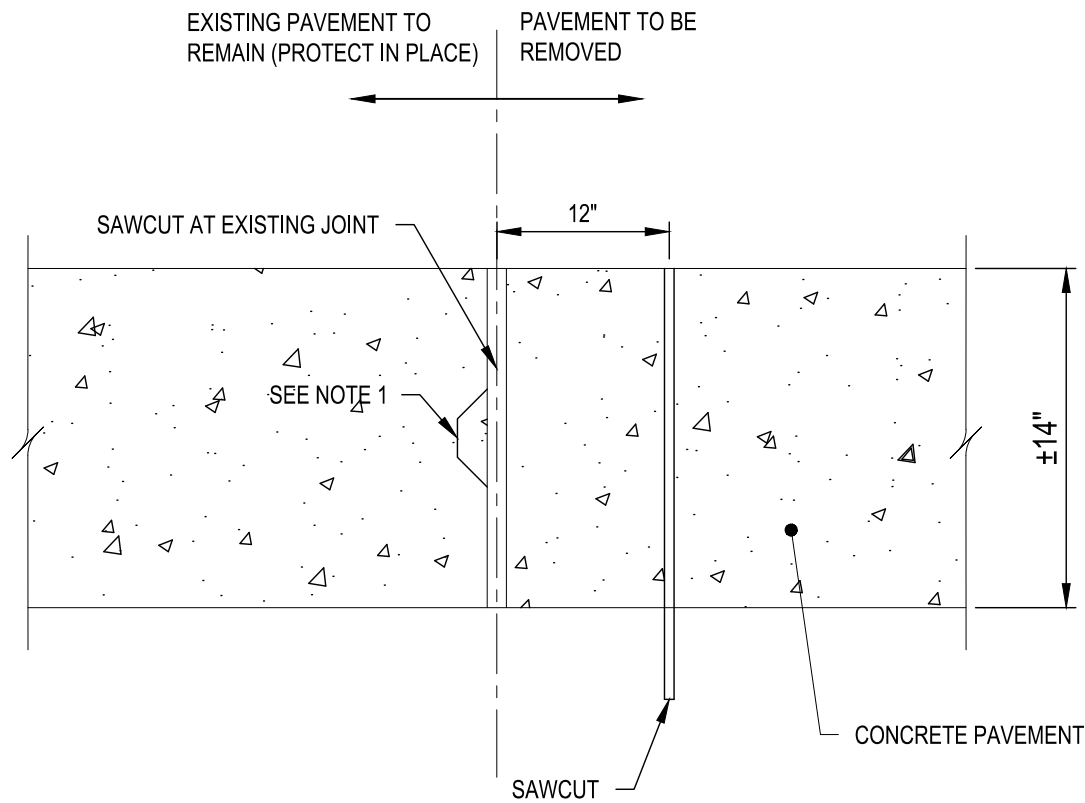
A2 EXISTING TAXIWAY AND APRON PAVEMENT SECTION

SCALE: NOT TO SCALE



A3 FAA DUCT BANK DETAIL (INSTALLED BY OTHERS)

SCALE: NOT TO SCALE



NOTES:

1. ADDITIONAL SAW CUTTING MAY BE NECESSARY IN AREAS WHERE THE PROPOSED CONCRETE TIES INTO AN EXISTING KEYWAY JOINT. THE EXISTING KEYWAY JOINT MUST BE FULLY REMOVED BEFORE PLACING THE PROPOSED CONCRETE. ADDITIONAL SAW CUTTING SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE REMOVAL, ITEM P-101.

A4 DOUBLE SAW CUT JOINT - PAVEMENT REMOVAL

SCALE: NOT TO SCALE

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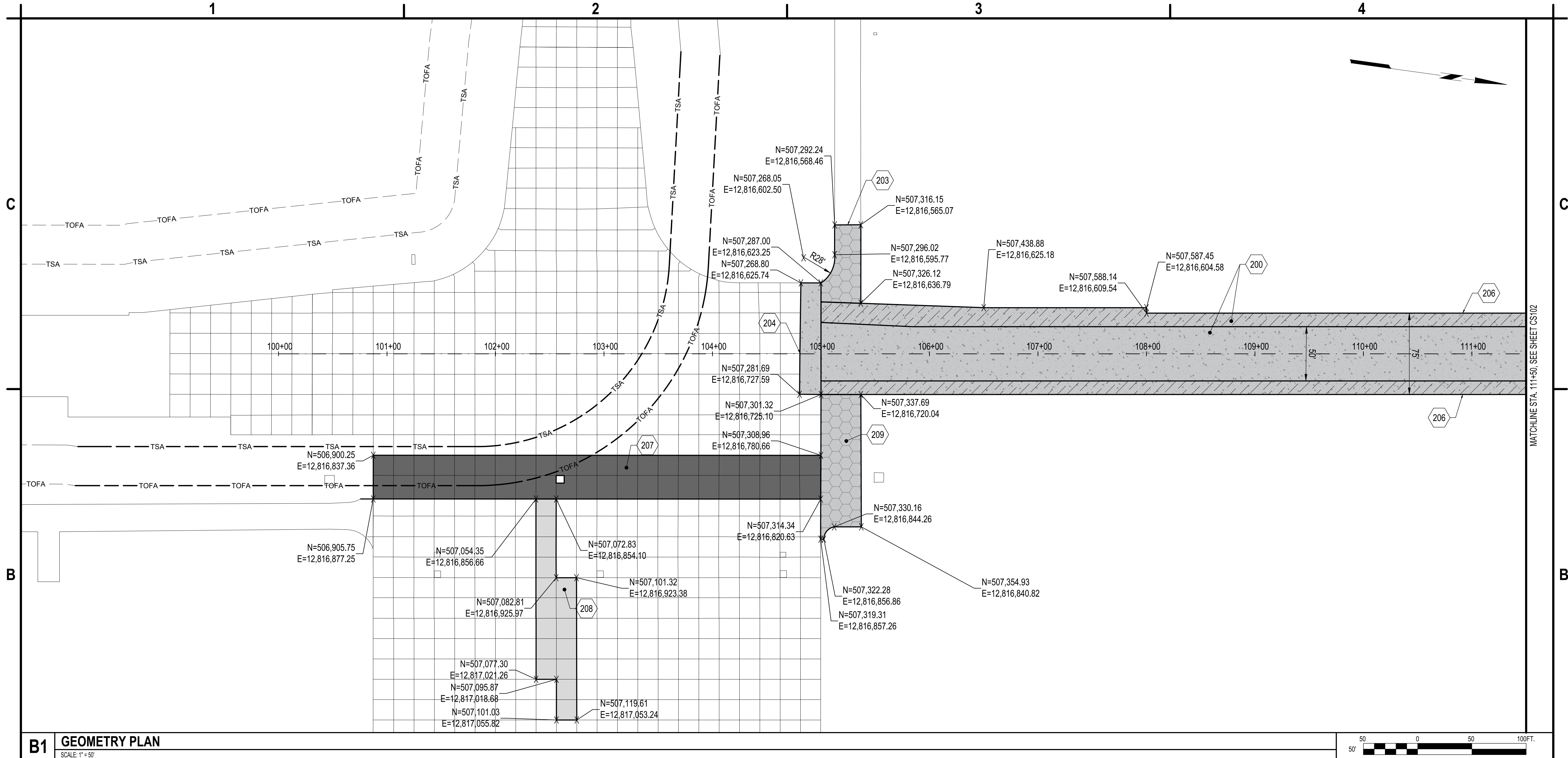
DEMOLITION DETAILS

CD501

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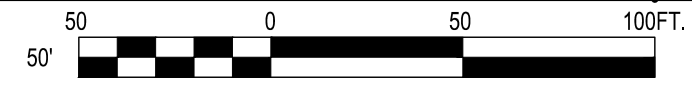
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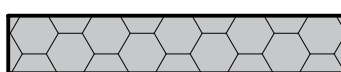


B1 GEOMETRY PLAN

SCALE: 1" = 50'



200. FULL STRENGTH CONCRETE PAVEMENT, ITEM P-501, SEE DETAIL C2/CP502
203. MEET EXISTING CONCRETE SERVICE ROAD, SEE DETAIL B1/CP501
204. MEET EXISTING PAVEMENT, SEE CP SERIES
206. EDGE OF PROPOSED PAVEMENT, SEE CG SERIES
207. FULL STRENGTH CONCRETE PANEL REPLACEMENT (ADD ON NO. 1), SEE DETAIL A1/CP503.
208. FULL STRENGTH CONCRETE PANEL REPLACEMENT (ADD ON NO. 2), SEE DETAIL A1/CP503.
209. ACCESS ROAD PAVEMENT, ITEM P-501, SEE DETAIL A3/CP503



PROPOSED CEMENT CONCRETE ACCESS ROAD PAVEMENT



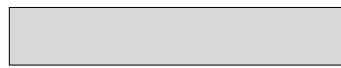
PROPOSED CEMENT CONCRETE PAVEMENT - FAA ELIGIBLE



PROPOSED CEMENT CONCRETE PAVEMENT - NOT FAA ELIGIBLE



PROPOSED CEMENT CONCRETE PAVEMENT (ADD ON NO. 1)



PROPOSED CEMENT CONCRETE PAVEMENT (ADD ON NO. 2)

A1 KEYED NOTES AND LEGEND

SCALE: NOT TO SCALE

NOTES:

1. NORTHINGS AND EASTING ARE BASED ON MICHIGAN (MI) NAD83 SOUTH ZONE, INTERNATIONAL FEET.

A2 GENERAL NOTES

SCALE: NOT TO SCALE



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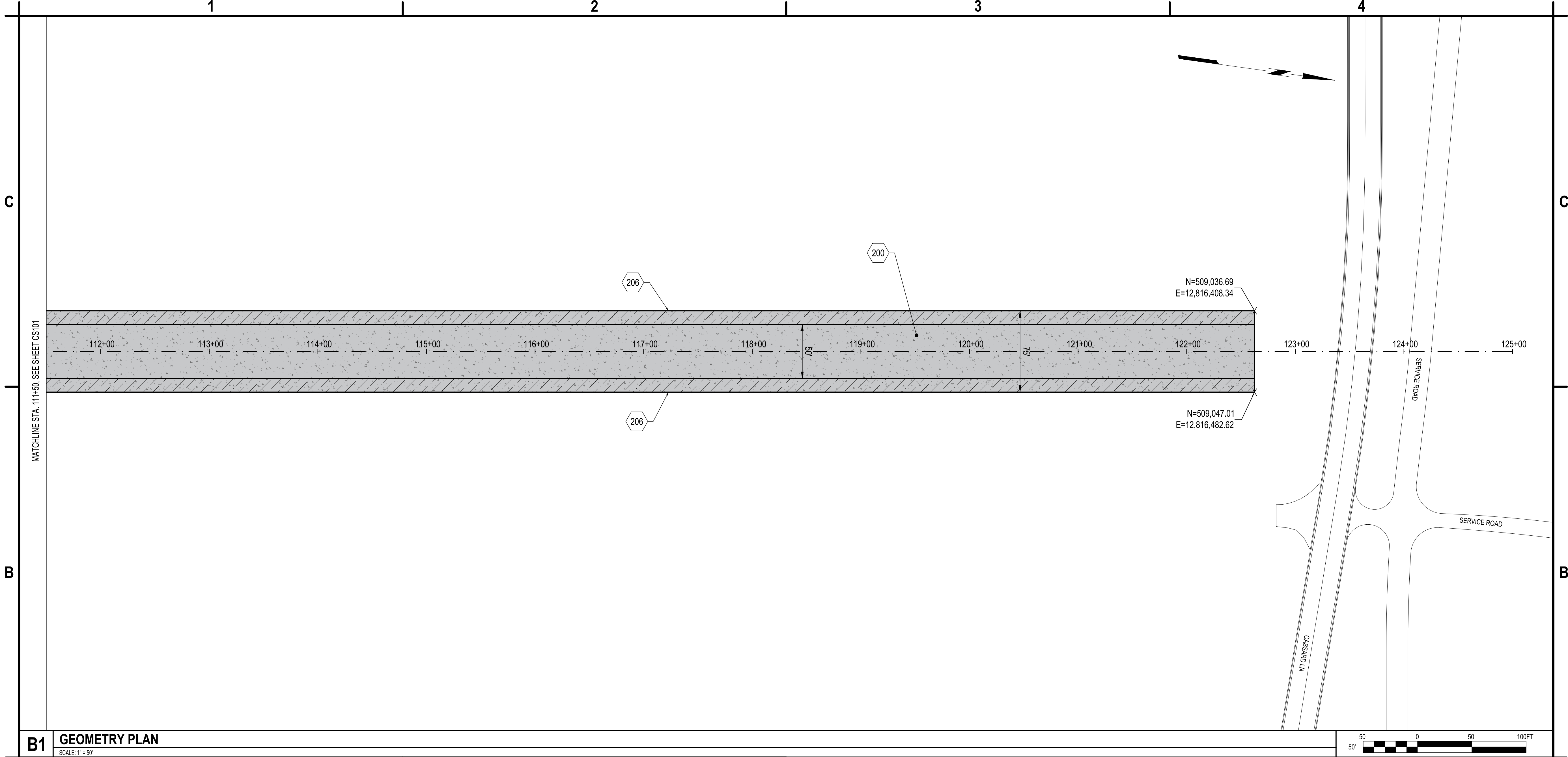
GEOMETRY PLAN

CS101

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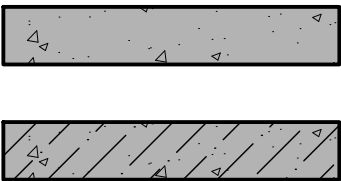
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B1 GEOMETRY PLAN
SCALE: 1" = 50'

200. FULL STRENGTH CONCRETE PAVEMENT, ITEM P-501, SEE DETAIL C2/CP502
206. EDGE OF PROPOSED PAVEMENT, SEE CG SERIES



PROPOSED PCC PAVEMENT - FAA ELIGIBLE
PROPOSED PCC PAVEMENT - NOT FAA ELIGIBLE

NOTES:

1. NORTHINGS AND EASTING ARE BASED ON MICHIGAN (MI) NAD83 SOUTH ZONE, INTERNATIONAL FEET

A1 KEYED NOTES AND LEGEND
SCALE: NOT TO SCALE

A2 GENERAL NOTES
SCALE: NOT TO SCALE



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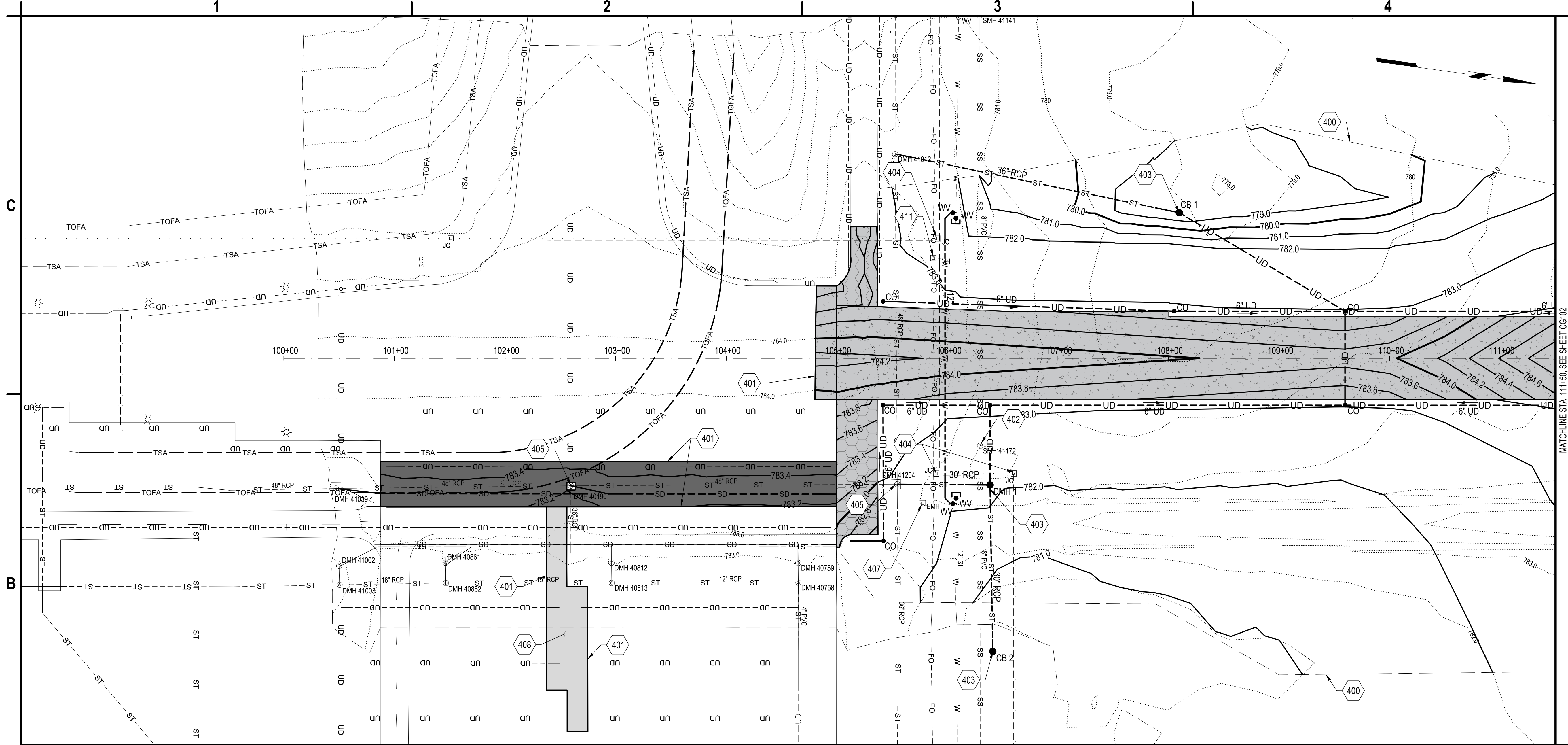
GEOMETRY PLAN

CS102

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B1 GRADING PLAN
SCALE: 1" = 50'



400. GRADING LIMIT LINE (TYP.)
401. MATCH EXISTING CONCRETE PAVEMENT
402. EXISTING STRUCTURE TO BE ADJUSTED TO GRADE, ITEM D-751, SEE DETAIL C1/CU502
403. PROPOSED DRAINAGE STRUCTURE, SEE DETAIL B3/CU501
404. FAA FIBER OPTIC JUNCTION CAN TO BE INSTALLED BY OTHERS PRIOR TO CONSTRUCTION
405. EXISTING DRAINAGE MANHOLE, PROTECT IN PLACE
407. EXISTING ELECTRICAL QUARTZITE BOX TO BE ADJUSTED TO GRADE, INCIDENTAL TO ITEM P-152
408. MATCH EXISTING JOINT ELEVATIONS (TYP.)
411. EXISTING TELECOMMUNICATIONS MANHOLE ADJUST TO GRADE, ITEM L-115

NOTES:

1. SEE THE CU SERIES FOR THE PROPOSED DRAINAGE INFRASTRUCTURE

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 GENERAL NOTES
SCALE: NOT TO SCALE



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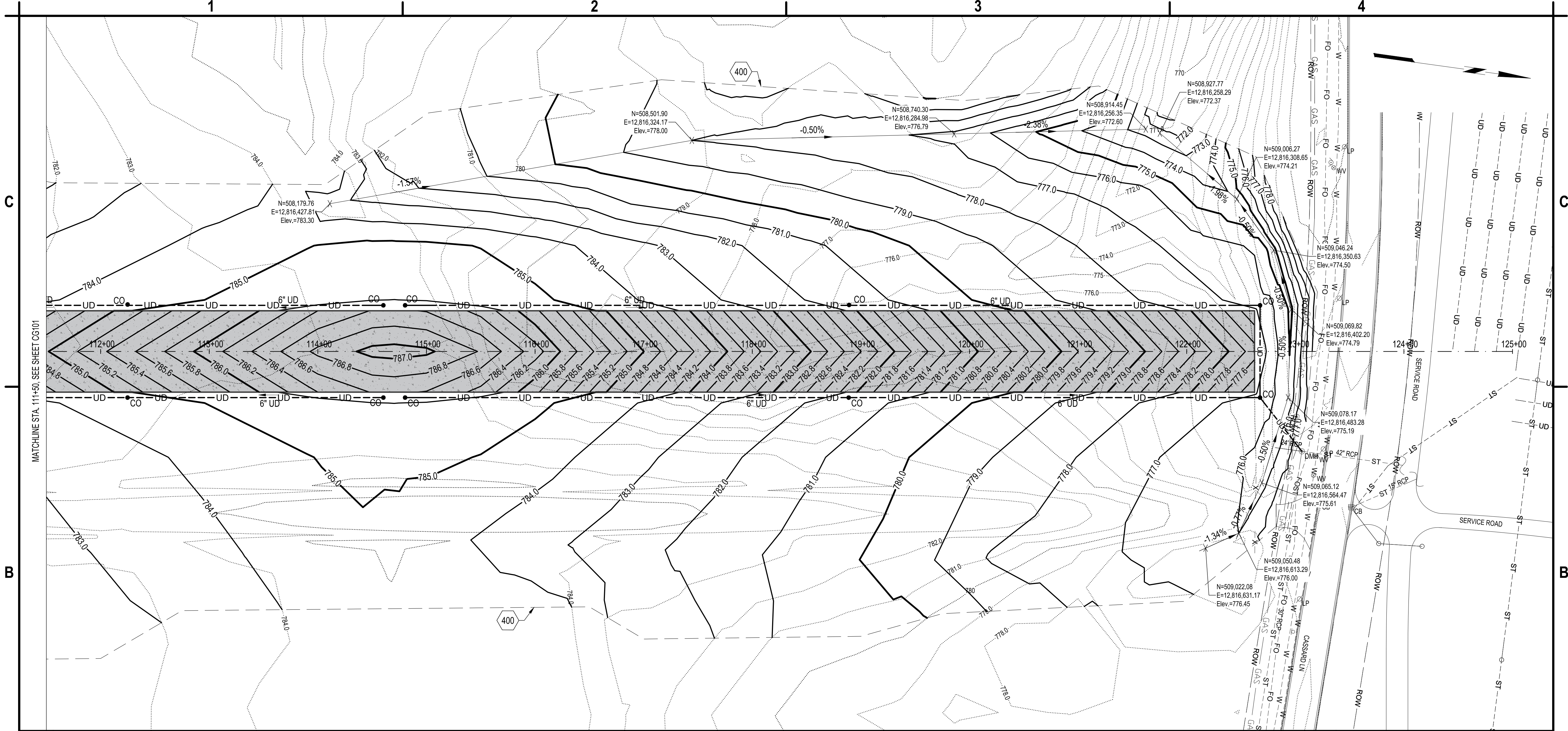
GRADING PLAN

CG101

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B1 GRADING PLAN
SCALE: 1" = 50'

400. GRADING LIMIT LINE (TYP.)

A1 KEYED NOTES
SCALE: NOT TO SCALE



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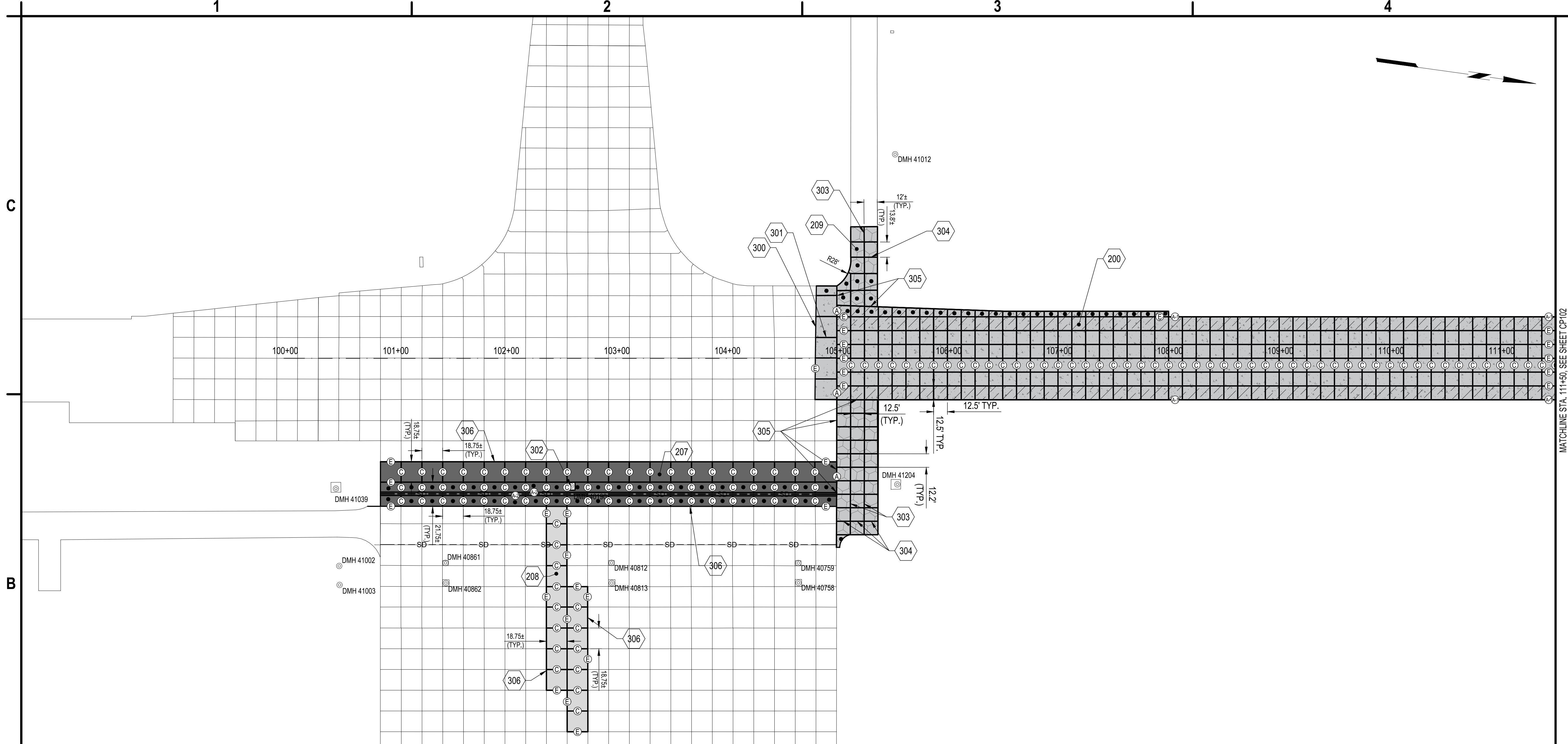
GRADING PLAN

CG102

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B1 JOINTING PLAN
SCALE: 1" = 50'

200. FULL STRENGTH CONCRETE PAVEMENT, ITEM P-501, SEE DETAIL C2/CP502
207. FULL STRENGTH CONCRETE PANEL REPLACEMENT (ADD ON NO. 1), SEE DETAIL A1/CP503.
208. FULL STRENGTH CONCRETE PANEL REPLACEMENT (ADD ON NO. 2), SEE DETAIL A1/CP503.
209. ACCESS ROAD PAVEMENT, ITEM P-501, SEE DETAIL A3/CP503
300. MATCH EXISTING CONCRETE PAVEMENT, SEE DETAILS A1/CP501 AND A4/CP502
301. PROPOSED JOINTS SHALL MATCH EXISTING JOINTS (TYP.)
302. PROTECT EXISTING STRUCTURE IN PLACE
303. ACCESS ROAD CONSTRUCTION JOINT WITH DOWEL BAR, SEE DETAIL B4/CP503
304. ACCESS ROAD CONTRACTION JOINT WITH DOWEL BAR BASKET, SEE DETAIL C4/CP503
305. ACCESS ROAD JUNCTURE SEE DETAIL A3/CP503
306. MATCH EXISTING CONCRETE PAVEMENT, SEE DETAIL A3/CP502

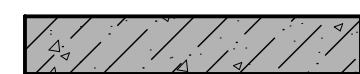
- (A) THICKENED EDGE ISOLATION JOINT, SEE DETAIL B2/CP501
- (E) CONSTRUCTION JOINT WITH DOWEL BAR, A1/CP501
- (C) CONTRACTION JOINT WITH DOWEL BASKET, SEE DETAIL A2/CP501
- (A-1) THICKENED EDGE ALONG FREE EDGE, SEE DETAIL A4/CP501
- (A-2) THICKENED EDGE ALONG SLOT DRAIN, SEE DETAIL A1/CU502
- IRREGULAR REINFORCED PAVEMENT SLABS, SEE DETAIL B3/CP501



PROPOSED CEMENT CONCRETE ACCESS ROAD PAVEMENT



PROPOSED CEMENT CONCRETE PAVEMENT - FAA ELIGIBLE



PROPOSED CEMENT CONCRETE PAVEMENT - NOT FAA ELIGIBLE



PROPOSED CEMENT CONCRETE PAVEMENT (ADD ON NO. 1)



PROPOSED CEMENT CONCRETE PAVEMENT (ADD ON NO. 2)

NOTES:

- SEE ADDITIONAL CONCRETE PAVING NOTES ON A1/CP502.
- SPALLING ALONG EXISTING PAVEMENT SHALL BE REPAIRED PER DETAIL C1/CP503, ITEM P-101 SPALL REPAIR

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 LEGEND
SCALE: NOT TO SCALE

A3 GENERAL NOTES
SCALE: NOT TO SCALE



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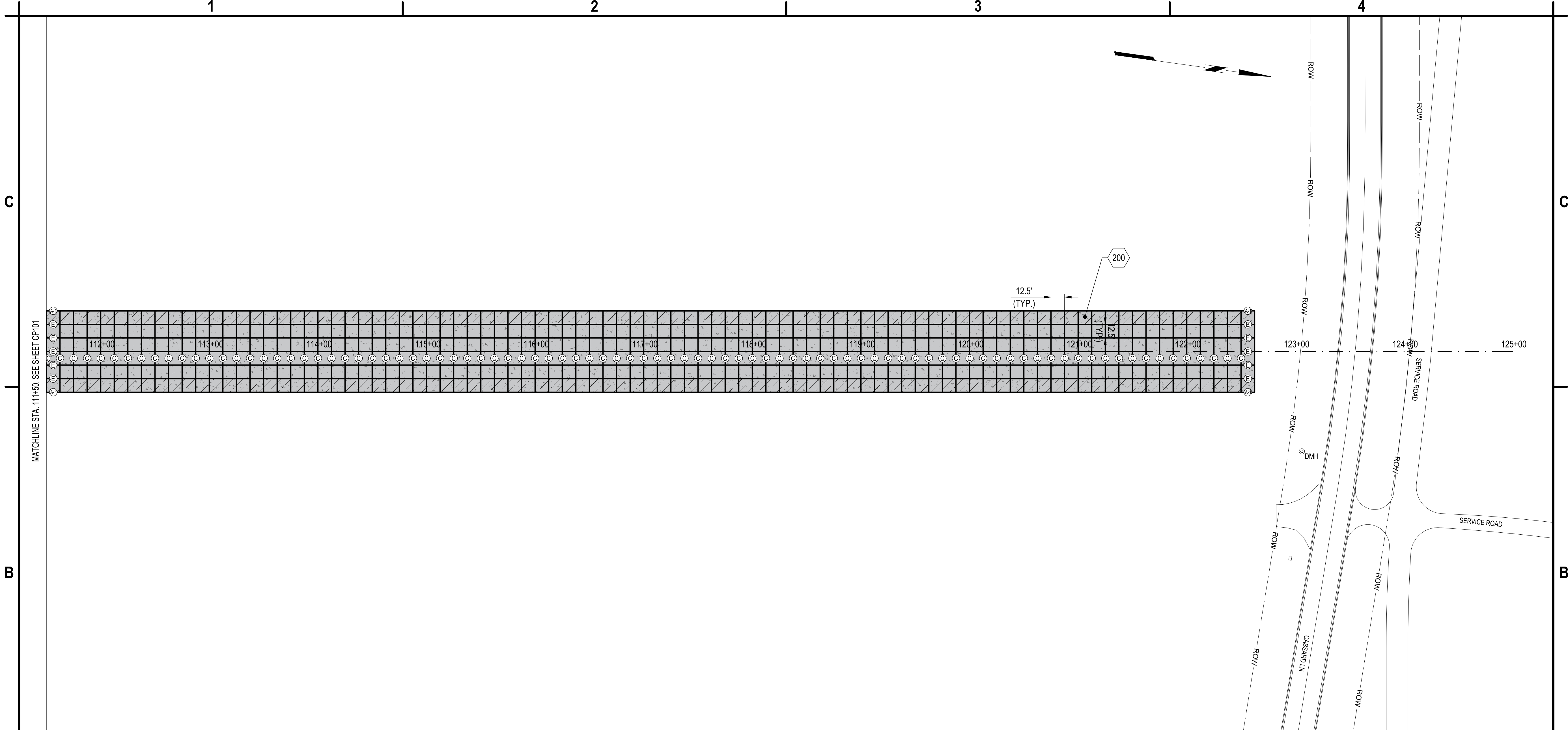
JOINTING PLAN

CP101

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B1 JOINTING PLAN
SCALE: 1" = 50'

200. FULL STRENGTH CONCRETE PAVEMENT, ITEM P-501, SEE DETAIL C2/CP502

- (A) THICKENED EDGE ISOLATION JOINT, SEE DETAIL B2/CP501
- (E) CONSTRUCTION JOINT WITH DOWEL BAR, A1/CP501
- (C) CONTRACTION JOINT WITH DOWEL BASKET, SEE DETAIL A2/CP501
- (A-1) THICKENED EDGE ALONG FREE EDGE, SEE DETAIL A4/CP501
- IRREGULAR REINFORCED PAVEMENT SLABS, SEE DETAIL B3/CP501



PROPOSED CEMENT CONCRETE PAVEMENT - FAA ELIGIBLE



PROPOSED CEMENT CONCRETE PAVEMENT - NOT FAA ELIGIBLE

NOTES:

- SEE ADDITIONAL CONCRETE PAVING NOTES ON A1/CP502.

A1 KEYED NOTES
SCALE: NOT TO SCALE

A2 LEGEND
SCALE: NOT TO SCALE

A3 GENERAL NOTES
SCALE: NOT TO SCALE



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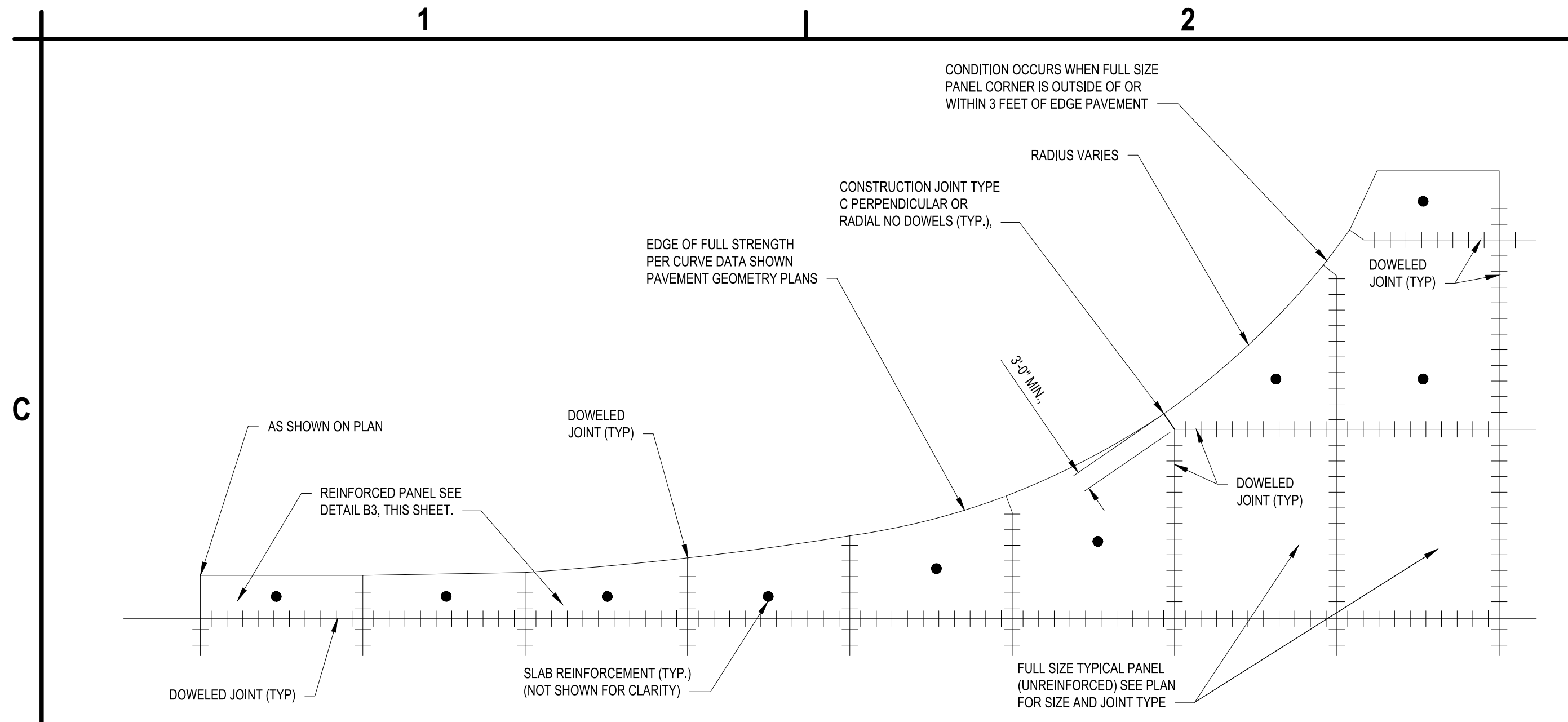
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JOINTING PLAN

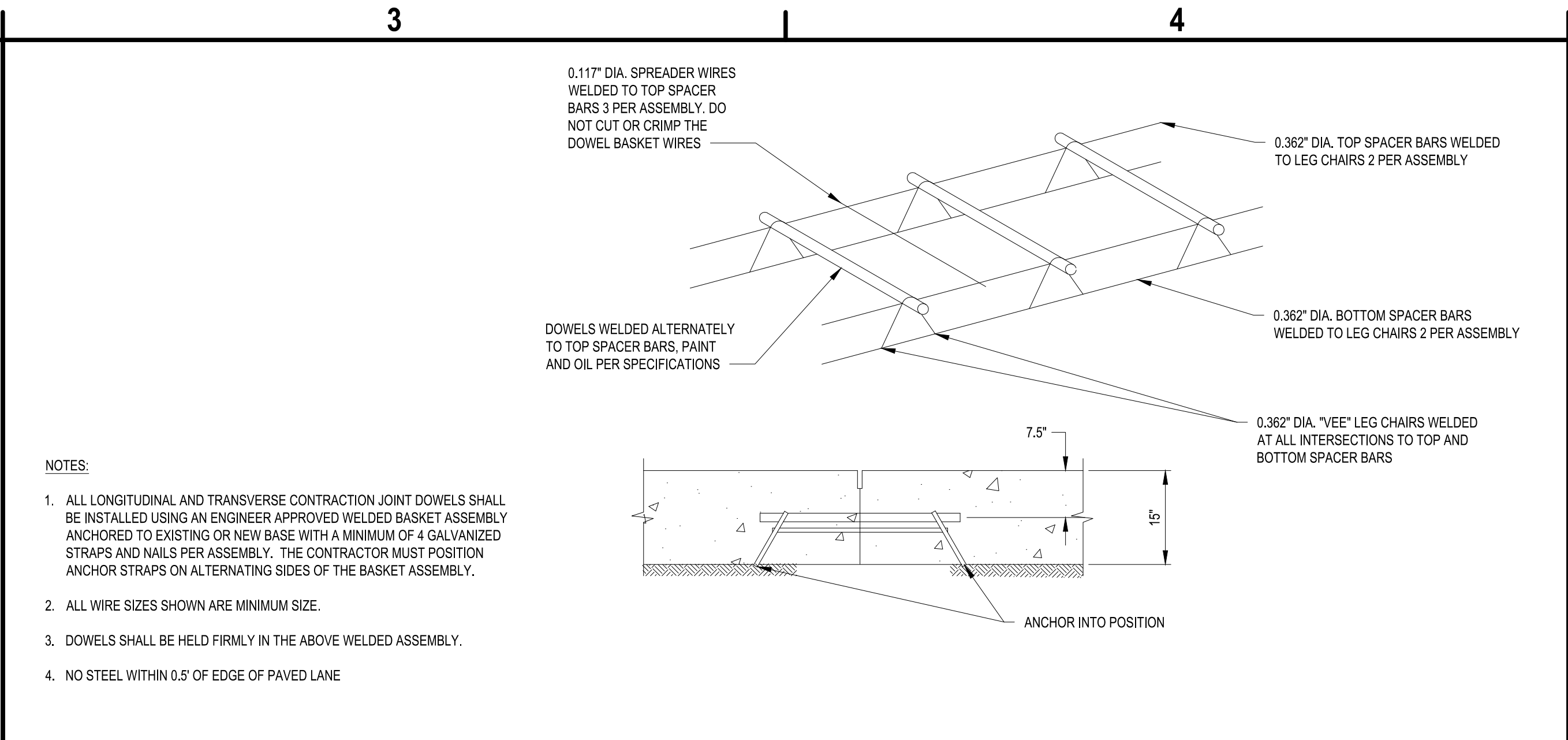
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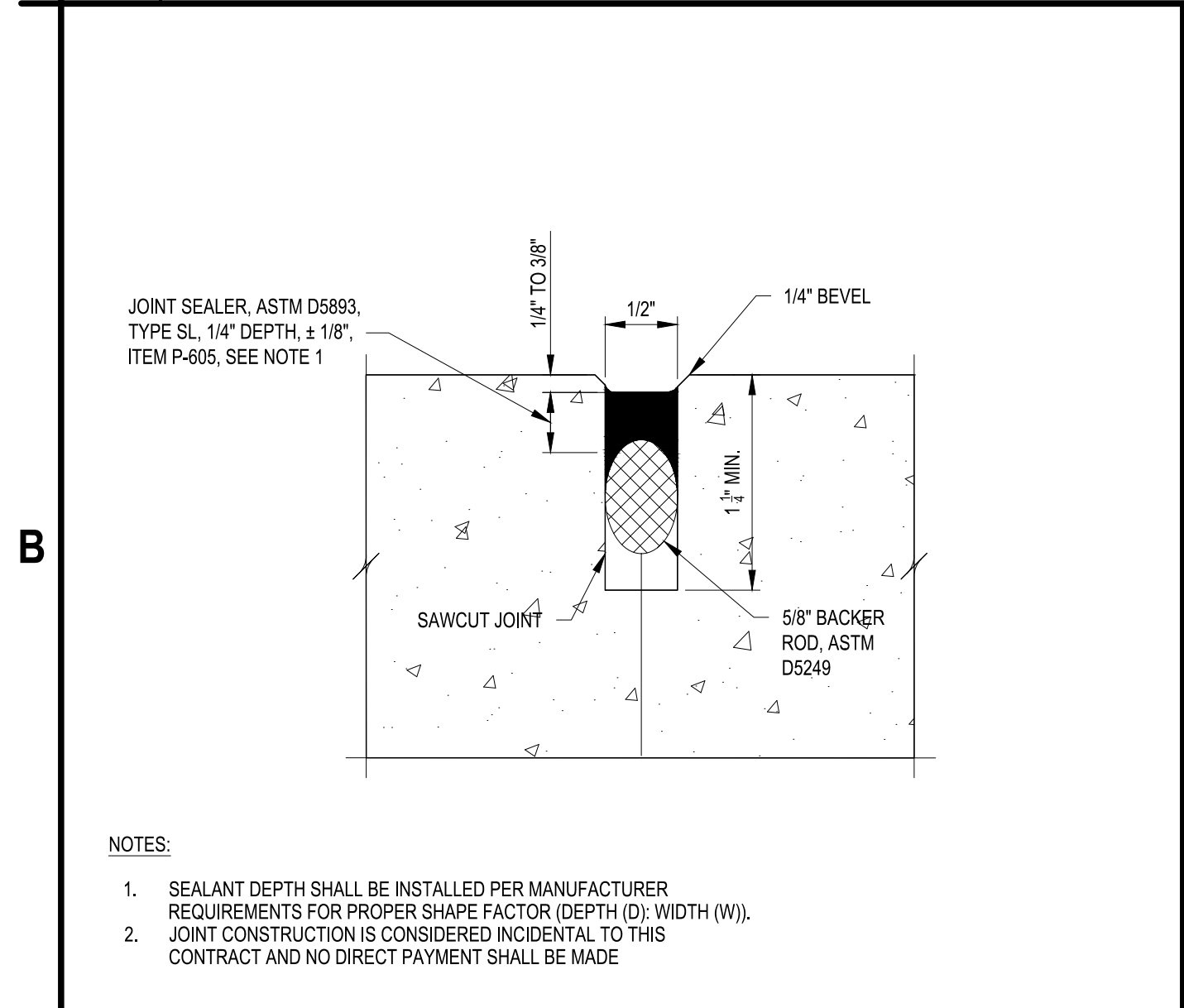
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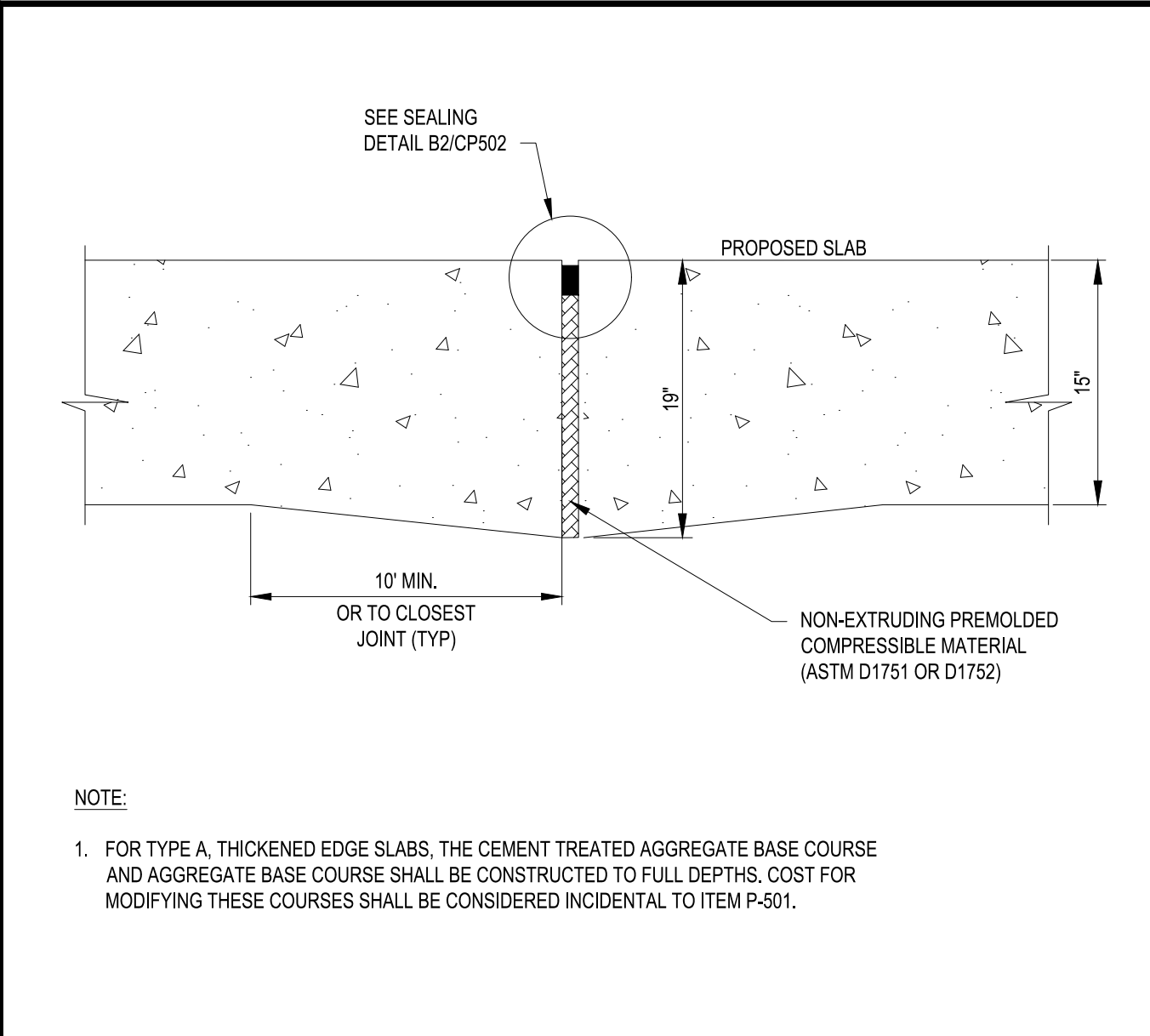
C1 PLAN VIEW - TYPICAL IRREGULAR PAVEMENT SLAB DETAIL
SCALE: NOT TO SCALE



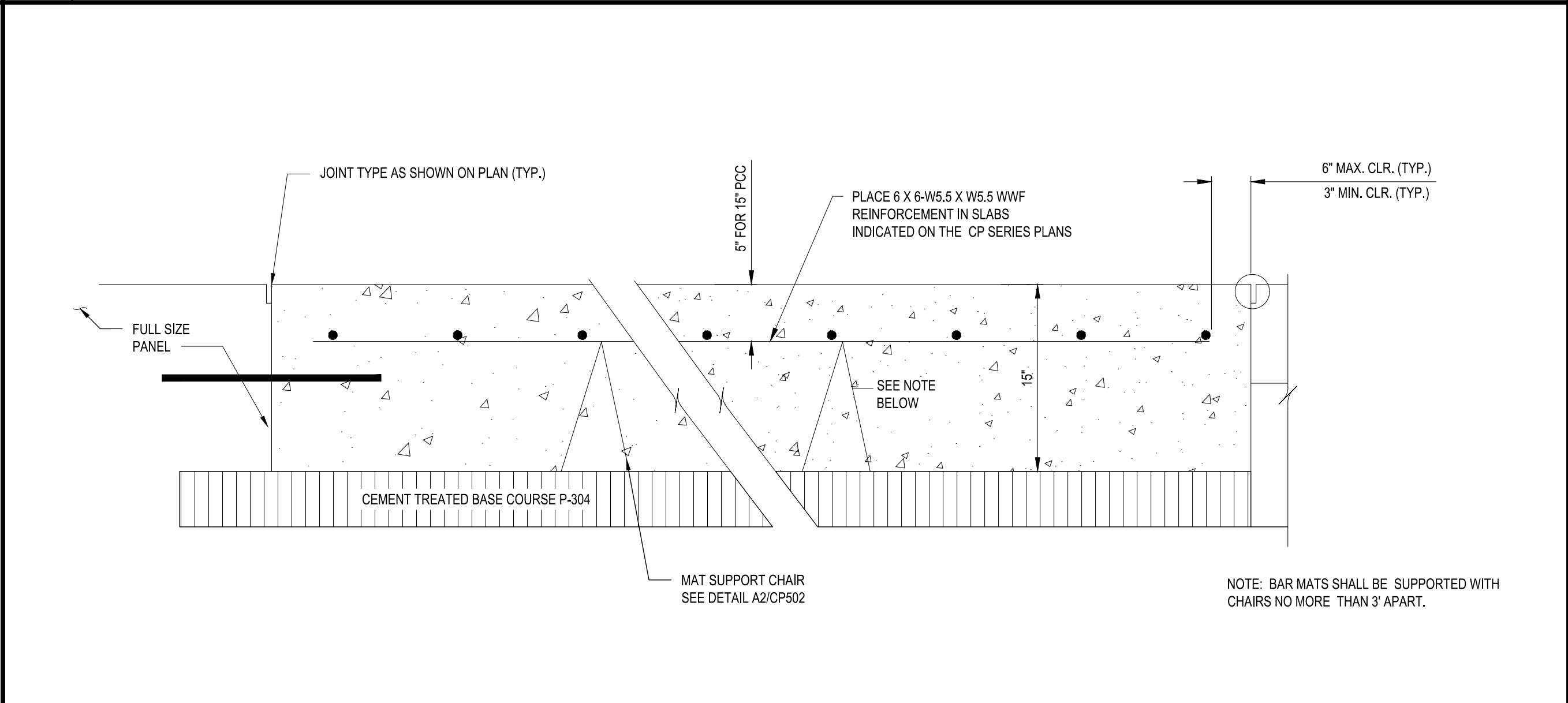
C3 TYPICAL DOWEL AND TIE BAR BASKET DETAIL
SCALE: NOT TO SCALE



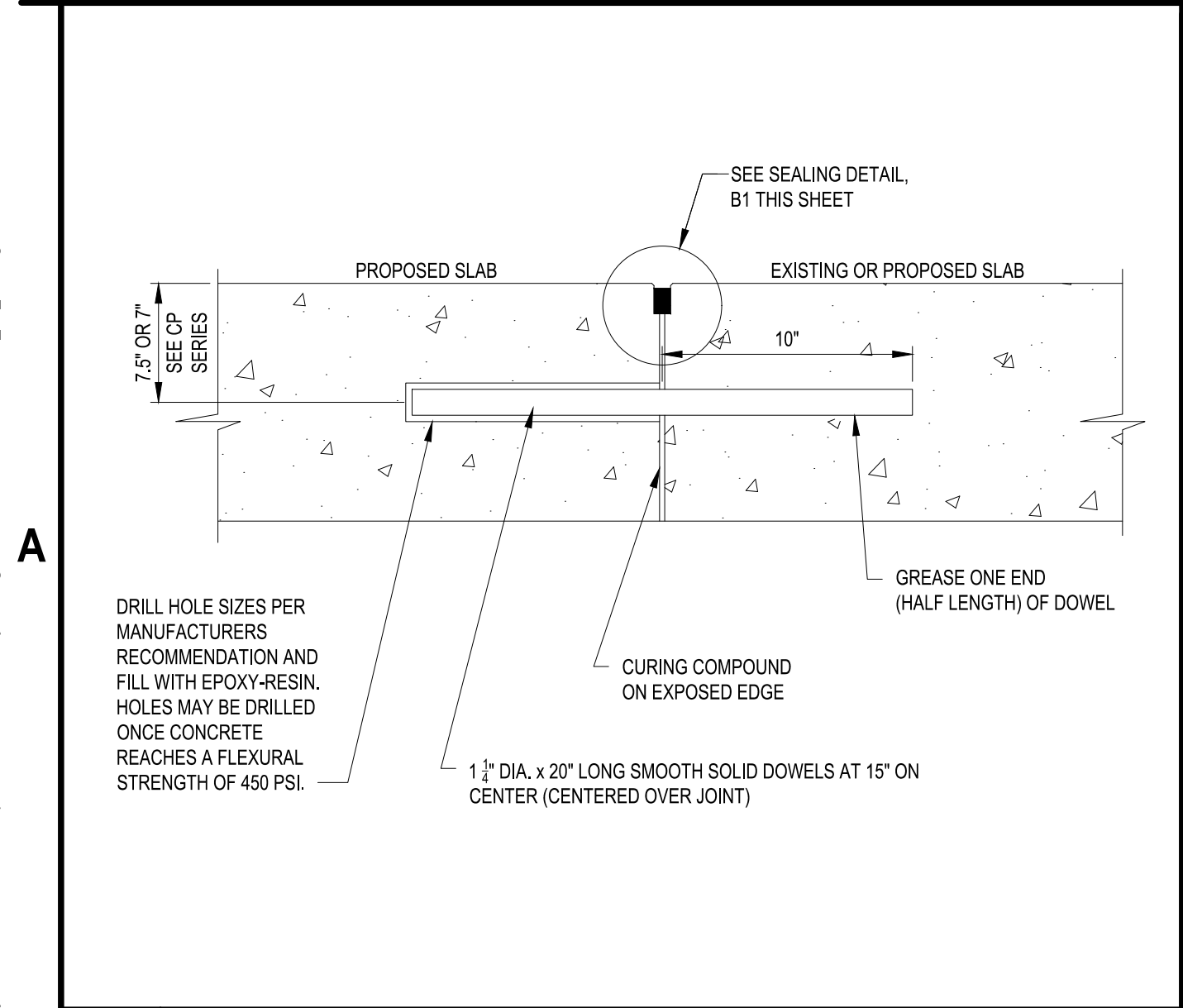
B1 CONSTRUCTION JOINT SEALING DETAIL
SCALE: NOT TO SCALE



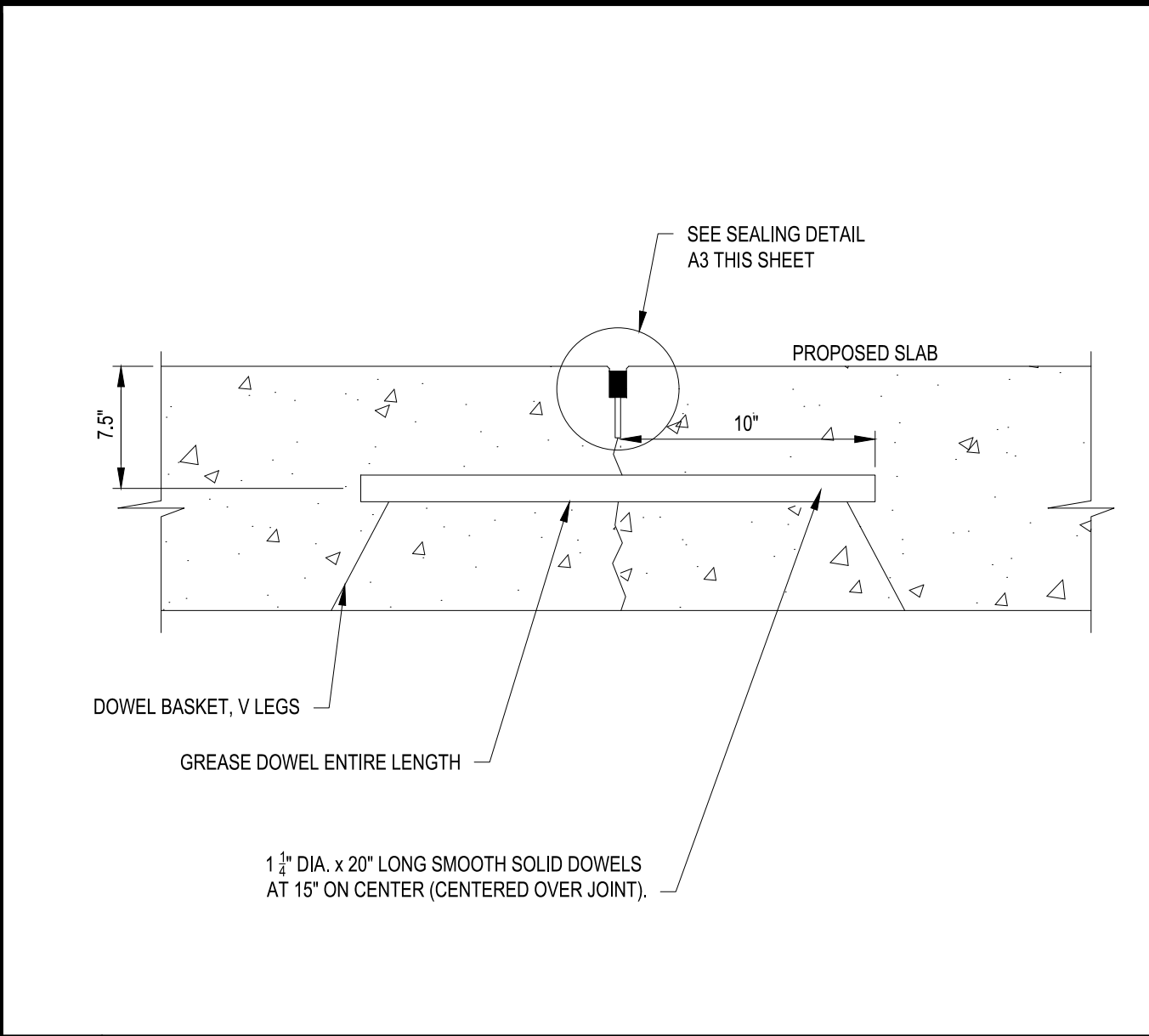
B2 TYPE (A) JOINT - THICKENED EDGE JOINT DETAIL
SCALE: NOT TO SCALE



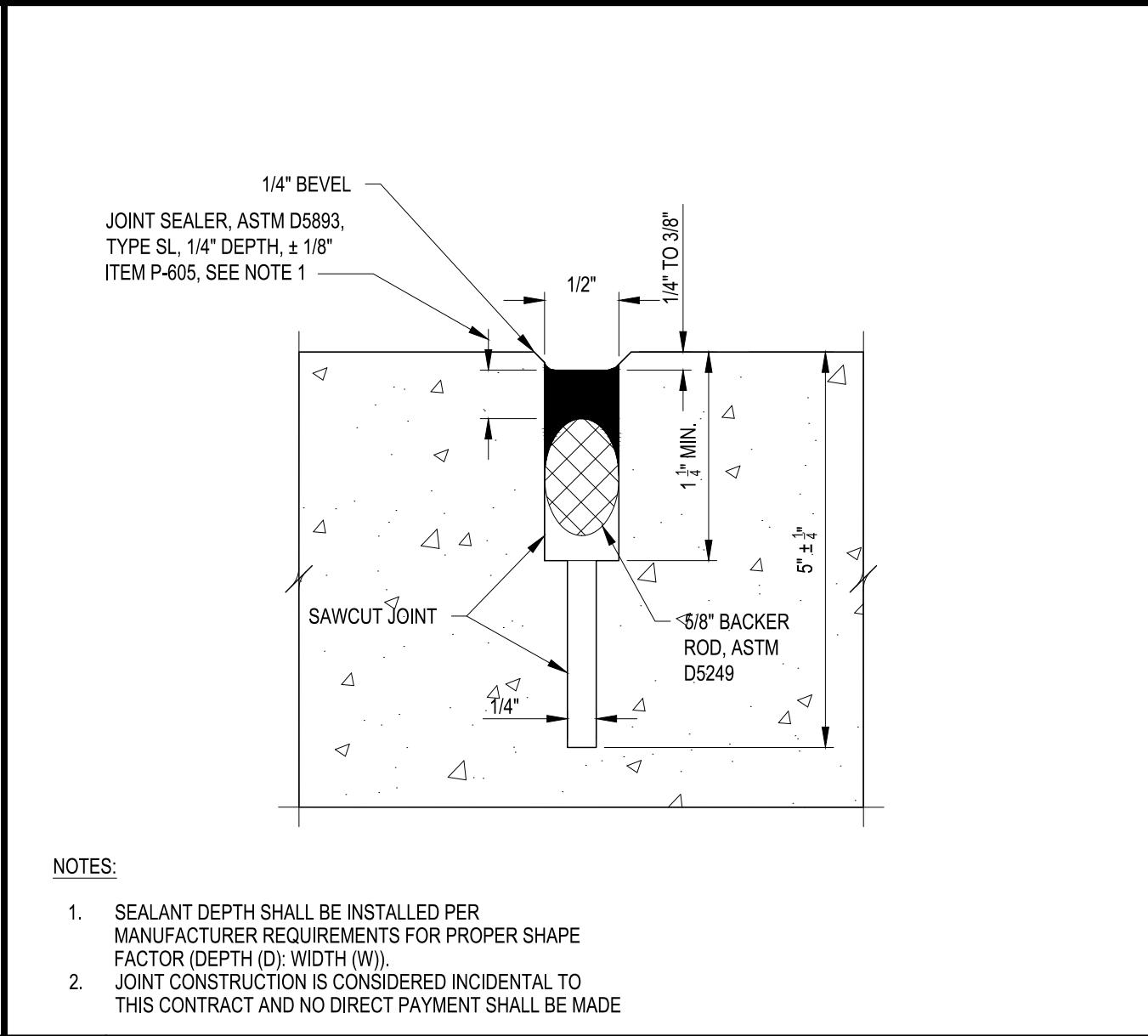
B3 IRREGULAR CONCRETE SLABS REINFORCING
SCALE: NOT TO SCALE



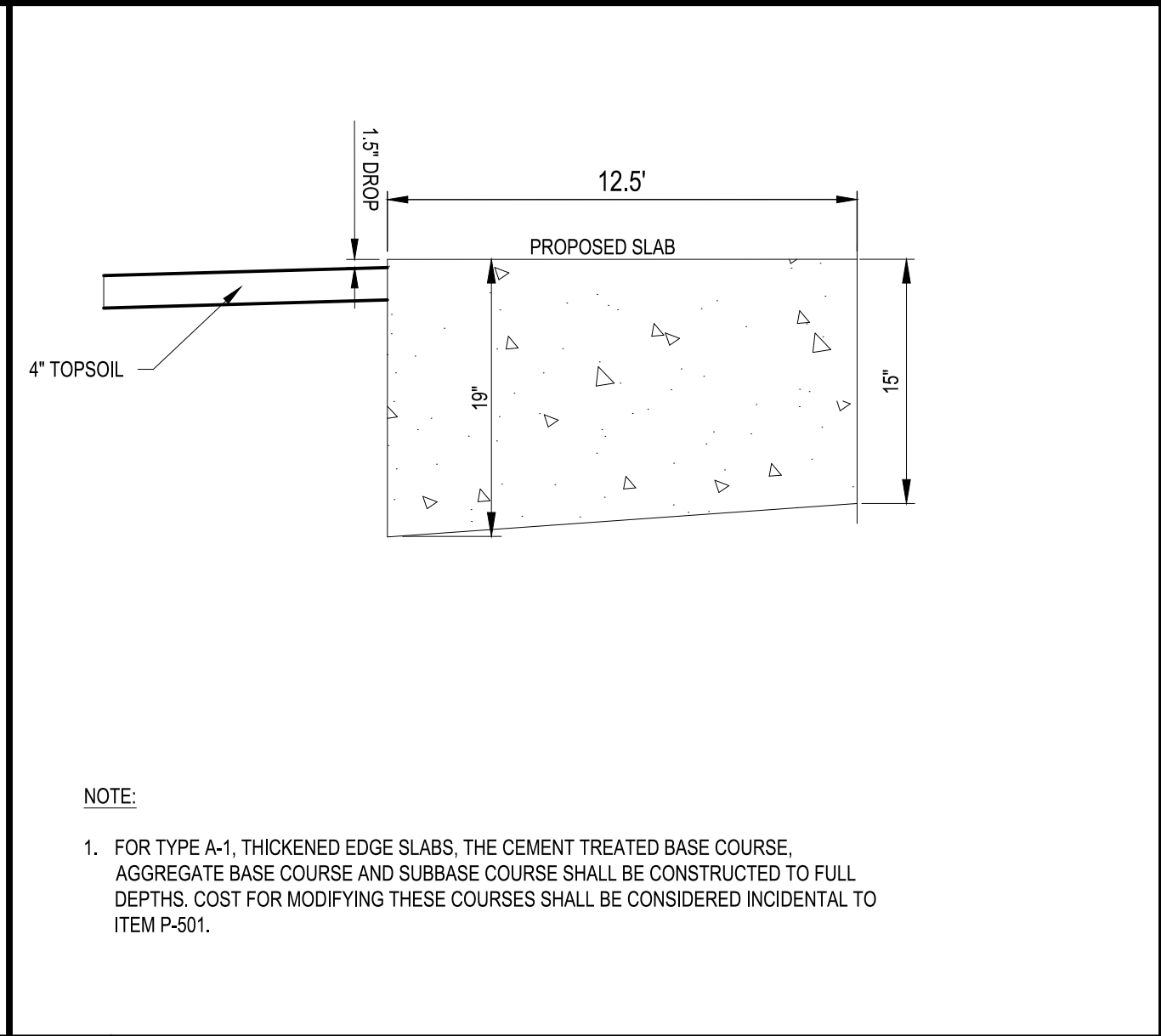
A1 TYPE (E) JOINT - CONSTRUCTION JOINT DETAIL
SCALE: NOT TO SCALE



A2 TYPE (C) JOINT - CONTRACTION JOINT DETAIL
SCALE: NOT TO SCALE



A3 CONTRACTION JOINT SEALING DETAIL
SCALE: NOT TO SCALE



A4 TYPE (A-1) JOINT - CONSTRUCTION JOINT DETAIL
SCALE: NOT TO SCALE

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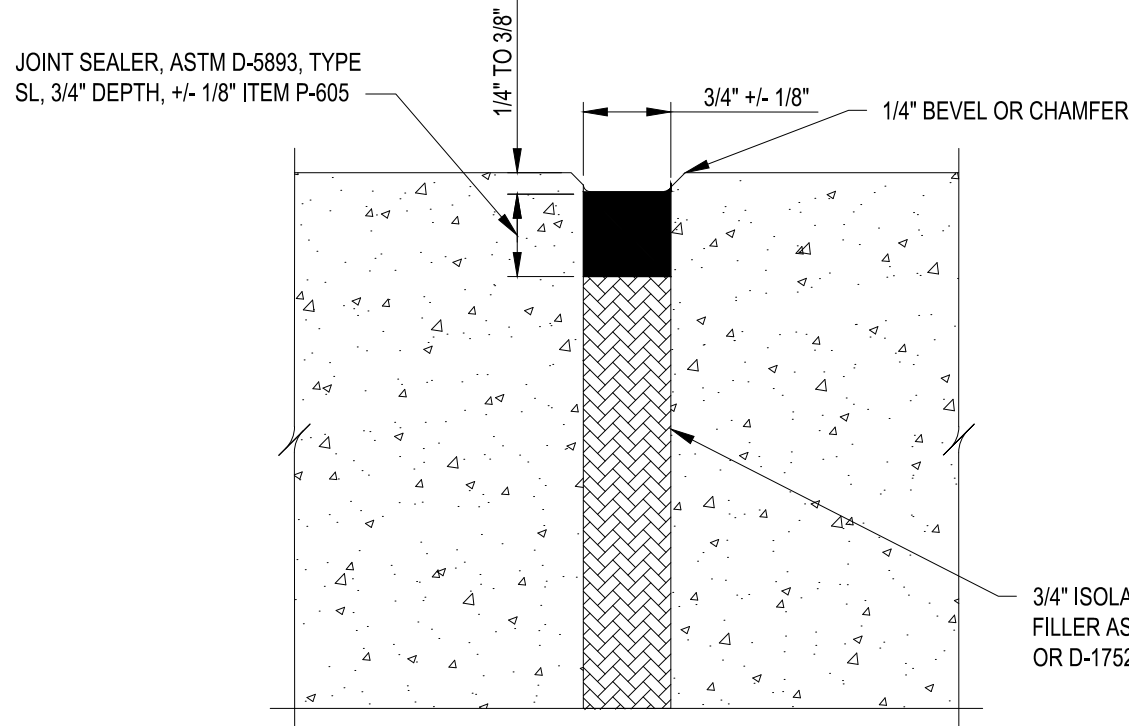
- DOWELS SHALL BE EPOXY COATED PER ASTM 1078 IN ACCORDANCE WITH TECHNICAL SPECIFICATION P-501 PRIOR TO DELIVERY TO THE SITE.
- DOWELS FOR 15" CONCRETE PAVEMENT SHALL BE SOLID SMOOTH STEEL BARS, 1 1/2" Ø, 20" IN LENGTH FOR FULL STRENGTH, SPACED EVENLY AT 15" O.C.. DOWELS FOR 10" CONCRETE PAVEMENT SHALL BE SOLID SMOOTH STEEL BARS, " Ø, 18" IN LENGTH FOR FULL STRENGTH, SPACED EVENLY AT 12" O.C.
- DOWELS SHALL BE LIGHTLY GREASED WITH A THIN COAT OF HIGH MELTING POINT GREASE OR AN APPROVED EQUIVALENT FROM MANUFACTURER PRIOR TO INSTALLATION ALONG CONTRACTION JOINTS.
- AFTER INSERTION AND GROUTING IN PLACE OF DOWELS ALONG CONSTRUCTION JOINTS, FREE END SHALL BE GREASED AS DESCRIBED IN NOTE 3 ABOVE.
- ALL CONSTRUCTION JOINT DOWELS SHALL BE GANG-DRILLED AND EPOXY GROUTED. INSERTION EQUIPMENT WILL NOT BE PERMITTED.
- DRILLING METHOD FOR DOWELS SHALL BE CAPABLE OF MAINTAINING DRILL HOLES PARALLEL TO THE CONCRETE SURFACE AND PERPENDICULAR TO THE JOINT DIRECTION. DRILL HOLES SHALL BE ACCURATELY LAID OUT SO THAT THE MAXIMUM DEVIATION DOES NOT EXCEED 3/8" FT HORIZONTALLY. DRILL HOLE DIAMETER TO BE OF SUFFICIENT SIZE TO ACCEPT THE TYPE AND SIZE OF REQUIRED DOWEL.
- AFTER DRILLING IS COMPLETE AND PRIOR TO THE INSTALLATION OF THE DOWELS, THE DRILLED HOLES SHALL BE THOROUGHLY CLEANED TO REMOVE DRILLING DUST, CONCRETE CHIPS AND ANY OTHER MATERIAL THAT MAY HINDER PROPER BONDING.
- CONTRACTOR WILL NOT BE PERMITTED TO DIP DOWEL IN EPOXY BEFORE INSERTING DOWEL. EPOXY GROUT SHALL BE INJECTED UNIFORMLY INTO THE BACK OF THE HOLE TO FILL THE ENTIRE CIRCUMFERENCE OF THE DRILLED DOWEL HOLE. CONTRACTOR TO INJECT SUFFICIENT AMOUNT OF EPOXY MATERIAL IN THE HOLE SO THAT A SLIGHT AMOUNT WILL BE FORCED OUT WHEN THE DOWEL IS INSERTED AND TAPPED IN PLACE. THE CONTRACTOR IS PERMITTED TO USE SMALL WEDGES TO PROVIDE SUPPORT TO THE DOWELS TO KEEP THEM IN THEIR PROPER LOCATION UNTIL THE EPOXY MATERIAL HARDENS. THE TOLERANCE FOR DOWEL ALIGNMENT IN EITHER THE HORIZONTAL OR VERTICAL PLANE IS 1/4" PER FOOT OF DOWEL BAR.
- ALL LONGITUDINAL AND TRANSVERSE CONTRACTION JOINT DOWELS SHALL BE INSTALLED USING AN ENGINEER APPROVED WELDED BASKET ASSEMBLY ANCHORED TO THE BASE WITH A MINIMUM OF 4 GALVANIZED STRAPS AND NAILS PER ASSEMBLY. THE CONTRACTOR MUST POSITION ANCHOR STRAPS ON ALTERNATING SIDES OF THE BASKET ASSEMBLY WITHOUT CUTTING OR CRIMPING THE DOWEL BASKET TIE WIRES.
- A TRANSVERSE CONSTRUCTION JOINT SHALL BE INSTALLED AT A PLANNED JOINT WHEN PAVING OPERATIONS ARE INTERRUPTED FOR MORE THAN A HALF AN HOUR (30 MINUTES). IF AN INTERRUPTION OCCURS BETWEEN PLANNED JOINTS, THE FRESH CONCRETE SHALL BE REMOVED BACK TO THE PREVIOUSLY INSTALLED JOINT. NO ADDITIONAL JOINTS WILL BE ALLOWED BETWEEN THE JOINTS SHOWN WITHIN THESE CONSTRUCTION DOCUMENTS.
- EDGES OF CONCRETE SLABS SHALL BE COVERED WITH AN APPROVED CURING MATERIAL AT THE SAME TIME AS THE SURFACE IS CURED. AT FORMED LOCATIONS, SLAB SIDES SHALL BE CURED WHEN FORMS ARE REMOVED.
- IN THICKENED EDGE AREAS WHERE DOWELS OR REINFORCING STEEL ARE REQUIRED, PROVIDE ADDITIONAL SUPPORT AS APPROVED BY THE ENGINEER TO MAINTAIN THE SAME DEPTH FROM THE SURFACE AS FOR FULL STRENGTH OR REDUCED STRENGTH THICK CONCRETE PAVEMENT.
- CONCRETE IN REINFORCED PANELS SHALL BE PLACED IN ONE COURSE. ALL WELDED WIRE FABRIC SHALL BE INSTALLED USING DESIGNER APPROVED HI-CHAIRS ANCHORED TO THE BASE COURSE AT A MAXIMUM OF 3" ON CENTER. THE WELDED WIRE FABRIC MUST RETAIN ITS SPECIFIED POSITION DURING THE PLACEMENT OF THE CONCRETE.
- THE CONTRACTOR WILL NOT BE PERMITTED TO VIBRATE THE WELDED WIRE FABRIC DOWN FROM THE TOP AFTER THE CONCRETE IS POURED.
- THE COST OF MODIFYING THE UNDERLYING PAVEMENT COURSES TO ACCOMMODATE THE CONCRETE PAVEMENT THICKENED EDGE IS INCIDENTAL TO ITEM P-501. NO SEPARATE PAYMENT WILL BE MADE FOR NECESSARY MODIFICATIONS.
- ALL JOINT SEALANT RESERVOIRS SHOWN ON THIS SHEET SHALL BE VERIFIED BY THE SEALANT MANUFACTURER PRIOR TO CONSTRUCTION. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION
- ALL JOINTS MUST BE ADEQUATELY CLEANED AFTER SAWCUTTING, IMMEDIATELY PRIOR TO THE INSTALLATION OF THE JOINT SEALANT.
- INITIAL CONTRACTION JOINTS SAWCUTS SHALL BE MADE AS SOON AS IS PRACTICABLE WITHOUT DAMAGING THE PAVEMENT SURFACE PER THE REQUIREMENTS OF ACI. CURING COMPOUND SHALL BE APPLIED IN THE INITIAL SAWCUT.
- ALL JOINT CONSTRUCTION, MATERIALS AND JOINT SEALER SHALL BE IN ACCORDANCE WITH FAA SPECS P-501 AND P-605 UNLESS OTHERWISE NOTED.
- SEALANT RESERVOIR SHAPE FACTOR, W/D, SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.
- ALL WORK AND MATERIALS REQUIRED FOR JOINTS ARE INCIDENTAL TO PCC PAVEMENT PAY ITEMS.
- JOINT CLEANING SHALL BE ACCOMPLISHED BY COMPRESSED AIR OR OTHER APPROVED METHOD. OTHER CLEANING METHODS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL.
- CONTRACTOR SHALL THOROUGHLY CLEAN ALL JOINTS, REMOVING ALL LOOSE MATERIAL AND SHALL THOROUGHLY SWEEP (VACUUM) PAVEMENT SURFACE TO THE SATISFACTION OF THE ENGINEER PRIOR TO ACCEPTANCE.
- SAWCUT WIDTH SHALL BE 1/2" WIDE OR THE WIDTH OF THE EXISTING CONTRACTION OR CONSTRUCTION JOINTS AND 3/4" WIDE FOR EXPANSION JOINTS. NO EXTRA PAYMENT WILL BE MADE FOR CLEANING OF SAWCUTS, BACKER ROD OR SEALANT IN JOINTS EXCEEDING DETAILED WIDTHS.
- SAWCUT DEPTH SHALL BE TO THE DEPTHS SHOWN IN THE DETAILS ON THIS SHEET. NO EXTRA PAYMENT WILL BE MADE FOR SAWCUTS IN EXCESS OF DETAILED DEPTHS.

A1 CONCRETE PAVING NOTES

SCALE: NOT TO SCALE

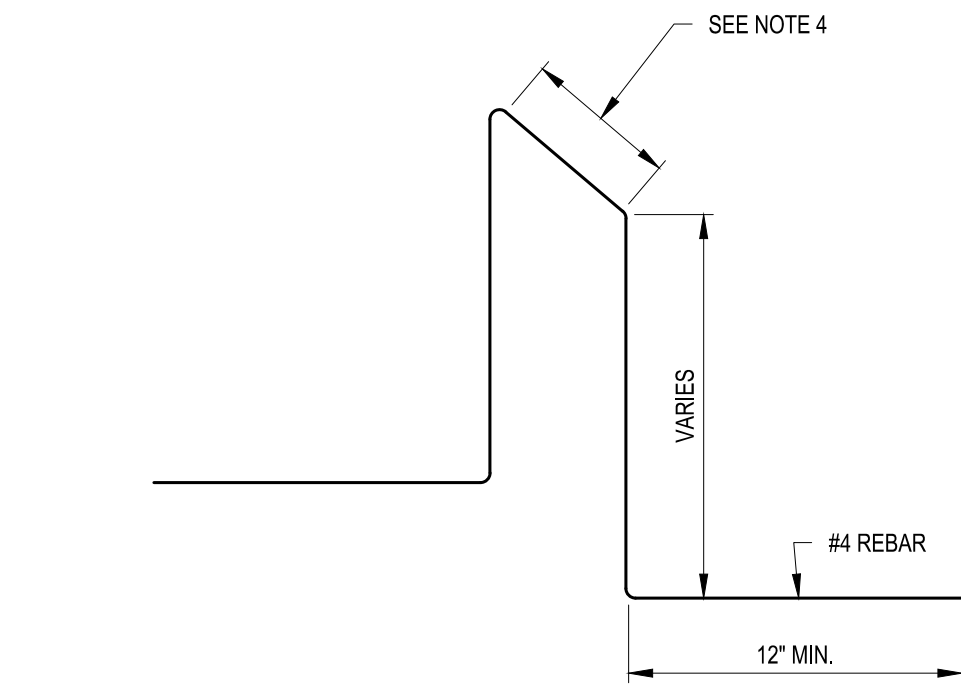
C2 TYPICAL TAXILANE PAVEMENT SECTION

SCALE: NOT TO SCALE



B2 ISOLATION JOINT SEALING DETAIL

SCALE: NOT TO SCALE

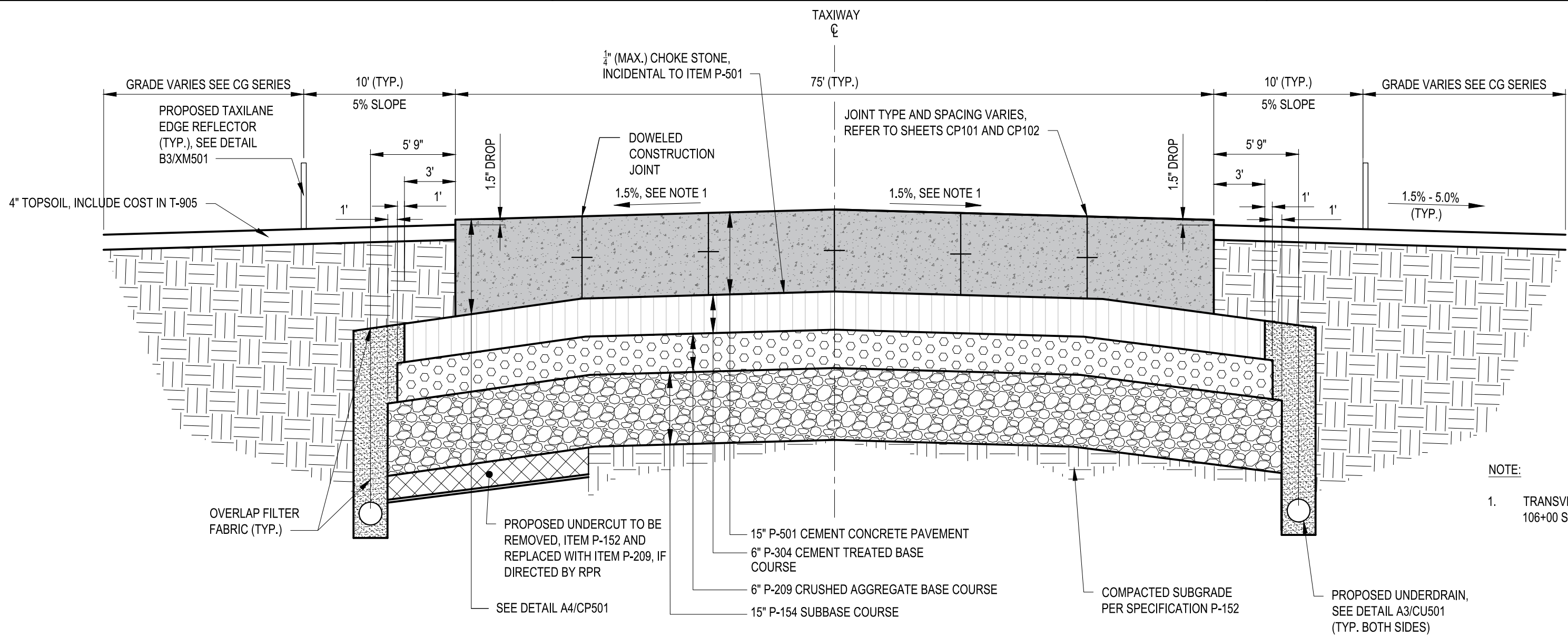


NOTES:

- CHAIR SHALL BE FIRMLY ANCHORED TO GRADE.
- THE NUMBER OF CHAIRS USED SHALL BE SUFFICIENT TO FULLY SUPPORT REINFORCEMENT MAT AT THE PROPER HEIGHT DURING PLACEMENT OF CONCRETE.
- A SIMILAR CHAIR MAY BE USED, AS APPROVED BY THE DESIGNER.
- LENGTH AS REQUIRED TO FULLY SUPPORT REINFORCEMENT MAT.

A2 MAT SUPPORT CHAIR DETAIL

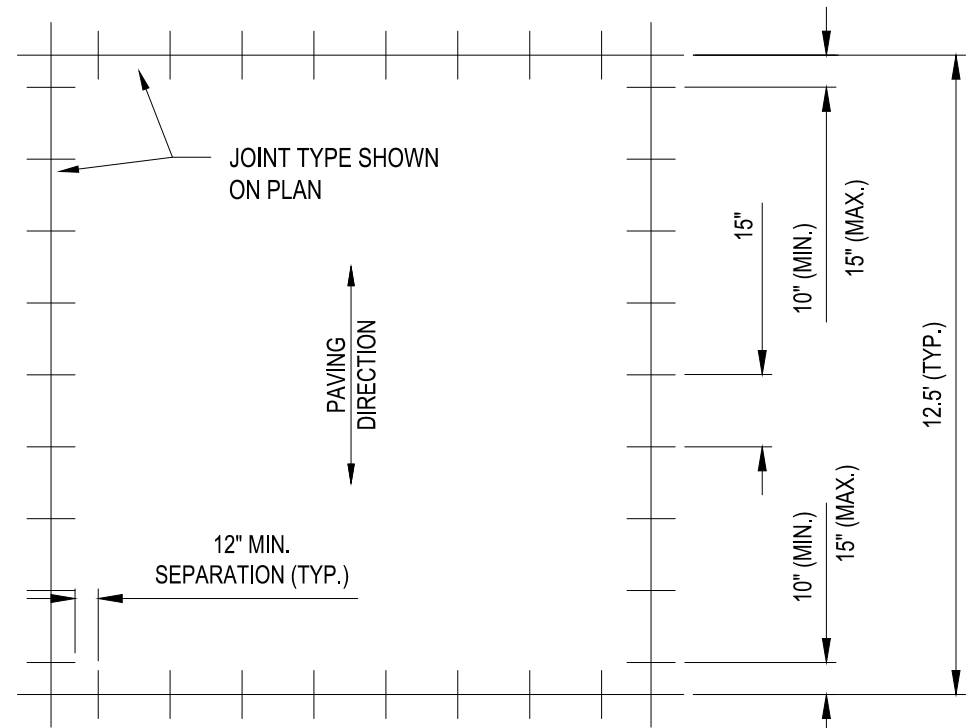
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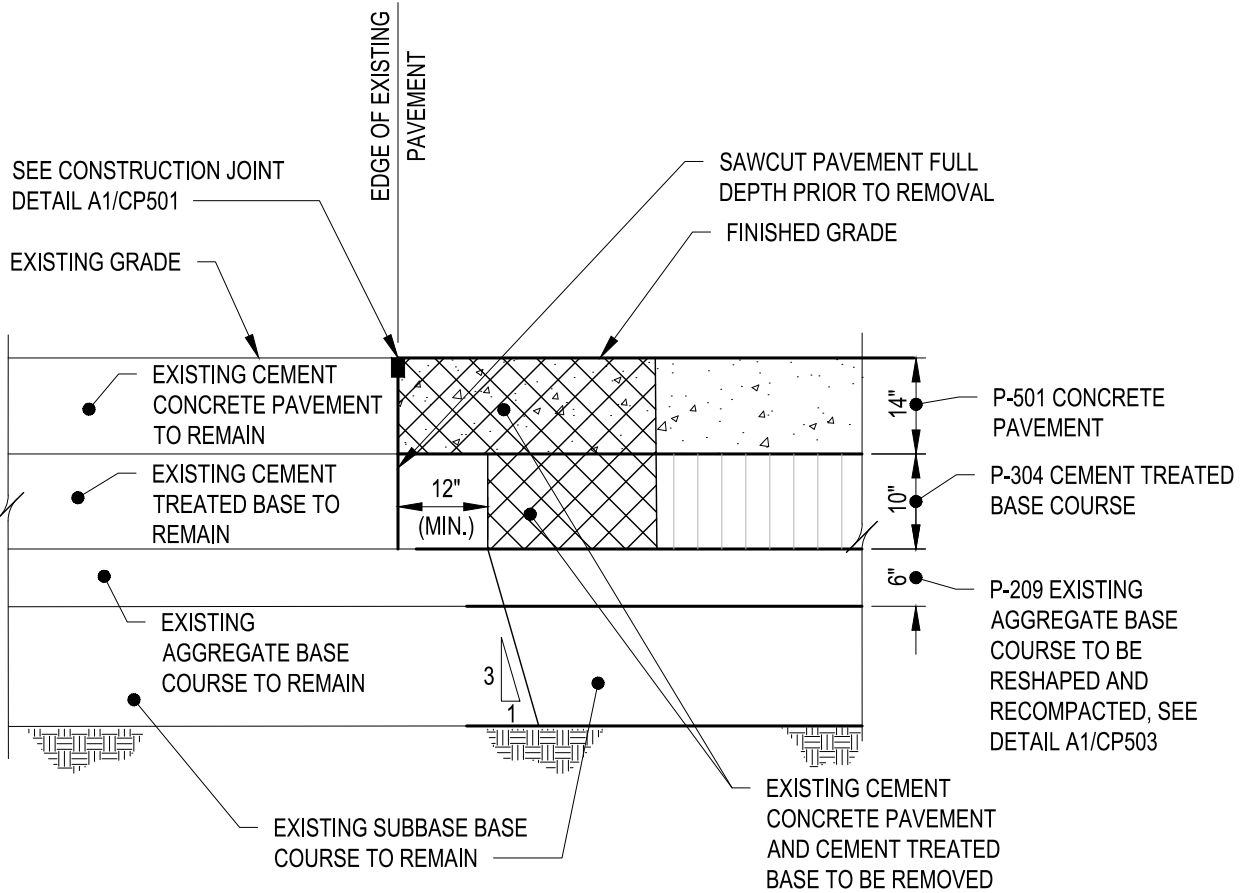
- TRANSVERSE SLOPES SHALL BE 1.5% EXCEPT FROM STA. 105+00 TO STA. 106+00 SEE CG SERIES.

- NOTE:
- FOR SLAB SIZES NOT CONFORMING TO THE DETAILS SHOWN, DOWEL BARS SHALL BE SPACED 15" ON CENTER FOR THE PROPOSED PAVEMENT AND DOWEL BARS SHALL BE SPACED AT LEAST 10" FROM ANY SLAB CORNER.



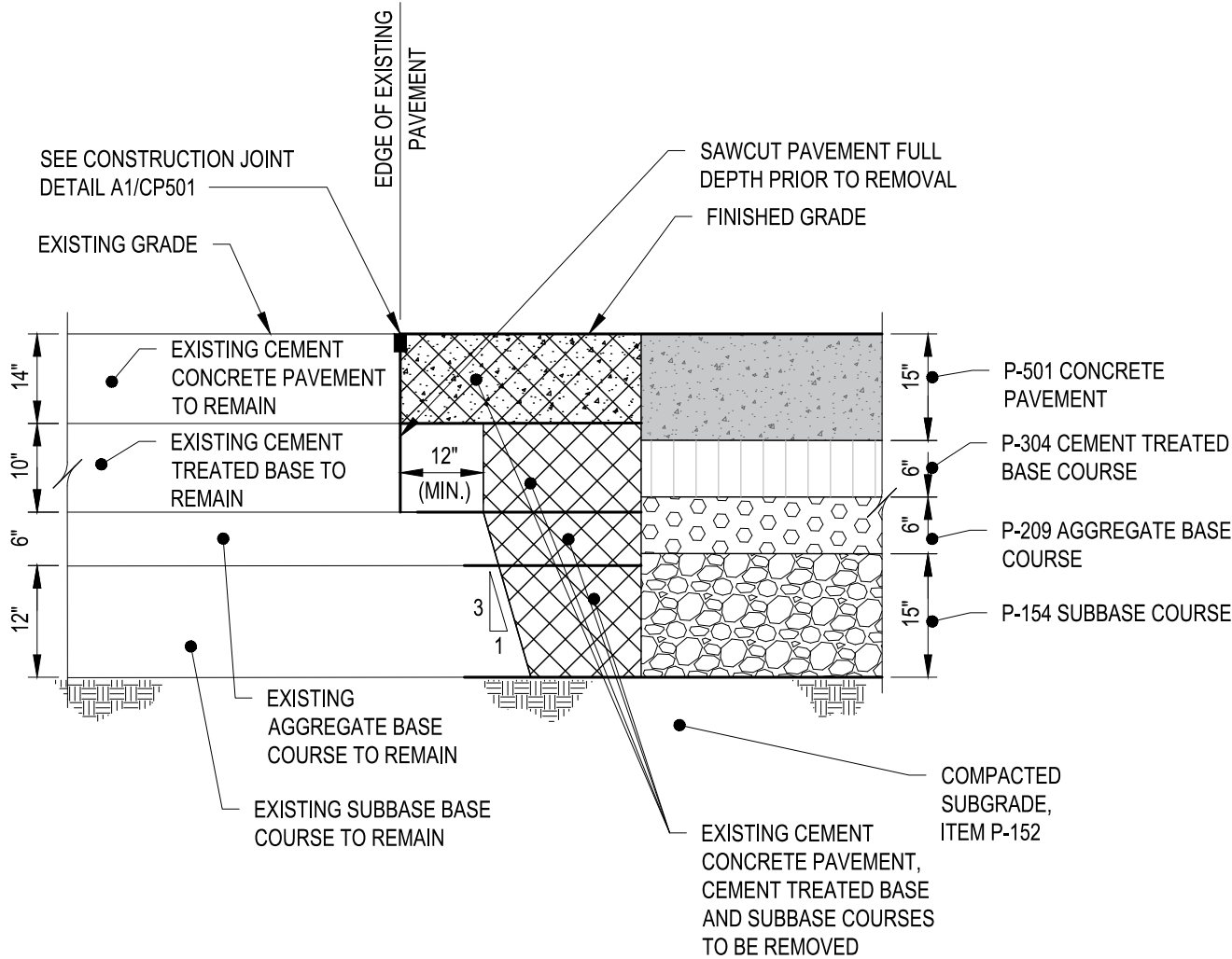
B3 DOWEL POSITION AT JOINT EDGE DETAIL

SCALE: NOT TO SCALE



A3 FULL STRENGTH CONCRETE PANEL KEYING DETAIL ADD ON NO. 1 AND NO. 2

SCALE: NOT TO SCALE



A4 FULL STRENGTH CONCRETE PAVEMENT KEYING DETAIL

SCALE: NOT TO SCALE



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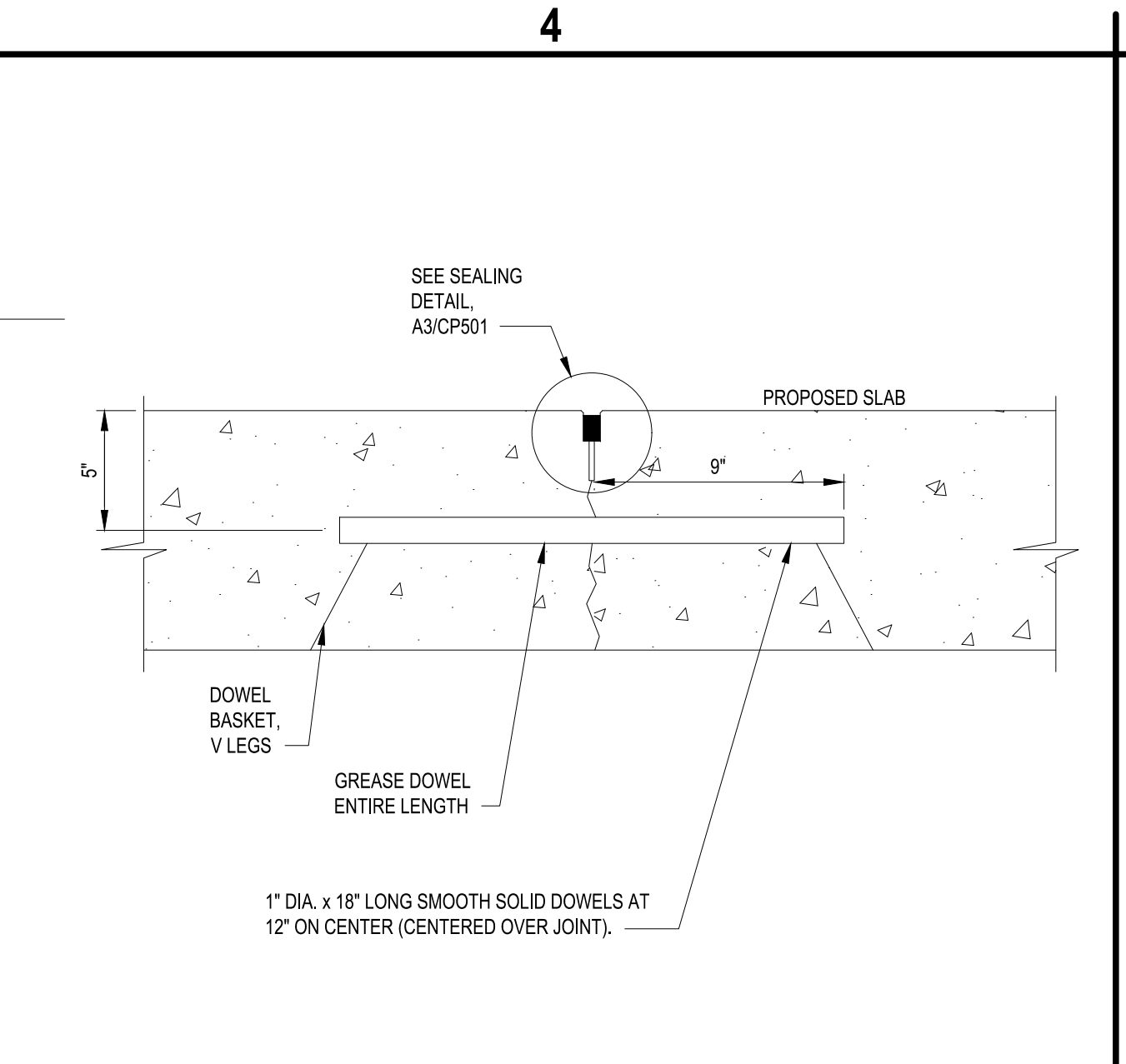
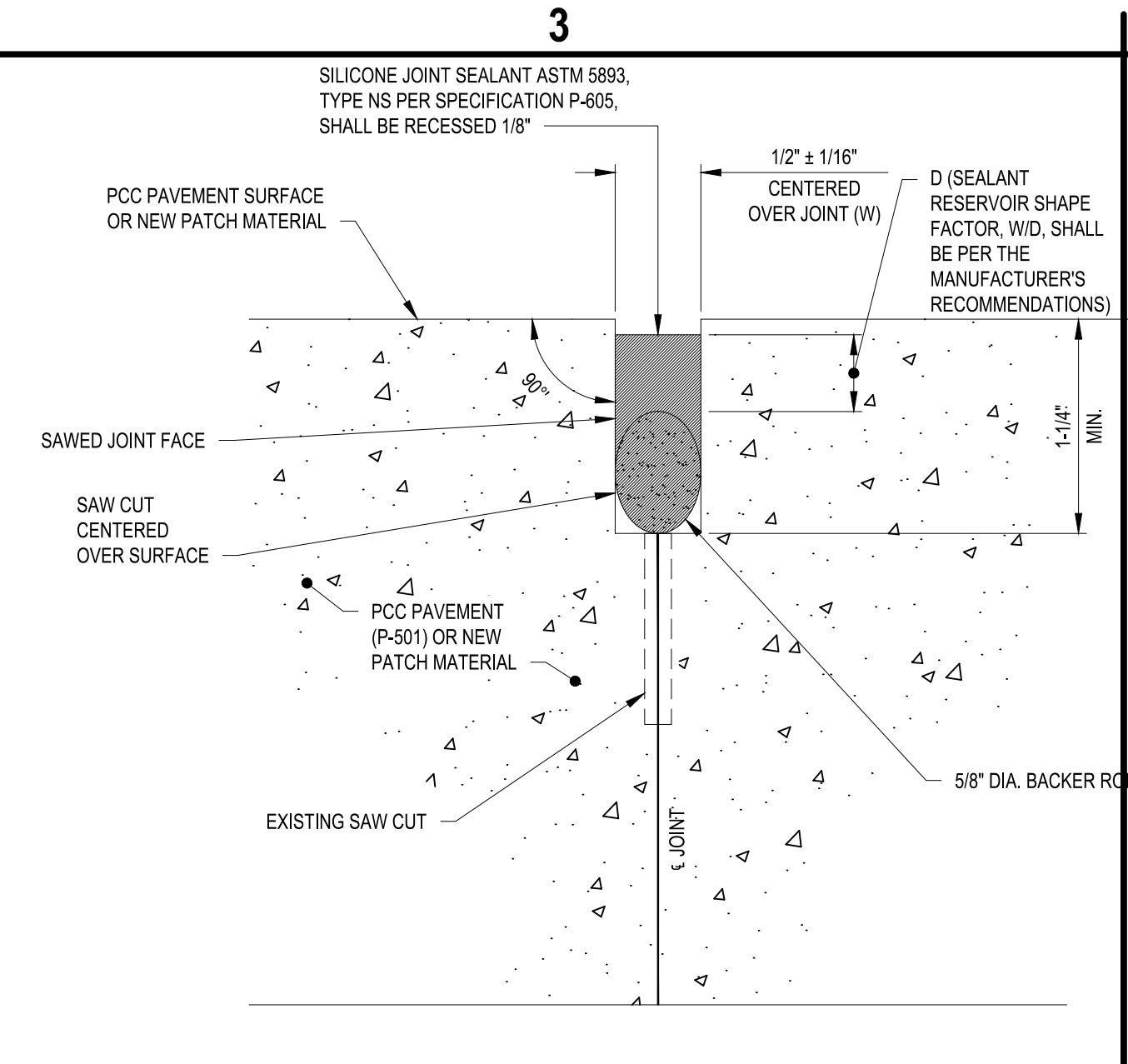
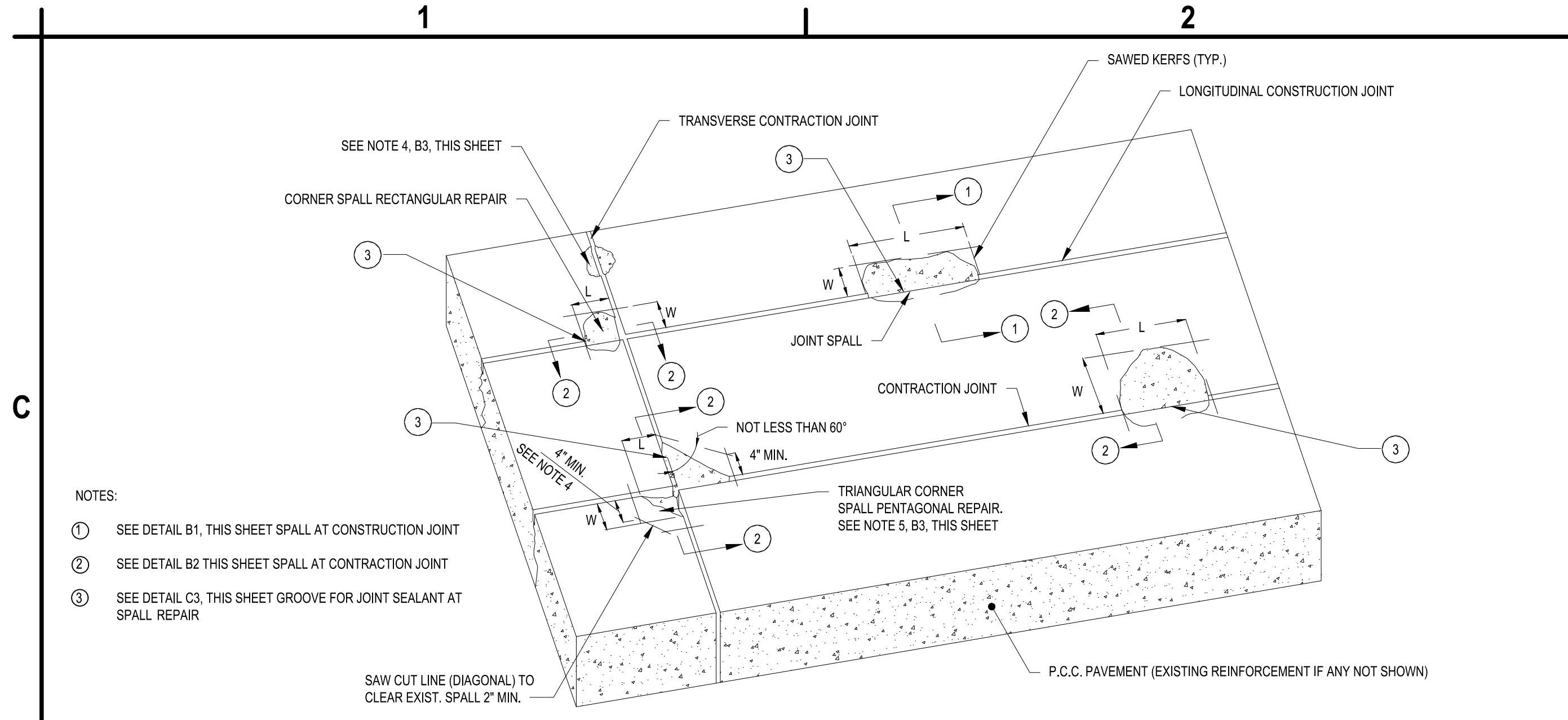
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PAVEMENT DETAILS

CP502

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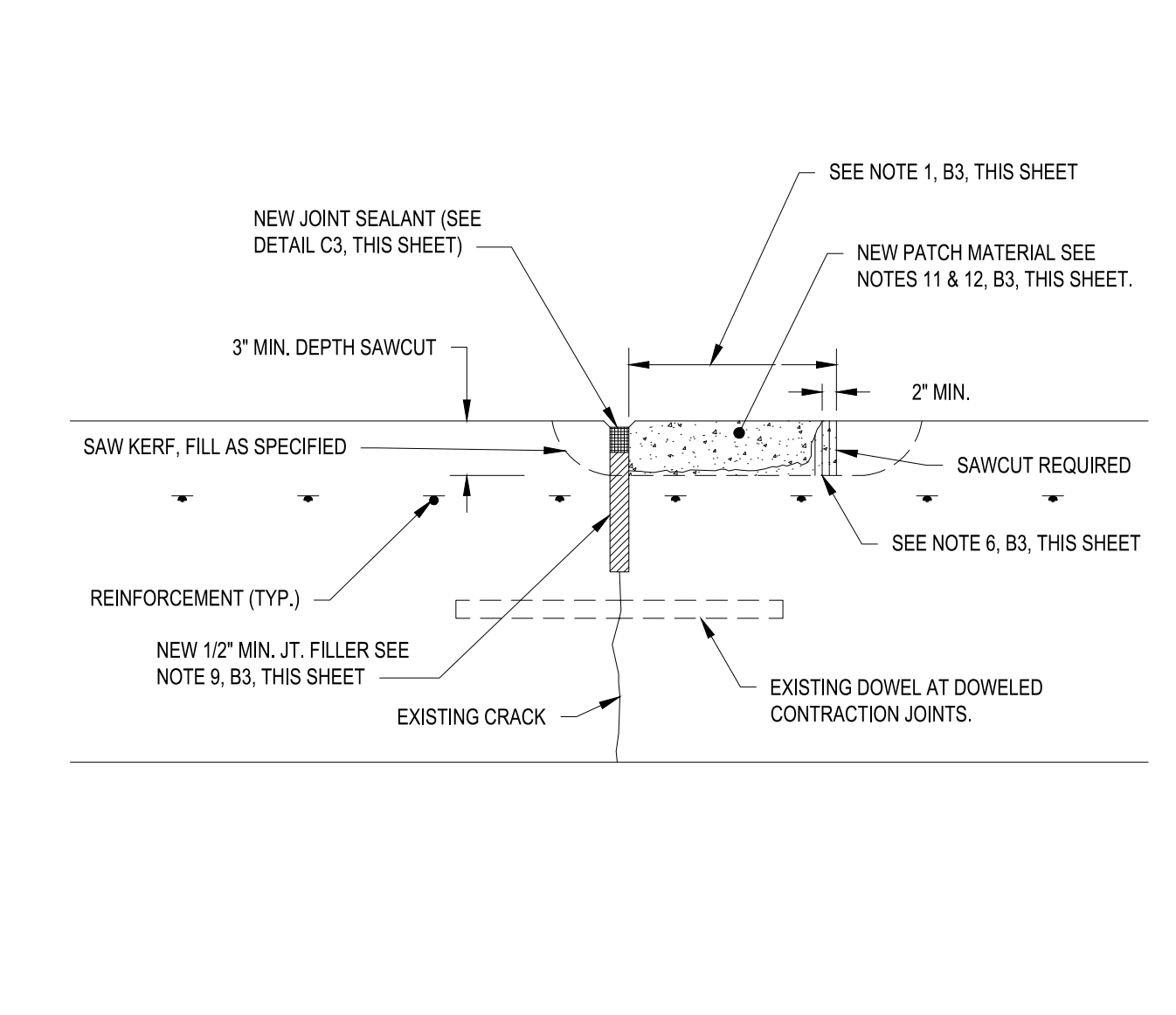
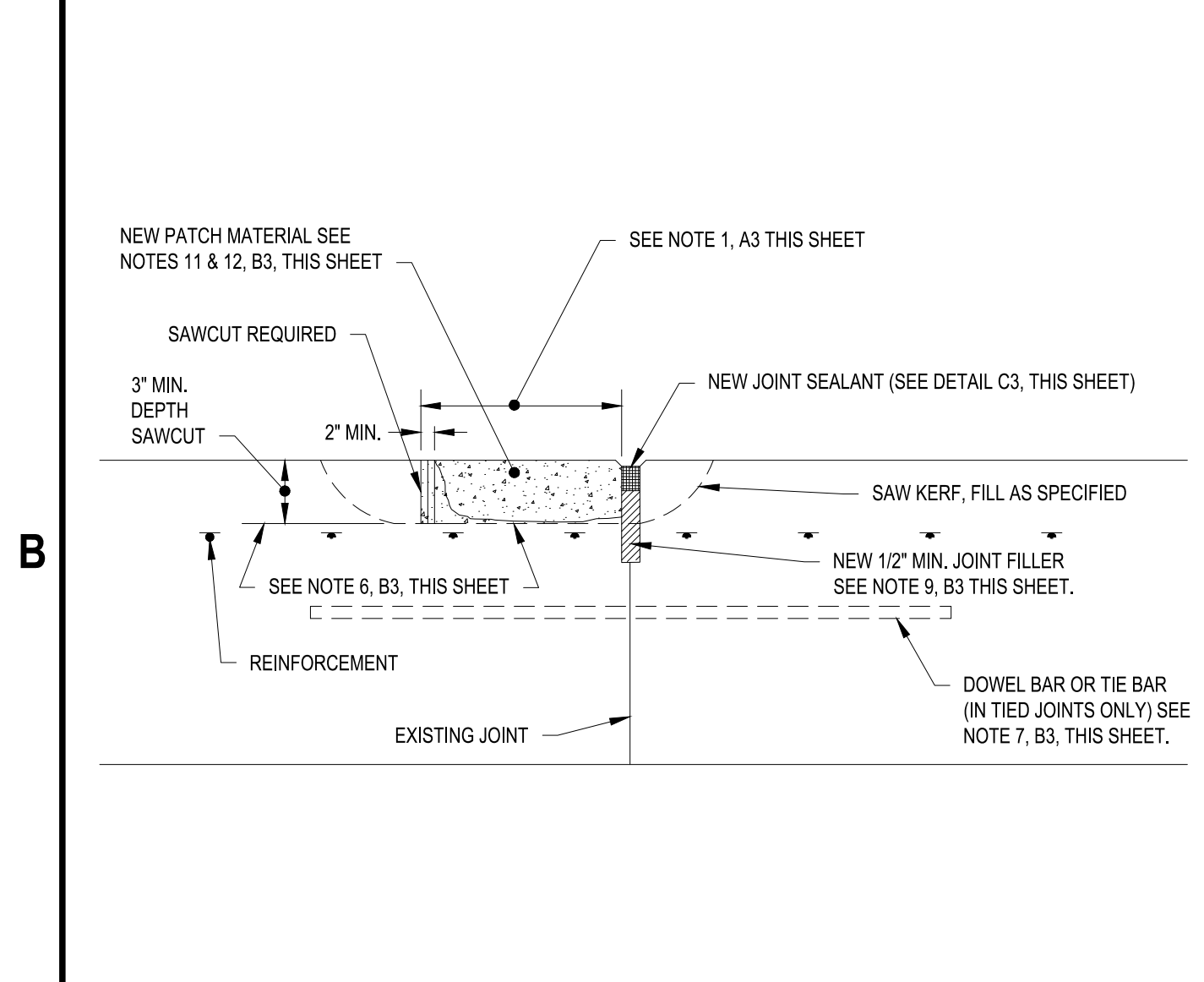
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C1 SPALL REPAIRS PLAN
SCALE: NOT TO SCALE

C3 SPALL REPAIR JOINT SEALING DETAIL
SCALE: NOT TO SCALE

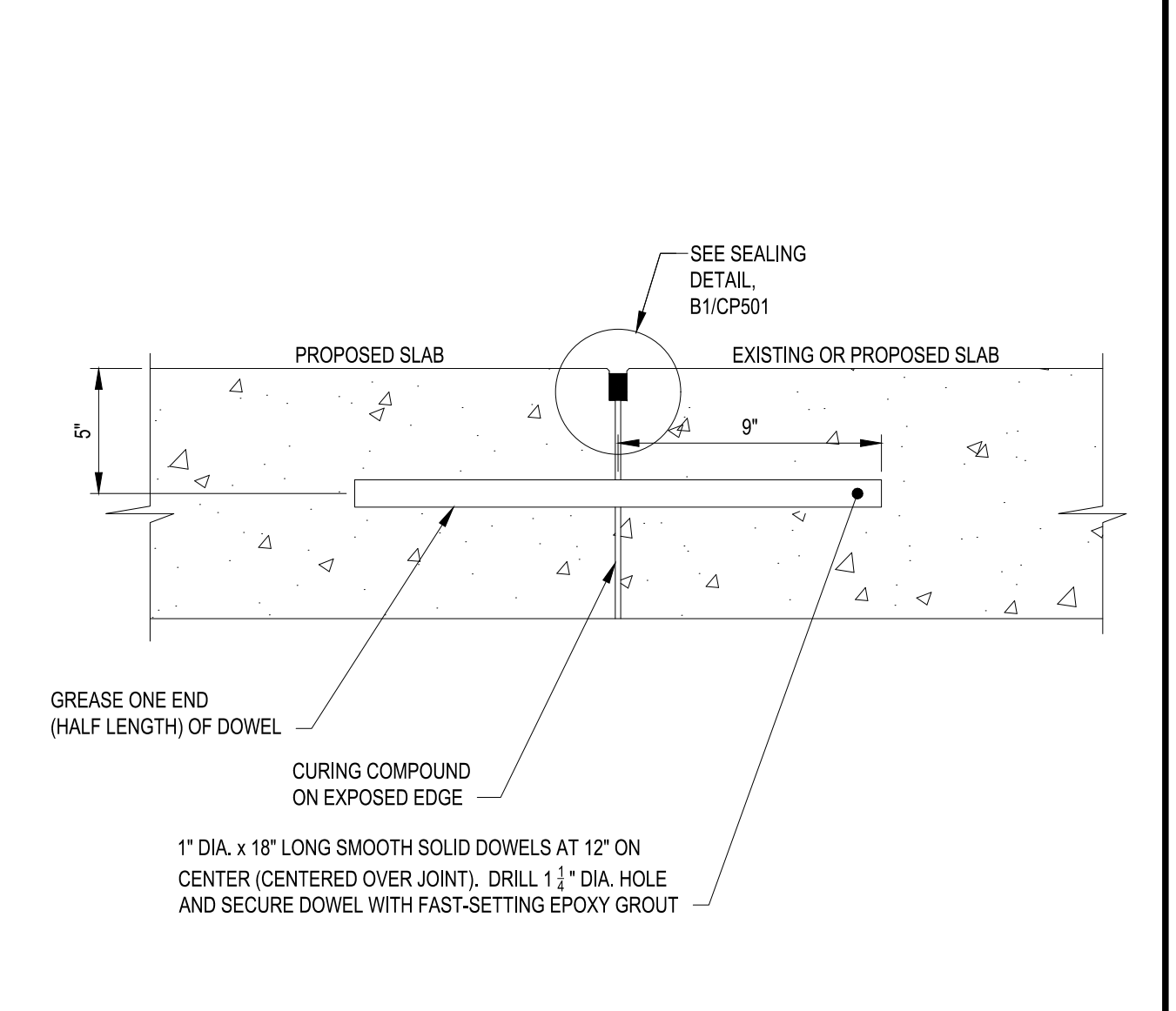
C4 ACCESS ROAD CONTRACTION JOINT DETAIL
SCALE: NOT TO SCALE



B1 SPALL REPAIR AT CONSTRUCTION JOINT DETAIL
SCALE: NOT TO SCALE

B2 SPALL REPAIR AT CONTRACTION JOINT DETAIL
SCALE: NOT TO SCALE

- B3** SPALL REHABILITATION GENERAL NOTES
SCALE: NOT TO SCALE
- APPROX. LOCATION, LENGTH (L) AND WIDTH (W) OF EACH SPALL REPAIR, ARE NOT SHOWN. EXACT LOCATION AND DIMENSIONS SHALL BE DETERMINED AND MARKED IN THE FIELD BY THE CONTRACTOR IN THE PRESENCE OF THE RPR.
 - SPALLS OCCUR IN MANY SIZES AND SHAPES. REPAIR DETAILS SHOWN ARE INTENDED TO REMOVE AND REPLACE ALL DETERIORATED CONCRETE, AND TO MAINTAIN THE SIZE OF THE SPALL REPAIR TO THE MINIMUM PRACTICAL TO AVOID UNNECESSARY REMOVAL OF SOUND CONCRETE.
 - JOINT SPALLS WITH ACTUAL CAVITY WIDTHS LESS THAN 2" SHALL BE REPAIRED BY CLEANING AND FILLING WITH JOINT SEALANT IN LIEU OF SPECIFIED PATCHING MATERIAL. PAYMENT FOR THIS TYPE REPAIR WILL BE INCIDENTAL TO ITEM P-101.
 - WHERE SPALL REPAIRS ARE REQUIRED ON EACH SIDE OF A JOINT OR CRACK, A NON-FLEXIBLE TYPE FILLER OR INSERT SHALL BE SECURED IN ALIGNMENT WITH THE JOINT OR CRACK AFTER BREAKING OUT THE SPALLED CONCRETE. THE SPALL REPAIRS SHALL BE COMPLETED AS INDICATED ON ONE SIDE AT A TIME.
 - AT TRIANGULAR SPALLS WHERE BOTH THE LENGTH AND WIDTH OF THE REPAIR EXCEED 12", THE REPAIR SHALL BE MADE PENTAGONAL TO AVOID FEATHER EDGED CORNERS AND TO MINIMIZE SIZE OF REPAIR AREA. SAWCUTS SHALL BE MADE TO INTERSECT JOINT LINES AT APPROX. 90° (80° MIN.) FOR NOT LESS THAN 4" AS SHOWN.
 - BREAK OUT AND REMOVE PAVEMENT AND UNSOUND CONCRETE WITHIN SAWCUTS TO A DEPTH NOT LESS THAN 3". CLEAN EXPOSED CAVITY SURFACES AS SPECIFIED. USE A LIGHT CHIPPING HAMMER TO PREVENT FRACTURE OF SOUND CONCRETE.
 - KEYWAYS, DOWELS, TIE-BARS, OR REINFORCEMENT EXPOSED OR SAWN THROUGH DURING PREPARATION OF SPALLED AREAS SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER. DOWEL BARS SHALL BE NEATLY COATED WITH GREASE PRIOR TO FILLING CAVITY WITH REPAIR MATERIAL.
 - SAWCUT A 1/2" MIN. WIDTH GROOVE AT EXISTING JOINT LINES TO A POINT 1/2" MIN. BELOW THE PREPARED CAVITY SURFACE TO HOLD NEW FILLER INSERTS DURING PLACEMENT OF PATCH MATERIAL.
 - PROVIDE JOINT FILLER TO MAINTAIN EXISTING JOINTS AND WORKING CRACKS. THICKNESS OF FILLER SHALL BE ABOUT EQUAL TO WIDTH OF EXISTING GAP AT THE JOINT OR CRACK BUT NOT LESS THAN DIMENSIONS SHOWN. DEPTH OF FILLER SHALL BE SUFFICIENT TO INSERT FILLER IN SAWED GROOVE BELOW PREPARED CAVITY SURFACE AND TO PROVIDE SEPARATION OF PATCH MATERIAL FROM EXISTING CONCRETE. INSTALL FILLER NEATLY TO PREVENT NEW PATCH MATERIALS FROM BY-PASSING FILLER AND ENTERING THE JOINT SPACE.
 - APPLY BONDING MATERIAL ON ALL EXPOSED CAVITY SURFACES EXCEPT FACES OF JOINTS AND WORKING CRACKS. FILL CAVITY FLUSH WITH PAVEMENT SURFACE WITH PATCH MATERIAL AS SPECIFIED.
 - REMOVAL OF CONCRETE SHALL NOT CAUSE DAMAGE TO ADJACENT EXISTING PAVEMENT. CONTRACTOR SHALL REMOVE AND REPLACE ADDITIONAL FULL DEPTH CONCRETE, AT NO ADDITIONAL COST, AS NECESSARY TO REPAIR ANY DAMAGED AREAS CAUSED BY CONTRACTOR'S OPERATIONS.
 - PATCH MATERIAL SHALL BE DELPATCH AS MANUFACTURED BY THE D.S. BROWN COMPANY, 419-257-3561 OR APPROVED EQUAL

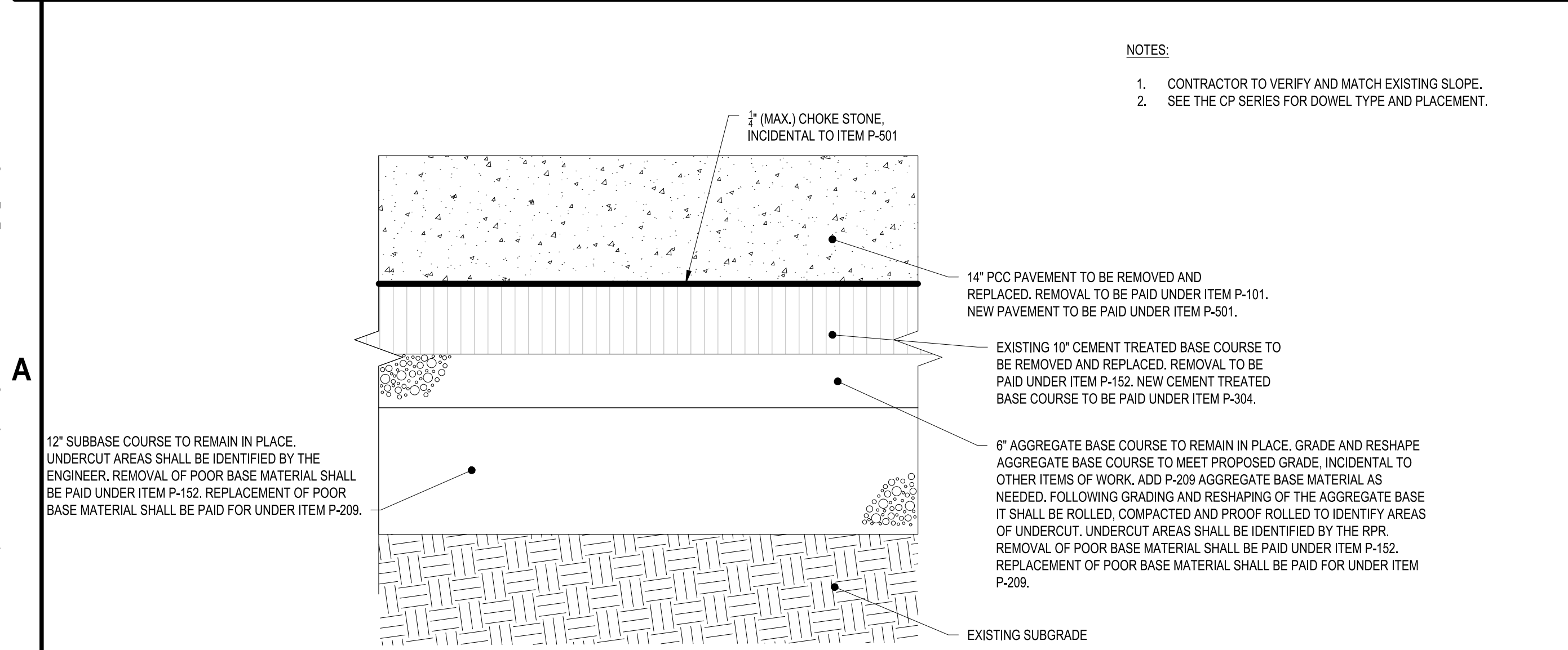


B1 SPALL REPAIR AT CONSTRUCTION JOINT DETAIL
SCALE: NOT TO SCALE

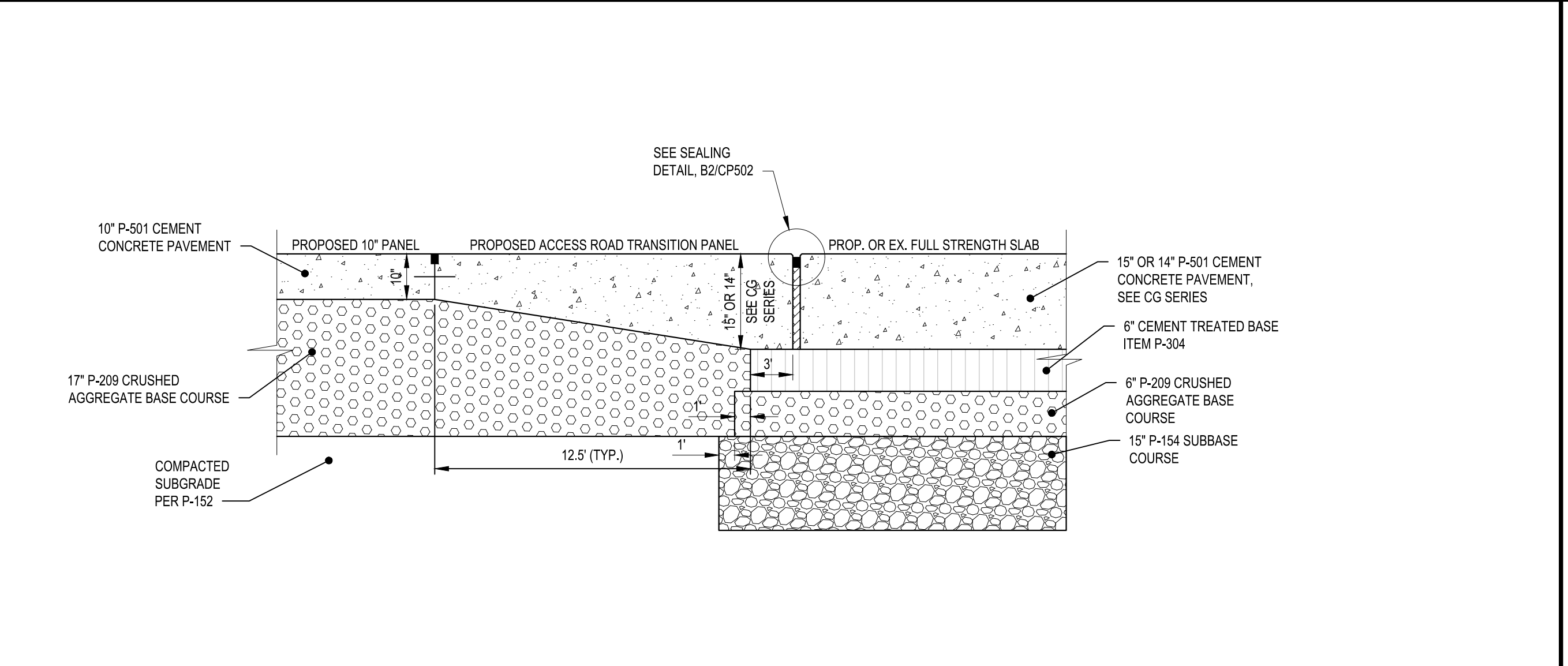
B2 SPALL REPAIR AT CONTRACTION JOINT DETAIL
SCALE: NOT TO SCALE

B3 SPALL REHABILITATION GENERAL NOTES
SCALE: NOT TO SCALE

B4 ACCESS ROAD CONSTRUCTION JOINT DETAIL
SCALE: NOT TO SCALE



A1 UPS APRON PAVEMENT REPAIRS (ADD ON NO. 1 AND ADD ON NO. 2)
SCALE: NOT TO SCALE



A3 ACCESS ROAD JUNCTURE DETAIL
SCALE: NOT TO SCALE

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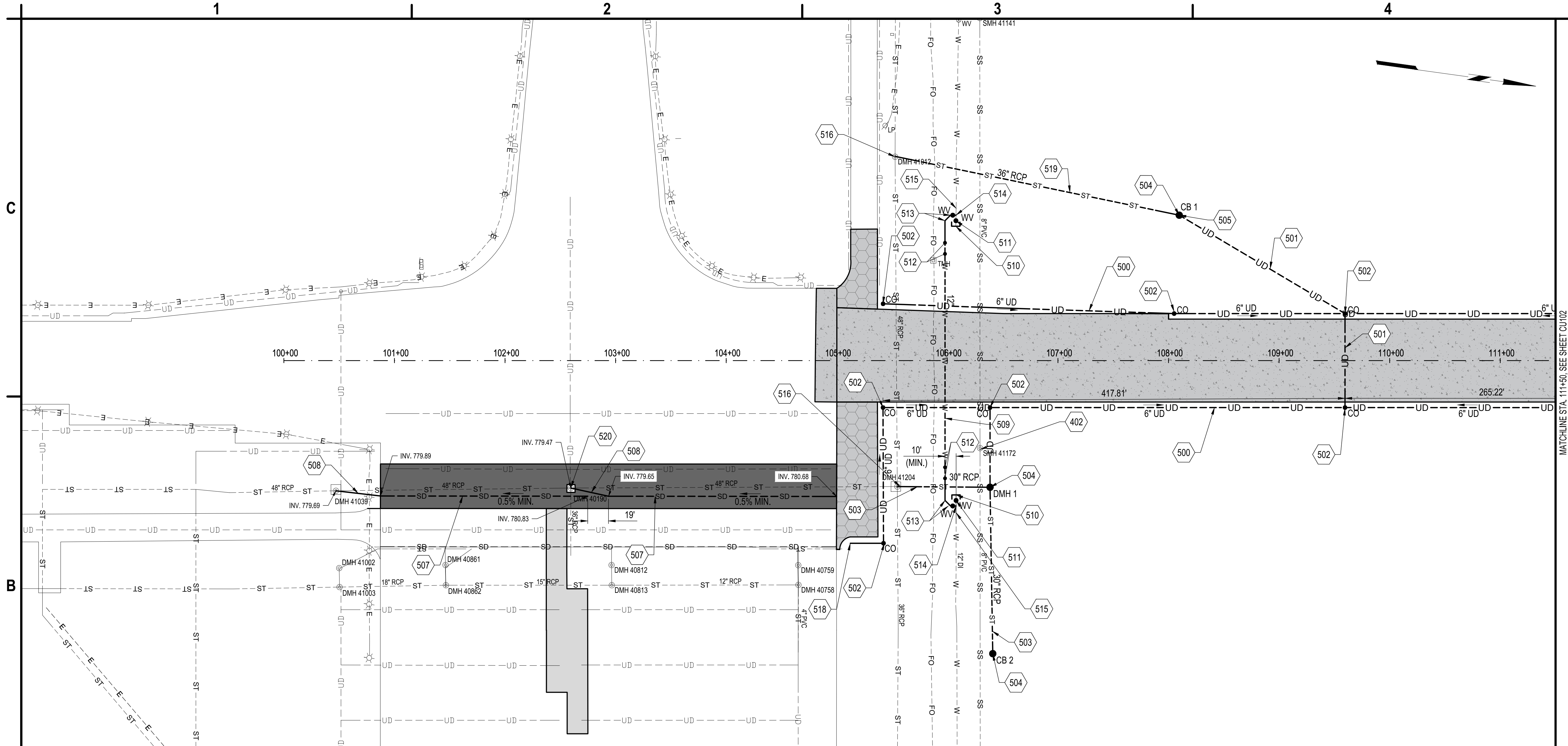
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PAVEMENT DETAILS

CP503

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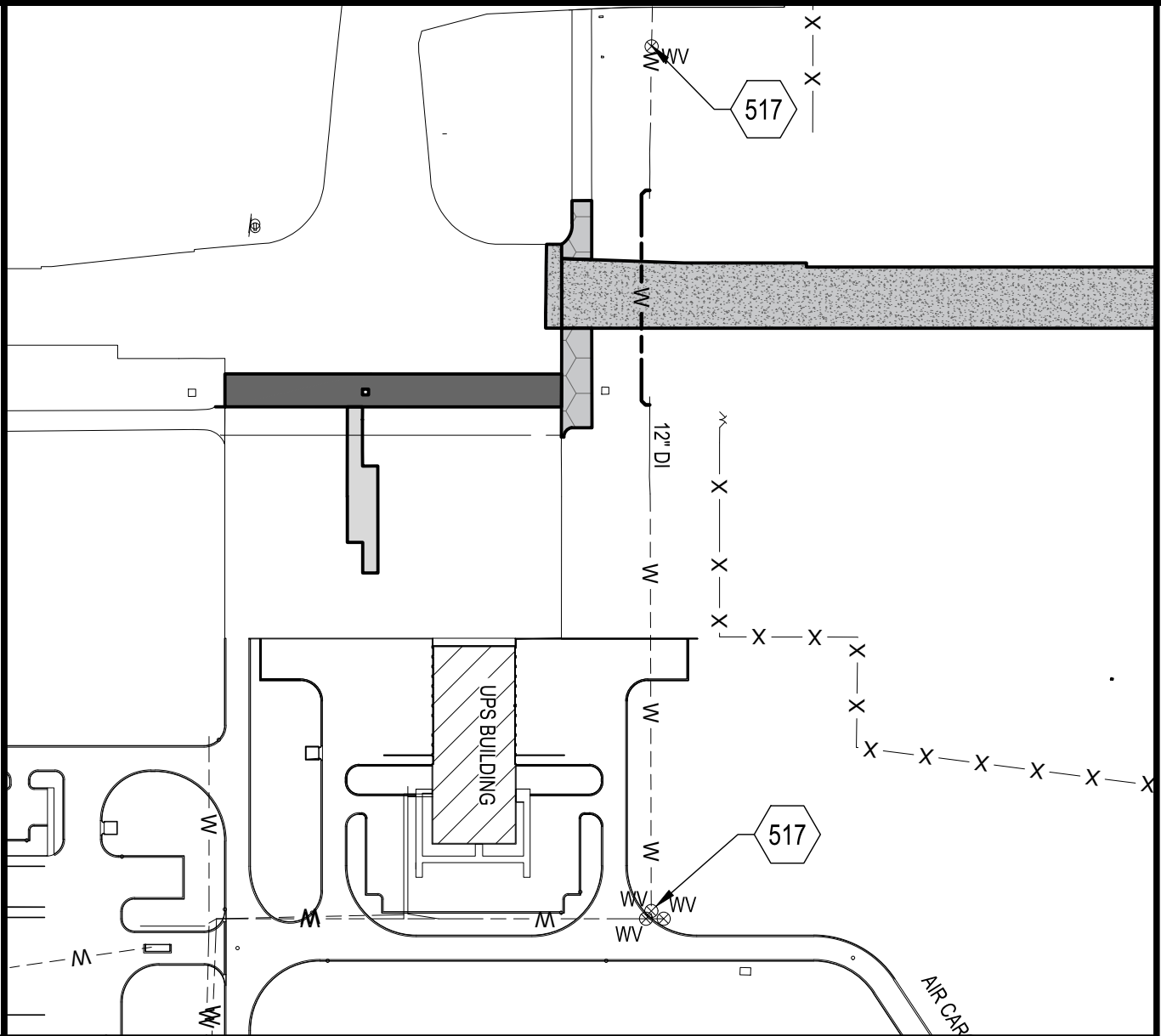


B1 DRAINAGE AND UTILITIES PLAN
SCALE: 1"=50'



402. EXISTING STRUCTURE TO BE ADJUSTED TO GRADE, ITEM D-751, SEE DETAIL C1/CU502
500. INSTALL UNDERDRAIN AT A 0.5% MIN. SLOPE, ITEM D-705 SEE DETAIL A3/CU501
501. SMOOTH WALL, NON PERFORATED UNDERDRAIN PIPE, ITEM D-705, SEE DETAIL B2/CU501
502. INSTALL CLEANOUT, ITEM D-751, SEE DETAIL A1/CU501
503. INSTALL 30" CLASS IV RCP STORM SEWER PIPE, ITEM D-701, SEE DETAIL C2/CU501
504. INSTALL CYLINDRICAL PRE-CAST STRUCTURE, ITEM D-751 SEE DETAIL B3/CU501
505. CONNECT UNDERDRAIN TO EXISTING OR PROPOSED STRUCUTRE, INCIDENTAL TO ITEM D-705 SEE DETAIL C1/CU501
507. PROPOSED SLOT DRAIN, (ADD ON NO. 1) SEE DETAIL A1/CU502
508. CONNECT PROPOSED SLOT DRAIN TO EXISTING STRUCTURE, INCIDENTAL TO SLOT DRAIN INSTALLATION.
509. WATER MAIN, 12 INCH DIA., RESTRAINED, DI. SEE PROFILE C1/CU201 AND DETAIL B2/CU503. WATERLINE SHALL BE REPLACED IN ACCORDANCE WITH KEYED NOTE 131 ON SHEET CD101
510. 12 INCH WATER MAIN PLUG WITH RESTRAINED JOINTS THRUST BLOCK PER DETAIL A3/CU503
511. GATE VALVE, 12 INCH AND BOX, SEE DETAIL B1/CU503 (TYP.)
512. 12 INCH 45 DEGREE VERTICAL BEND WITH THRUST BLOCK PER DETAIL B3/CU503
513. 12 INCH 45 DEGREE HORIZONTAL BEND WITH THRUST BLOCK PER DETAIL B3/CU503
514. 12 INCH X 12 INCH X 12 INCH TEE

515. SAWCUT AND CONNECT PROPOSED WATER MAIN TO EXISTING, SEE DETAIL C1/CU503
516. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE. MODIFY EXISTING OPENING TO ACCEPT THE NEW PIPE AS REQUIRED. COST INCIDENTAL TO ITEM D-701
517. EXISTING WATERMAIN VALVE, SEE A3 THIS SHEET. WATERMAIN SHUT OFFS SHALL OCCUR FROM 11PM TO 5AM ON DATES APPROVED BY GRR
518. CAP PROPOSED UNDERDRAIN, INCIDENTAL TO UNDERDRAIN INSTALLATION, ITEM D-705
519. INSTALL 36" CLASS IV RCP STORM SEWER PIPE, ITEM D-701, SEE DETAIL C2/CU501
520. EXISTING STRUCTURE TO BE PROTECTED IN PLACE



A3 WATER VALVE LOCATION
SCALE: NOT TO SCALE

A1 KEYED NOTES
SCALE: NOT TO SCALE



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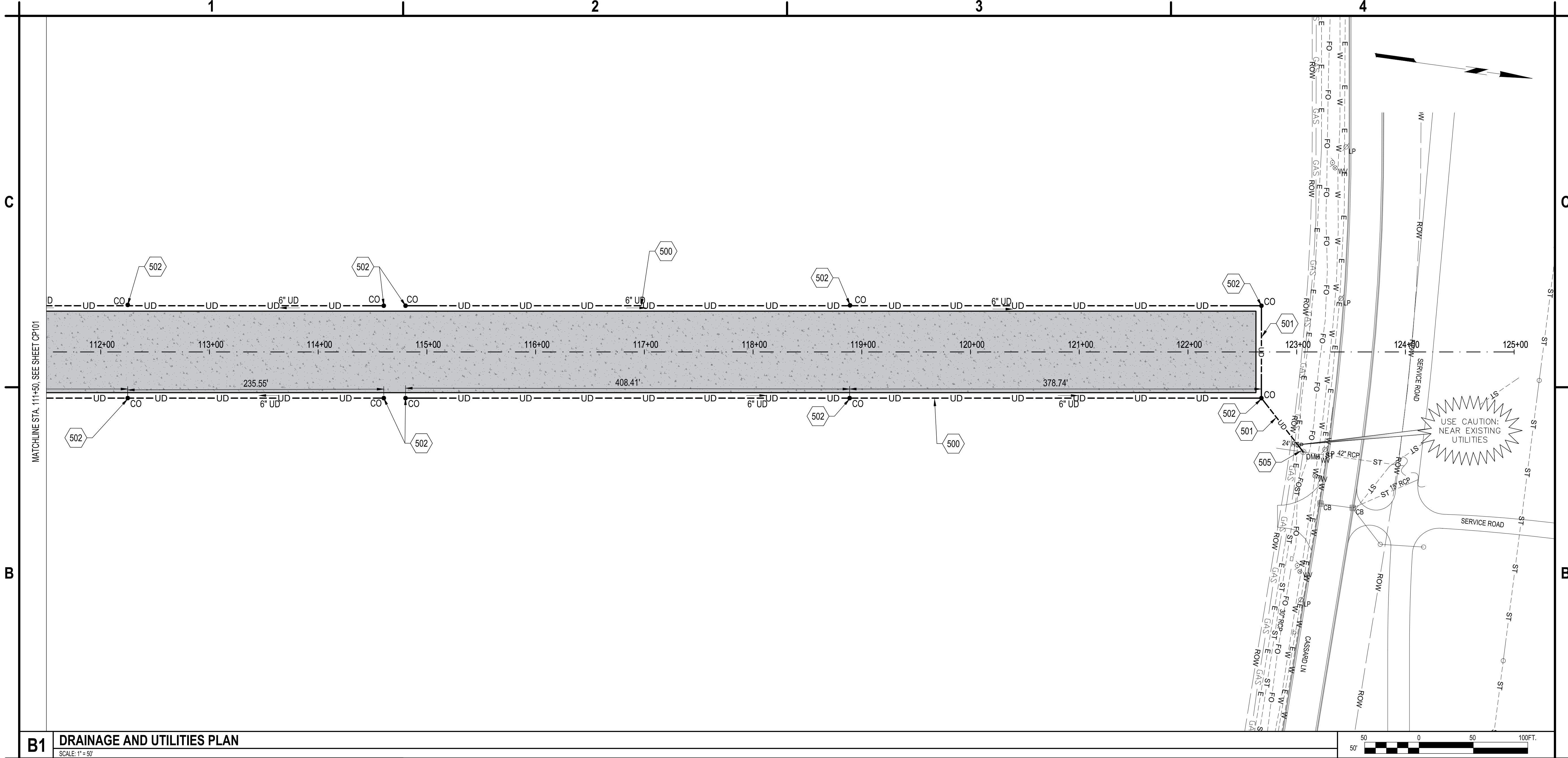
DRAINAGE AND UTILITIES PLAN

CU101

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B1 DRAINAGE AND UTILITIES PLAN
SCALE: 1" = 50'

500. INSTALL UNDERDRAIN AT A 0.5% MIN. SLOPE, ITEM D-705 SEE DETAIL A3/CU501
501. SMOOTH WALL, NON PERFORATED UNDERDRAIN PIPE, ITEM D-705, SEE DETAIL B2/CU501
502. INSTALL CLEANOUT, ITEM D-751, SEE DETAIL A1/CU501
505. CONNECT UNDERDRAIN TO EXISTING OR PROPOSED STRUCUTRE, INCIDENTAL TO ITEM D-705 SEE DETAIL C1/CU501

A1 KEYED NOTES
SCALE: NOT TO SCALE



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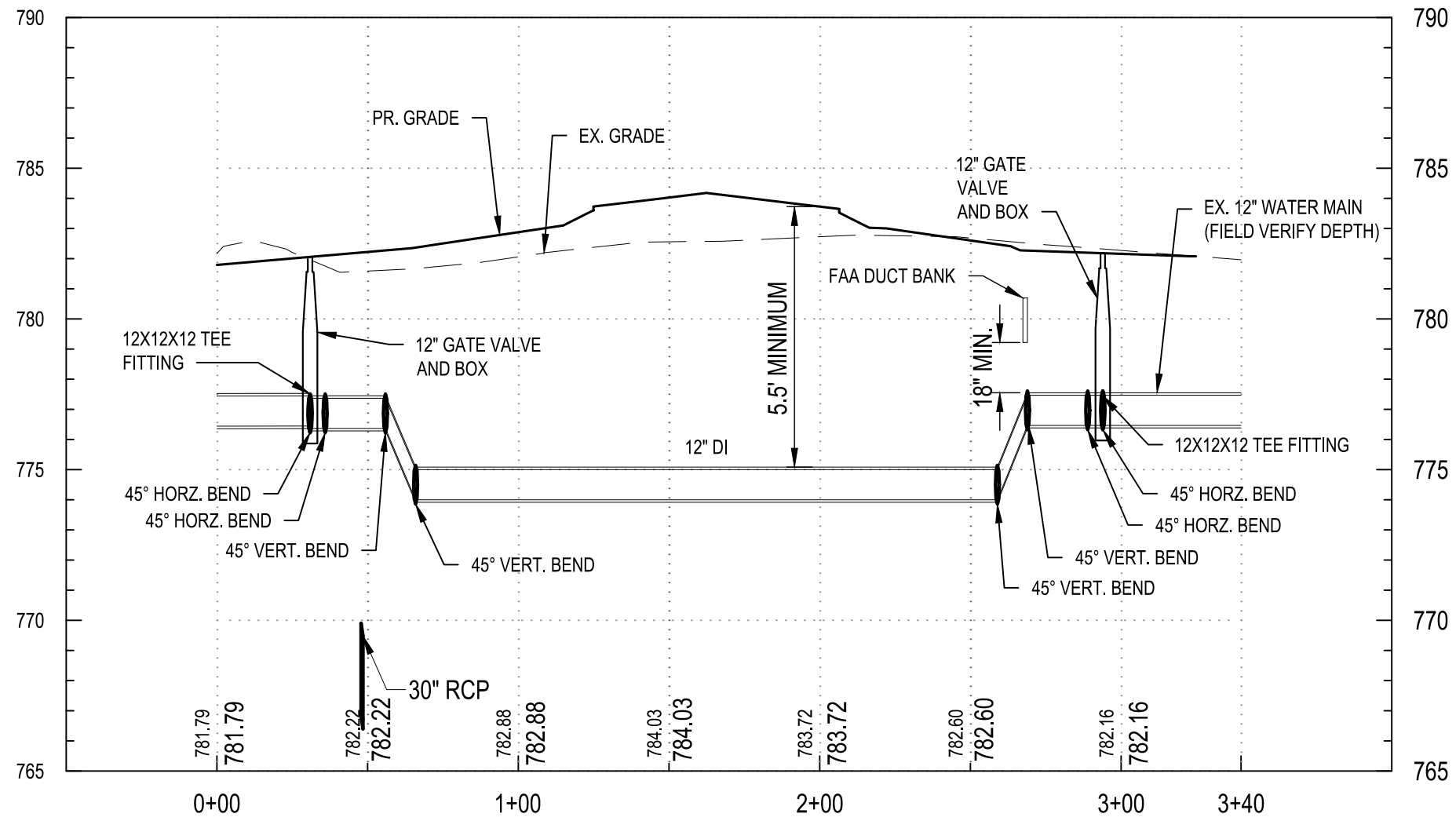
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DRAINAGE AND UTILITIES PLAN

CU102

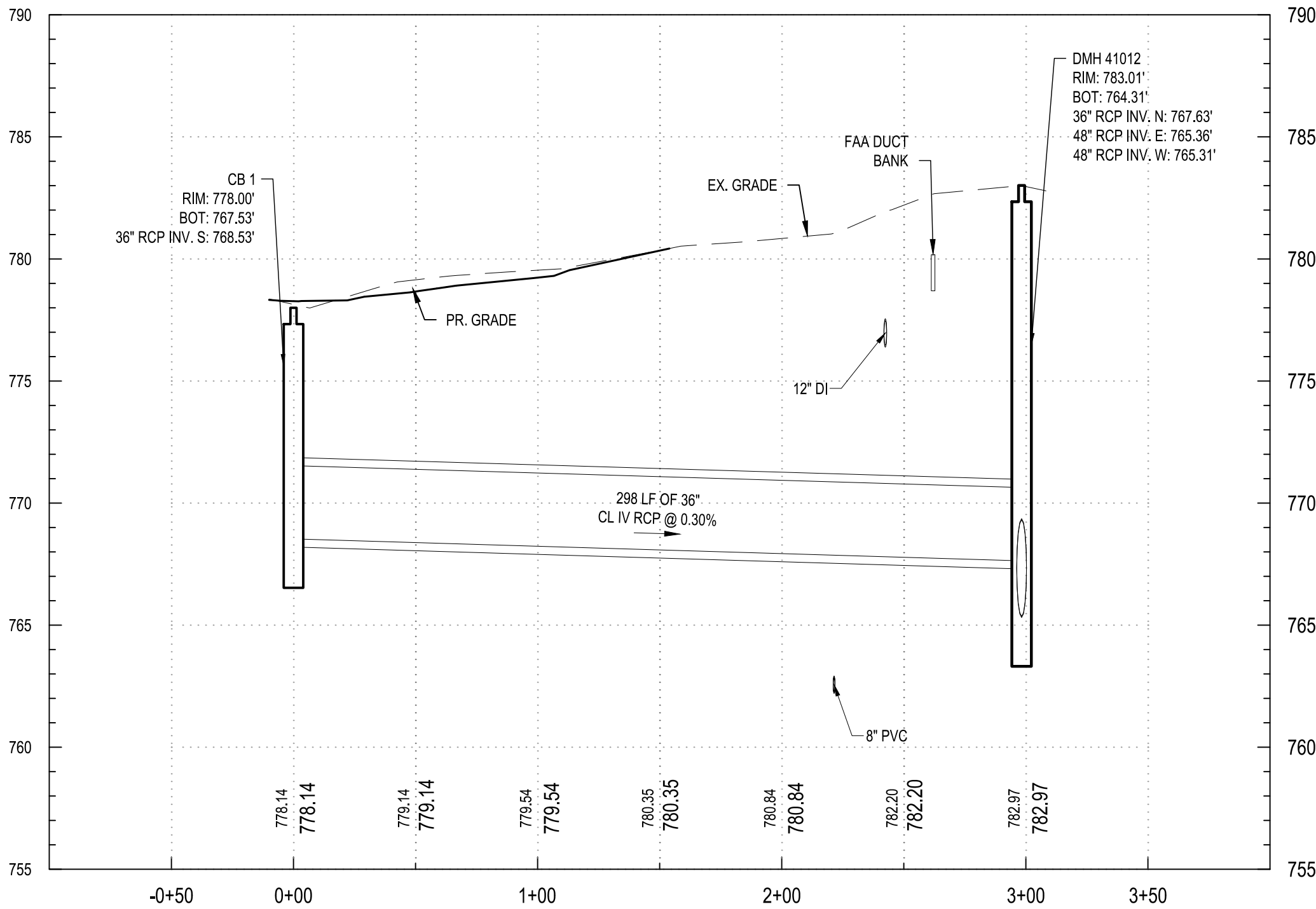
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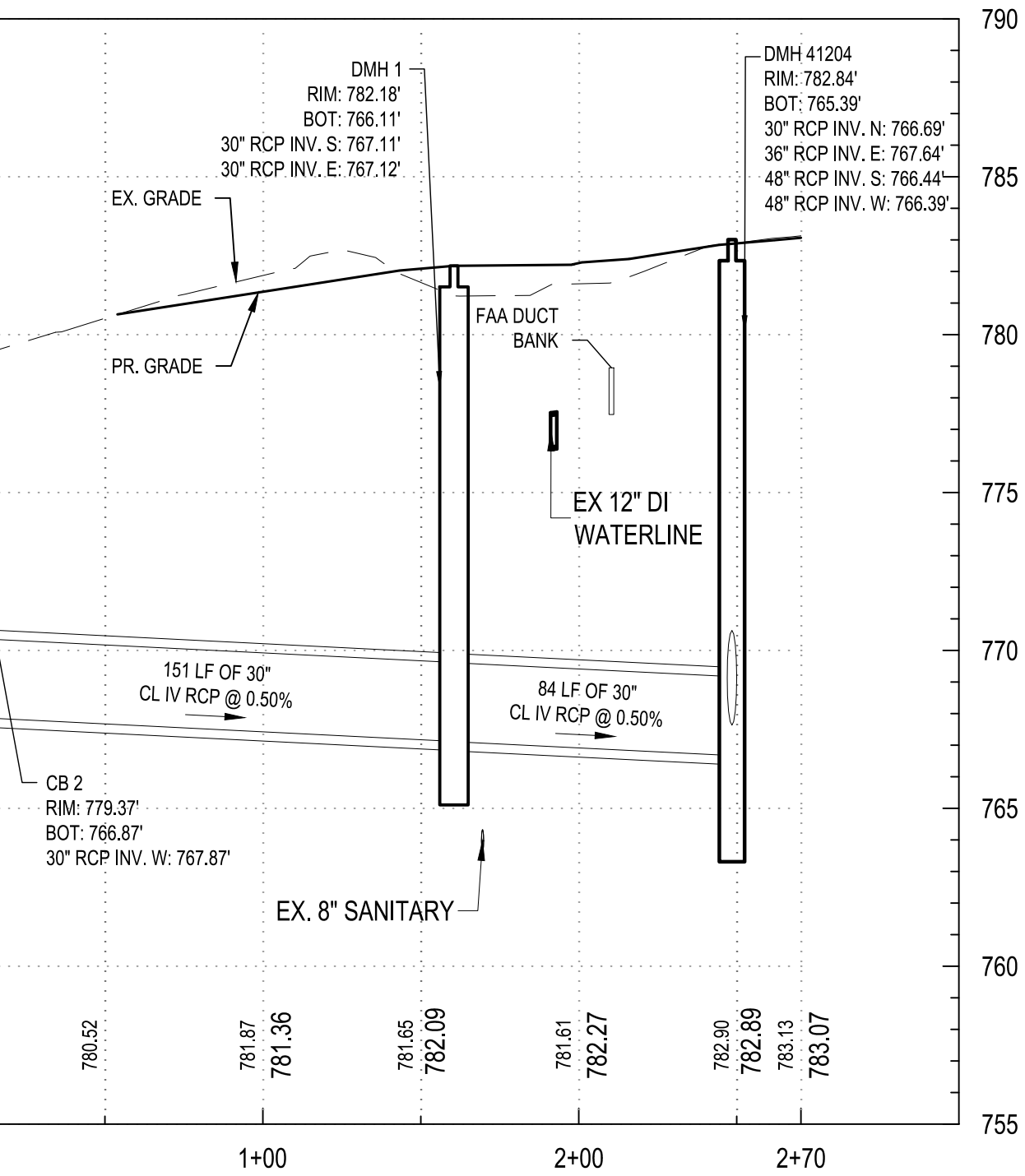
C1 PROPOSED 12 INCH WATER MAIN PROFILE

SCALE: HORIZ.: 1" = 50'; VERT.: 1" = 5'



A1 PROPOSED STORM RCP PROFILE

SCALE: HORIZ.: 1" = 50'; VERT.: 1" = 5'



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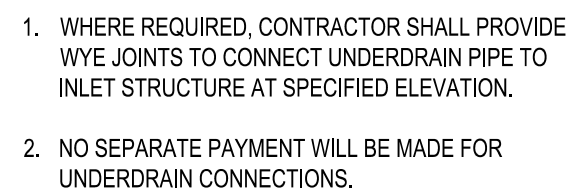
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DRAINAGE AND
UTILITIES PROFILE

CU201

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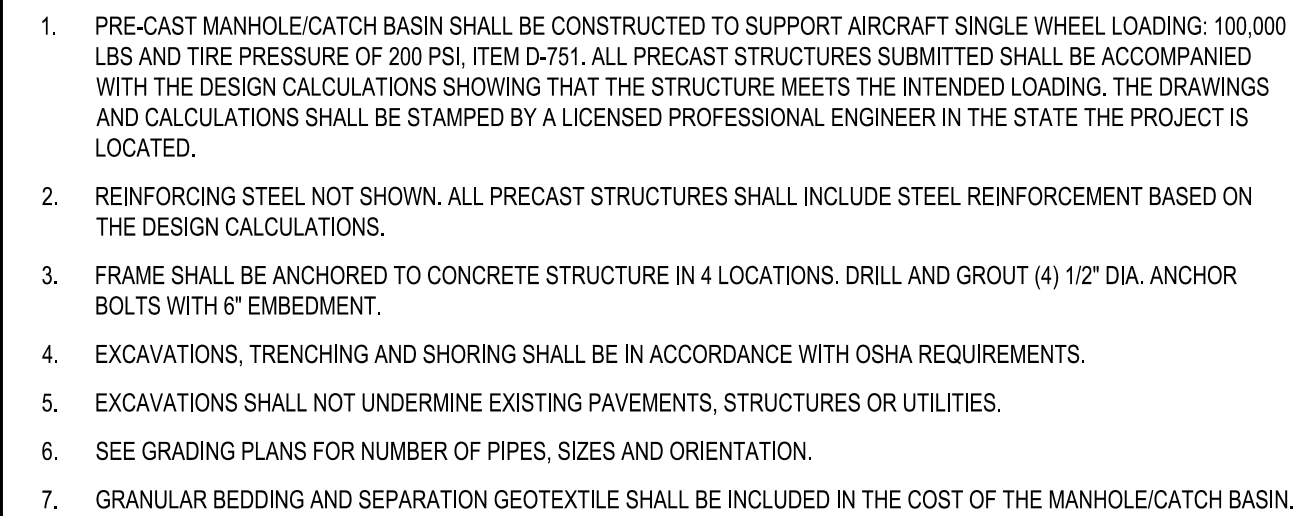
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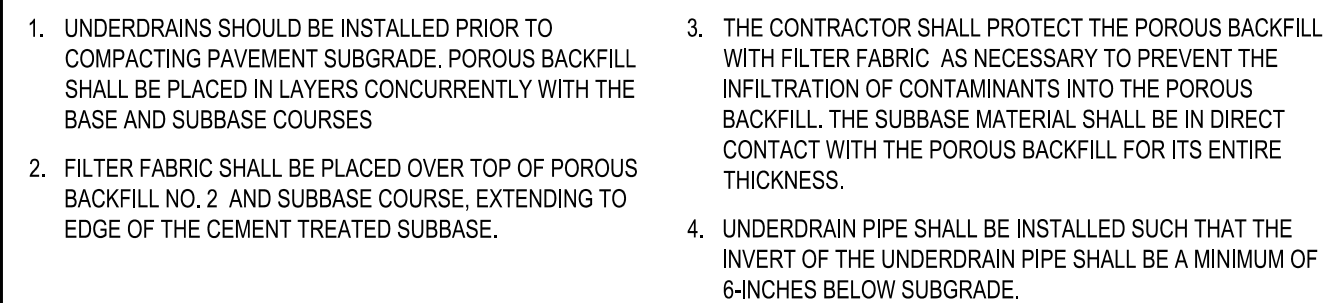
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1. UNDERDRAINERS SHOULD BE INSTALLED PRIOR TO COMPACTING PAVEMENT SUBGRADE. POROUS BACKFILL SHALL BE PLACED IN LAYERS CONCURRENTLY WITH THE CRUSHED AGGREGATE BASE COURSE.
2. FILTER FABRIC SHALL BE PLACED OVER TOP OF POROUS BACKFILL NO. 2 AND SUBBASE COURSE.
3. WITH FILTER FABRIC AS NECESSARY TO PREVENT THE INFILTRATION OF CONTAMINANTS INTO THE POROUS BACKFILL. THE SUBBASE MATERIAL SHALL BE IN DIRECT CONTACT WITH THE POROUS BACKFILL FOR ITS ENTIRE THICKNESS.
4. UNDERDRAIN PIPE SHALL BE INSTALLED SUCH THAT THE INVERT OF THE UNDERDRAIN PIPE SHALL BE A MINIMUM OF 6-INCHES BELOW SUBGRADE.

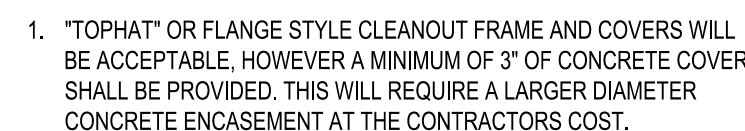


SCALE: NOT TO SCALE



SCALE: NOT TO SCALE

SCALE: NOT TO SCALE



SCALE: NOT TO SCALE

DRAINAGE DETAILS

C

C

C1

MAJOR ADJUSTMENT TO AN EXISTING STRUCTURE DETAIL

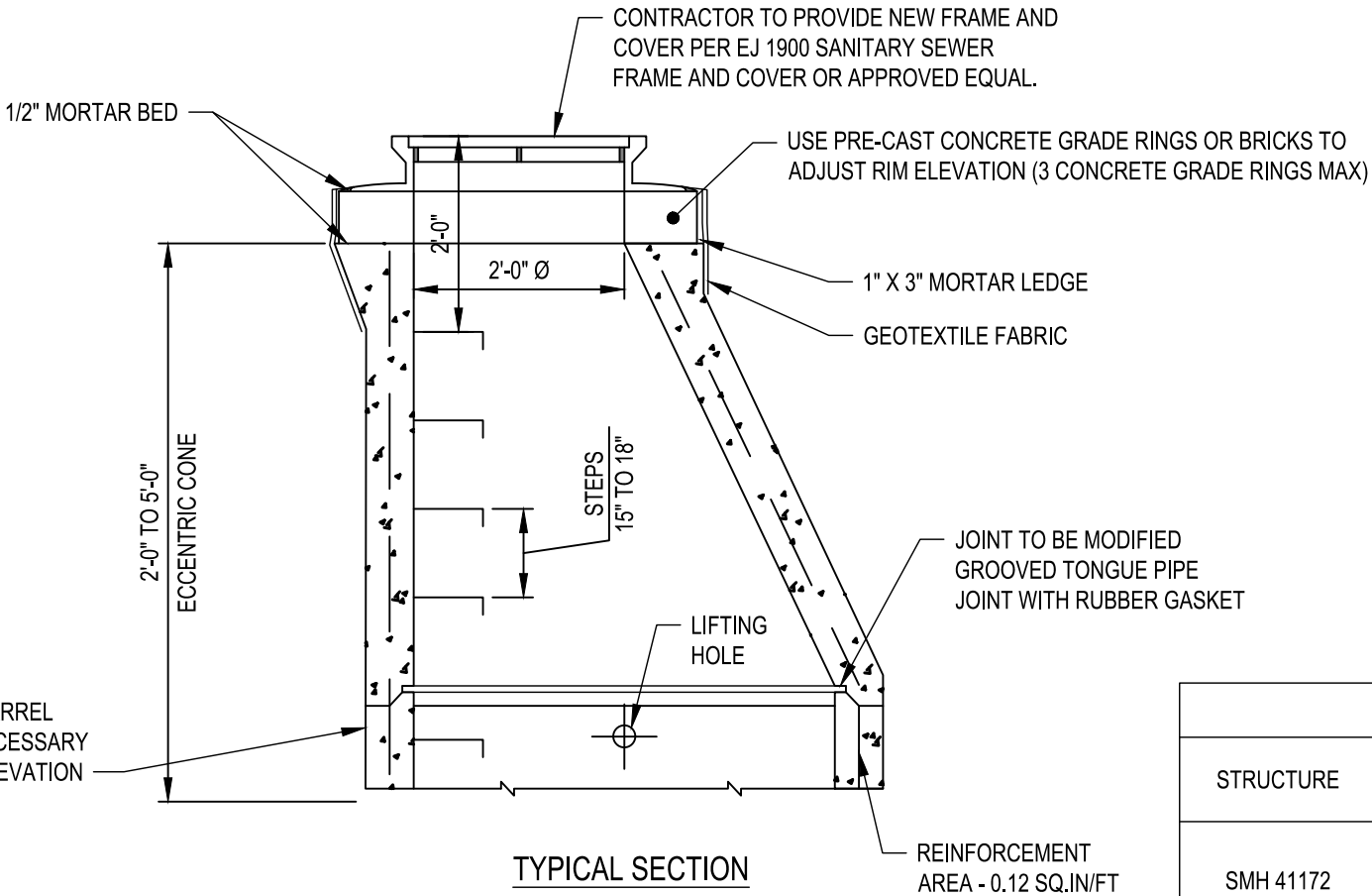
SCALE: NOT TO SCALE

B

B

A

A



NOTES:

1. PRECAST UNITS SHALL MEET THE REQUIREMENTS OF A.S.T.M. C478 THESE ARE THE MINIMUM REINFORCING REQUIREMENTS
2. M.H. STEPS SHALL HAVE 3\"/>

STRUCTURE TABLE				
STRUCTURE	PIPE INVERTS	COORDINATES	STRUCTURE SIZE	STRUCTURE MODIFICATION
SMH 41172	8" PVC W INV. = 763.59' 8" PVC E INV. = 763.64'	RIM = 780.99' NORTHING = 507,435.29' EASTING = 12,816,748.58'	48" DIA.	RAISE STRUCTURE RIM TO ELEV. 782.61' (+1.62')

BAR SIZE	F'c = 4000 PSI	
	CLASS A	CLASS B
#3	12	12
#4	12	15
#5	15	19
#6	17	22
#7	28	37
#8	36	47
#9	44	57
#10	54	70
#11	64	84

NOTES:

1. Ld = TENSION DEVELOPMENT LENGTH.
2. ALL SPLICE LENGTHS ARE IN INCHES.
3. FOR TOP BARS, MULTIPLY SPLICE LENGTHS BY 1.30. TOP BARS REQUIRE A MINIMUM OF 12\"/>

TENSION DEVELOPMENT AND SPLICE LENGTHS-
NORMAL WEIGHT CONCRETE (GRADE 60 REINFORCING BARS)

BAR SIZE	F'c = 4000 PSI	
	Lhb	0.7Lhb
#3	7	6
#4	9	7
#5	12	8
#6	14	10
#7	17	12
#8	19	13
#9	21	15
#10	24	17
#11	27	19

NOTES:

1. Ldh = DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (INCHES).
2. Ldh = Lhb UNLESS CONDITIONS OF ITEM 3 ARE SATISFIED.
3. Ldh = 0.7Lhb WHEN SIDE COVER NORMAL TO PLANE OF HOOK IS NOT LESS THAN 2 1/2 INCHES AND FOR 90 DEGREE HOOKS, COVER ON BAR EXTENSION BEYOND HOOK IS NOT LESS THAN 2 INCHES.
4. HOOKS SHALL NOT BE CONSIDERED EFFECTIVE FOR DEVELOPING BARS IN COMPRESSION.
5. VALUES SHOWN ARE FOR GRADE 60 BARS. MULTIPLY BY 1.25 FOR GRADE 75 BARS.
6. Ldh SHALL BE MULTIPLIED BY 1.2 FOR EPOXY-COATED HOOKED BARS.

TENSION DEVELOPMENT LENGTHS OF STANDARD HOOKS- NORMAL
WEIGHT CONCRETE (GRADE 60 REINFORCING BARS)

B3

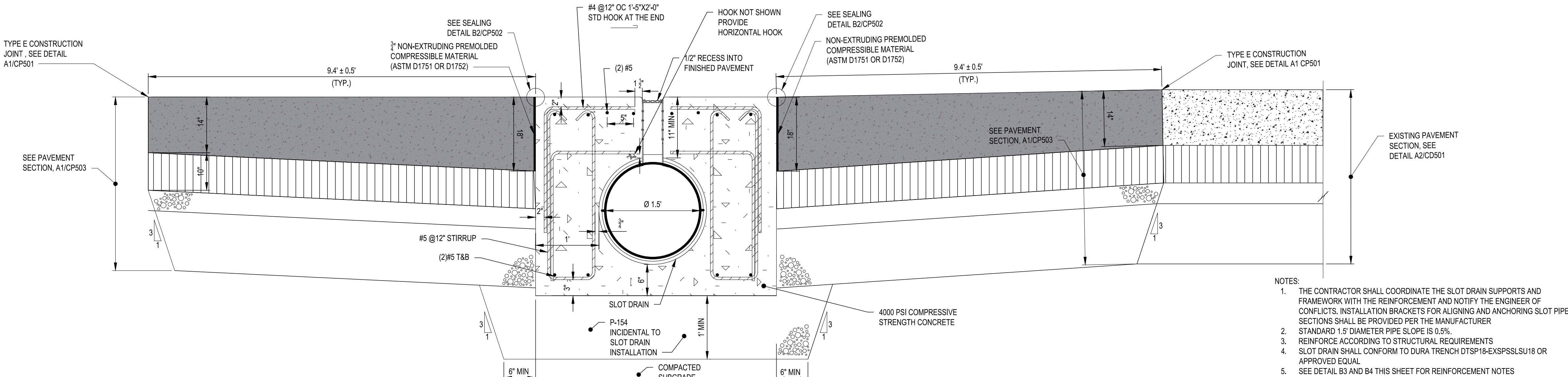
CONCRETE REINFORCEMENT TENSION DEVELOPMENT AND SPLICE LENGTHS

SCALE: NOT TO SCALE

B4

GENERAL REINFORCEMENT NOTES

SCALE: NOT TO SCALE



NOTES:

1. THE CONTRACTOR SHALL COORDINATE THE SLOT DRAIN SUPPORTS AND FRAMEWORK WITH THE REINFORCEMENT AND NOTIFY THE ENGINEER OF CONFLICTS. INSTALLATION BRACKETS FOR ALIGNING AND ANCHORING SLOT PIPE SECTIONS SHALL BE PROVIDED PER THE MANUFACTURER.
2. STANDARD 1.5\"/>
3. REINFORCE ACCORDING TO STRUCTURAL REQUIREMENTS.
4. SLOT DRAIN SHALL CONFORM TO DURA TRENCH DTSP18-EXSPSSLU18 OR APPROVED EQUAL.
5. SEE DETAIL B3 AND B4 THIS SHEET FOR REINFORCEMENT NOTES.

A1

SLOT DRAIN DETAIL

SCALE: 1\"/>



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TAXILANE L CONSTRUCTION
GERALD R. FORD INTERNATIONAL
AIRPORT GRAND RAPIDS, MI

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K19.025.001		
DATE: AUGUST 2025		
DRAWN BY: B. COOK		
DESIGNED BY: T.J. CORCORAN		
CHECKED BY: K.J. JOST		

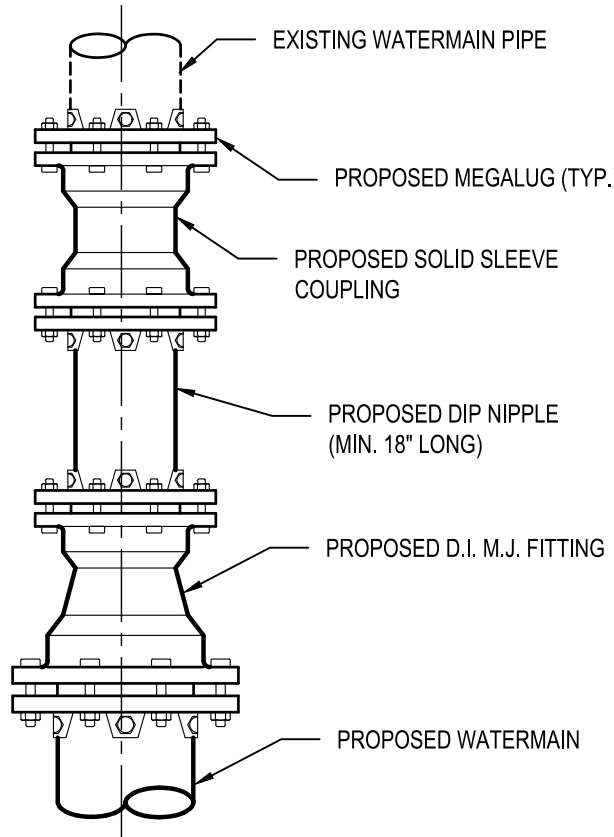
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.

DRAINAGE DETAILS

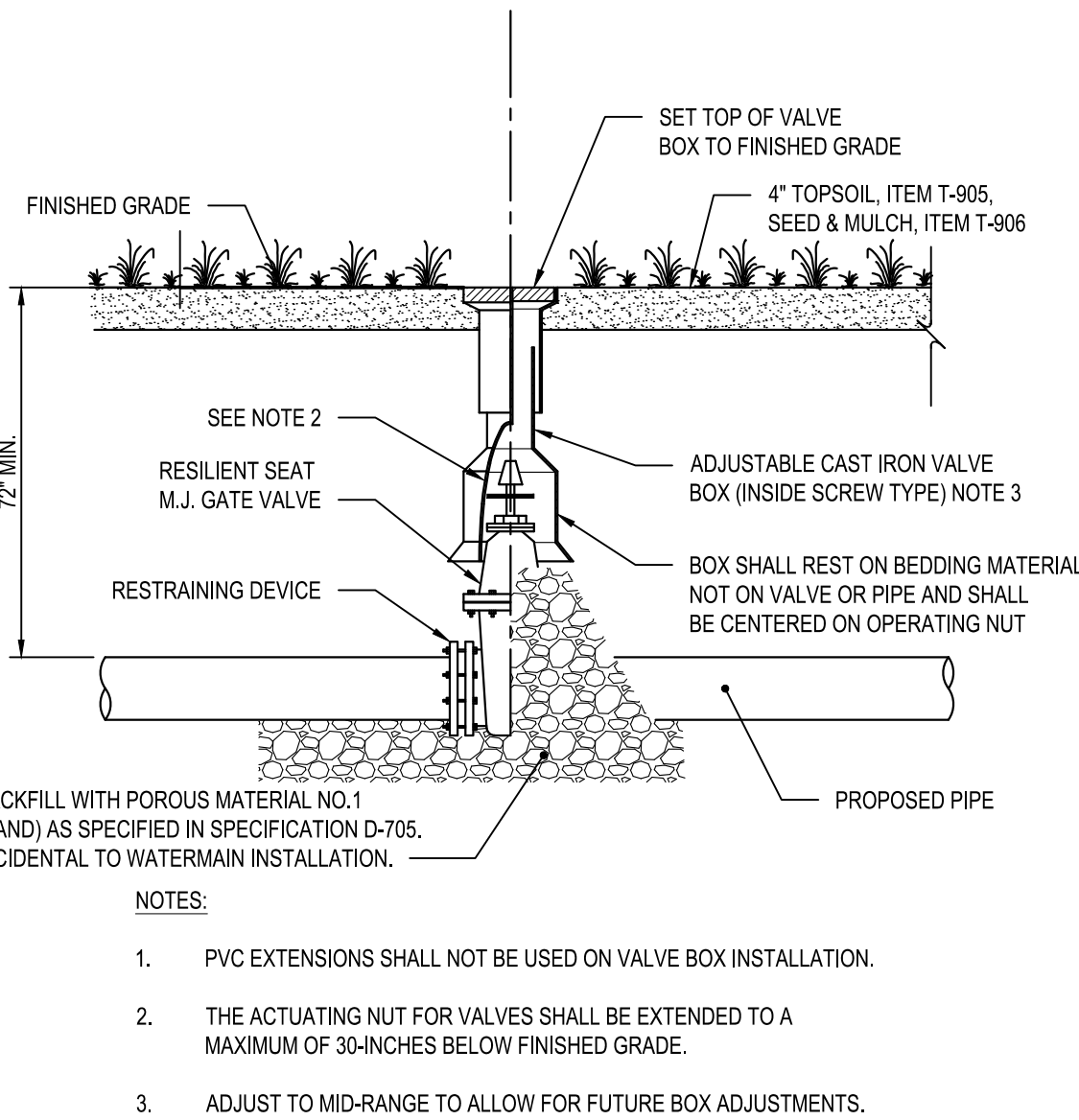
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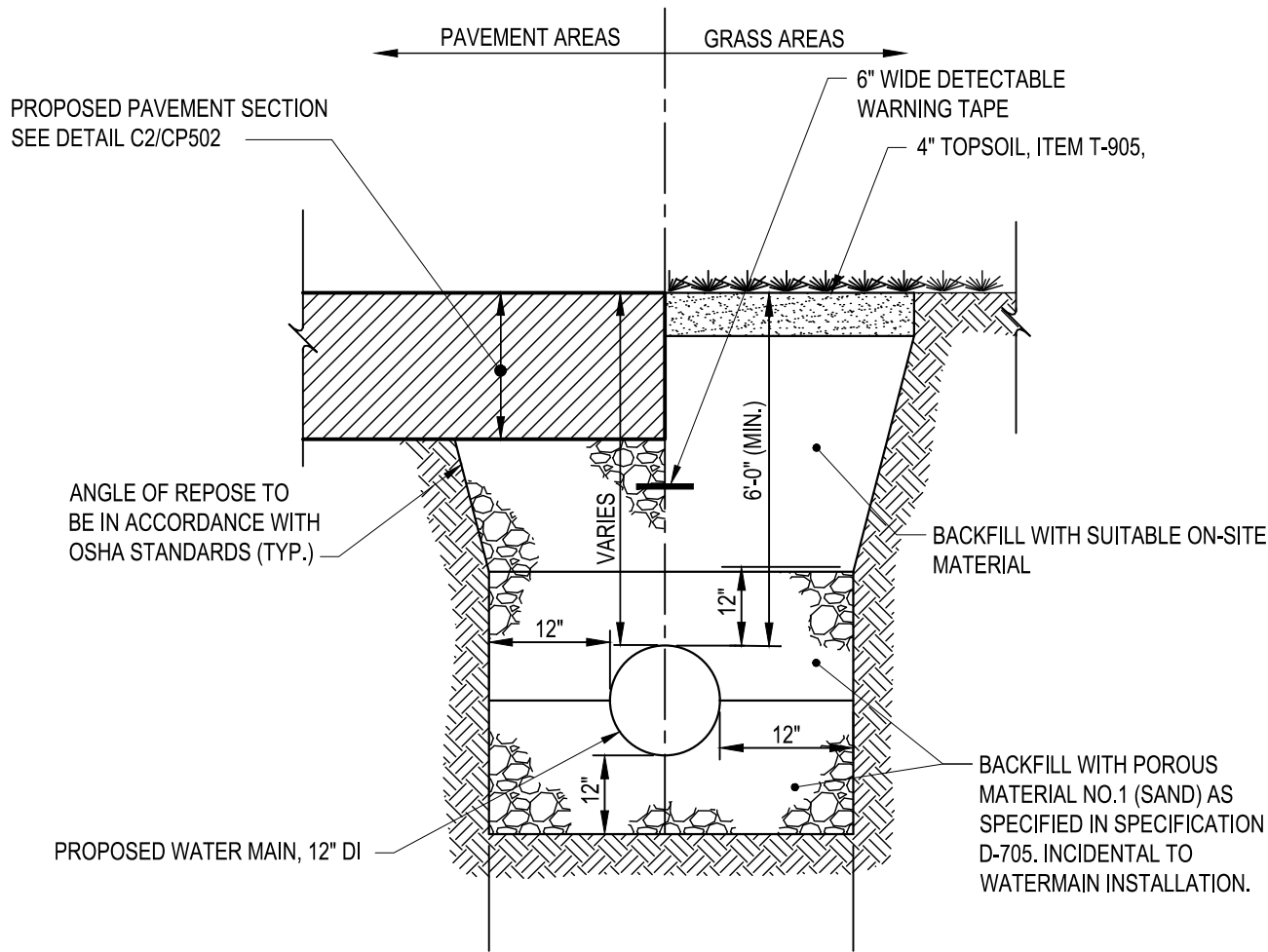
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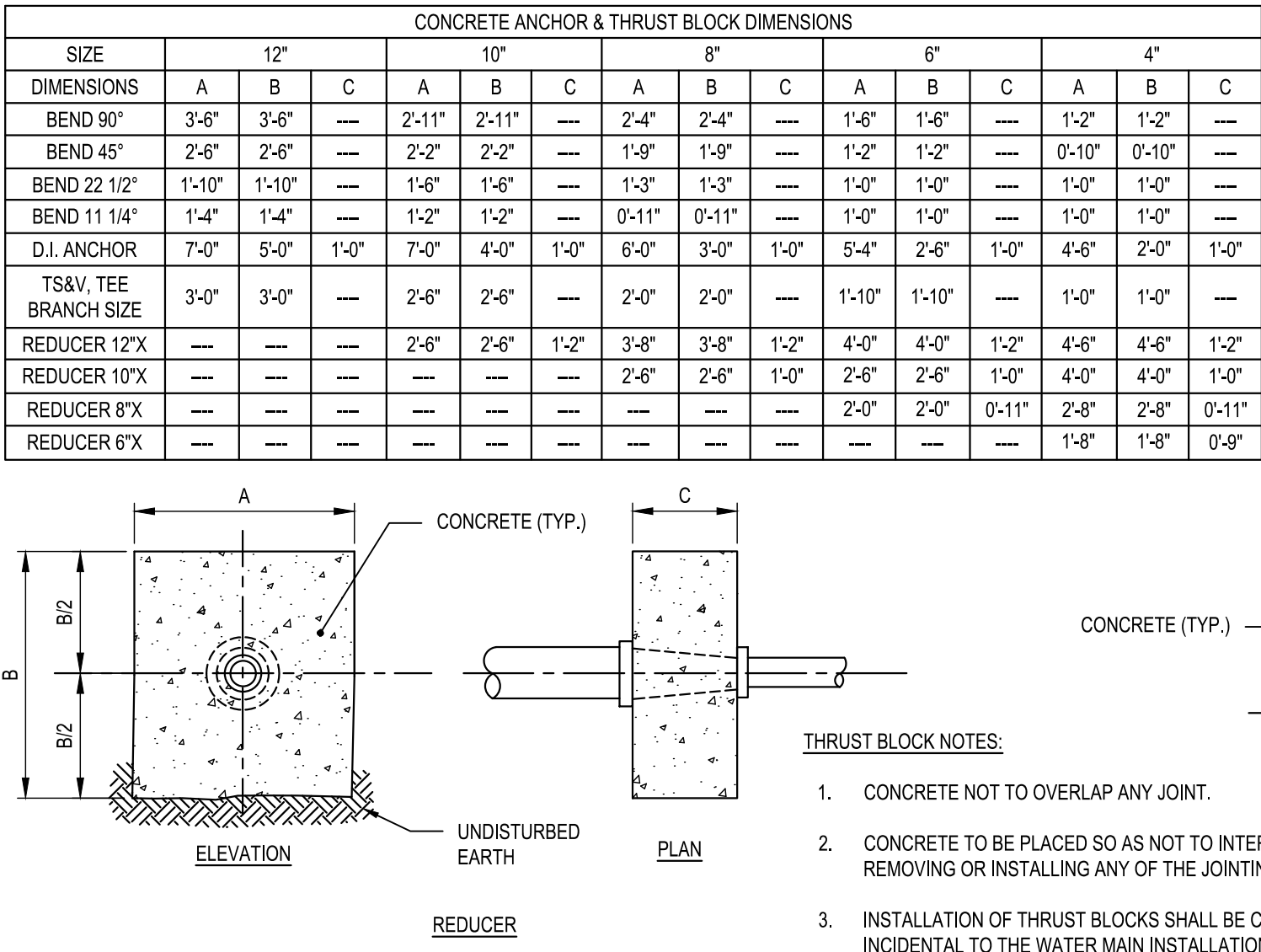
C1 CONNECTION TO EXISTING WATERMAIN DETAIL
SCALE: NOT TO SCALE



B1 GATE VALVE DETAIL
SCALE: NOT TO SCALE



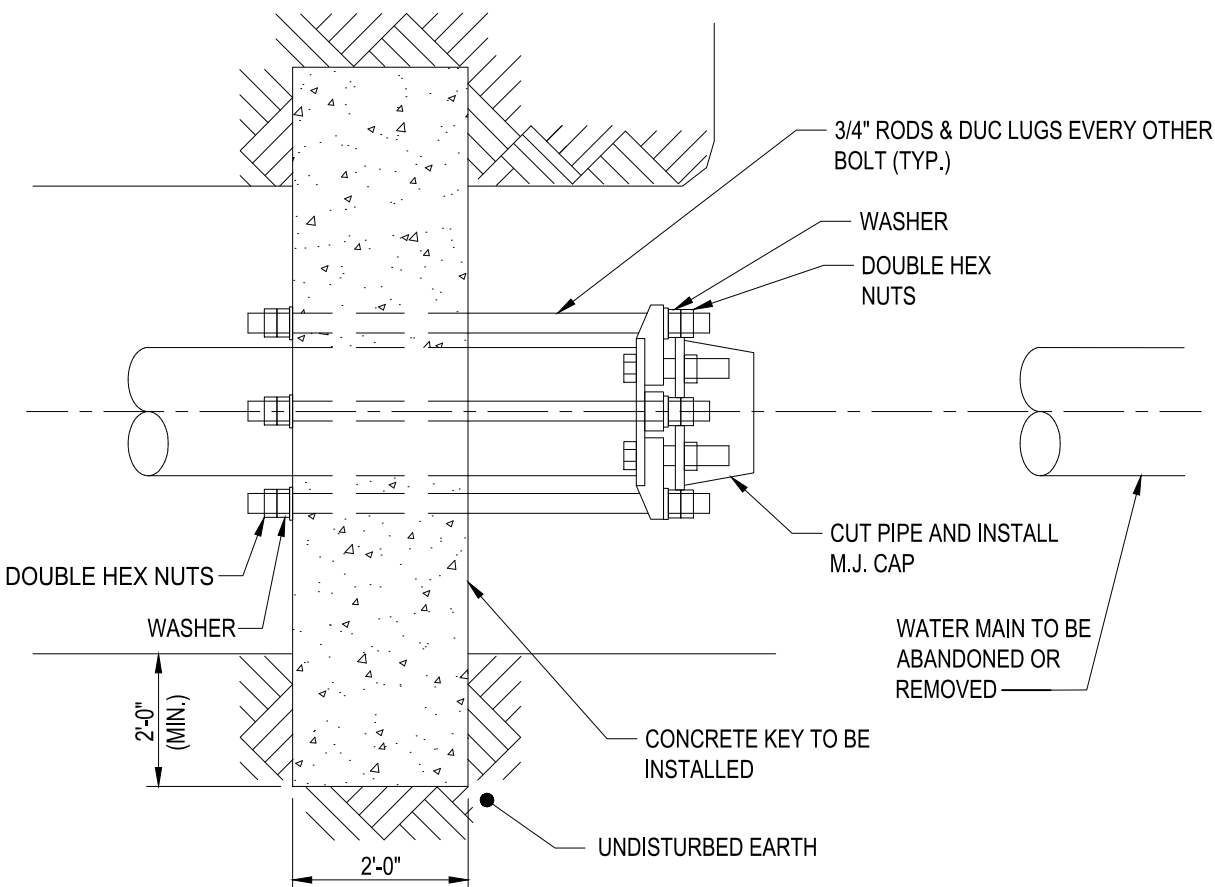
B2 WATER MAIN PIPE TRENCHING DETAIL
SCALE: NOT TO SCALE



B3 TYPICAL THRUST BLOCK DETAILS
SCALE: NOT TO SCALE

- ALL WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND GENERAL SPECIFICATION OF THE CITY OF GRAND RAPIDS OR OTHER AGENCIES HAVING JURISDICTION OF THE WATER SUPPLY SYSTEM AND CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE NATIONAL AND LOCAL CODES. THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY IF CONTRACT DOCUMENTS CONFLICT WITH ANY SUCH CODES.
- ALL WATER MAIN SHALL BE DUCTILE IRON, CEMENT LINED, CLASS 56, AND SHALL BE FULLY WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH THE LATEST SPECIFICATION OF AWWA C105. ALL FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT DUCTILE IRON WITH A MINIMUM PRESSURE RATING OF 350 PSI.
- WATER MAIN CONSTRUCTION SHALL BE COORDINATED WITH THE ENGINEER AND THE GERALD R. FORD INTERNATIONAL AIRPORT AUTHORITY. THE CONTRACTOR SHALL PROVIDE A WORK PLAN WITH SCHEDULE AND MILESTONES, CONSTRUCTION METHODS, AND A RISK ANALYSIS DETAILING POTENTIAL HAZARDS AND PROPOSED HAZARD MITIGATION PROCEDURES. THIS WORK PLAN SHALL BE PRESENTED TO THE ENGINEER AS SOON AS POSSIBLE WITH A MINIMUM OF 30 DAYS PRIOR TO COMMENCEMENT OF SUCH PROCEDURES. THE EXISTING WATER MAIN MAY ONLY BE SHUT DOWN BETWEEN THE HOURS OF 11PM - 5AM DURING CONNECTION TO PROPOSED WATER MAIN.
- RECORD DRAWINGS FOR EXISTING WATER MAIN ARE NOT AVAILABLE, THUS THE EXACT DEPTH, LOCATION AND TYPE OF EXISTING WATER MAIN IS UNKNOWN.
- OPERATION OF EXISTING WATER MAIN IS TO BE MAINTAINED UNTIL REPLACEMENT LINE IS PLACED INTO SERVICE. EVERY EFFORT SHALL BE MADE TO PROTECT IN PLACE EXISTING WATER MAIN. IF WATER SERVICE IS COMPROMISED DUE TO WATER MAIN BREAKAGE WITHIN THE CONSTRUCTION AREA, THE CONTRACTOR SHALL IMMEDIATELY REPAIR THE DAMAGE AND IS RESPONSIBLE FOR THE IMPLICATIONS OF ANY NECESSARY SHUT DOWN. NO SEPARATE PAYMENT WILL BE MADE FOR EMERGENCY REPAIR WORK. EMERGENCY REPAIR WORK IS TO COMPLY WITH ANY APPLICABLE NATIONAL AND LOCAL CODES.
- PROPOSED WATER MAIN IS TO BE INSTALLED AT A MINIMUM DEPTH OF 6 FEET UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WATER MAIN SHALL BE INSTALLED WITH MINIMUM 18 INCHES OF VERTICAL SEPARATION FROM ANY EXISTING OR PROPOSED UTILITY. WATER MAINS SHALL CROSS SEWER MAINS AT HIGHER ELEVATION THAN THE SEWER MAIN UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CROSSINGS SHALL BE ARRANGED SO THAT WATER MAIN JOINTS ARE AS FAR AS POSSIBLE FROM SEWER MAIN JOINTS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE NATIONAL AND LOCAL CODES.
- CONNECTION TO EXISTING WATER MAIN SHALL BE MADE ONLY AFTER HYDROSTATIC AND BACTERIOLOGICAL TESTS HAVE BEEN SUCCESSFULLY COMPLETED AND REVIEWED BY THE ENGINEER AND THE GERALD R. FORD INTERNATIONAL AIRPORT AUTHORITY. TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL SURFACE STRUCTURES, SUCH AS HYDRANTS, VALVE PITS AND CURB BOXES SHALL BE SET TO GRADE AS INDICATED ON THE PLANS UNLESS OTHERWISE DIRECTED BY ENGINEER.
- ALL FITTINGS SHALL CONFORM TO AWWA/ANSI C110/A21.10, ANSI/WWA C111/A21.11, AND ANSI/WWA C153/A21.53.
- ALL GATE VALVES MUST MEET THE REQUIREMENTS OF AWWA C509
- ALL VALVE BOXES SHALL MEET THE REQUIREMENTS OF ASTM A48/A48M FOR CLASS 30B AND AASHTO M 306. EACH BOX MUST BE A SCREW TYPE AND CONSIST OF FIVE SECTIONS: BASE, CENTER, EXTENSION, TOP, AND COVER. THE COVER MUST BE MARKED "WATER".

A1 WATER MAIN NOTES
SCALE: NOT TO SCALE



A3 CUT AND CAP DETAIL
SCALE: NOT TO SCALE



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AIRPORT GRAND RAPIDS, MI

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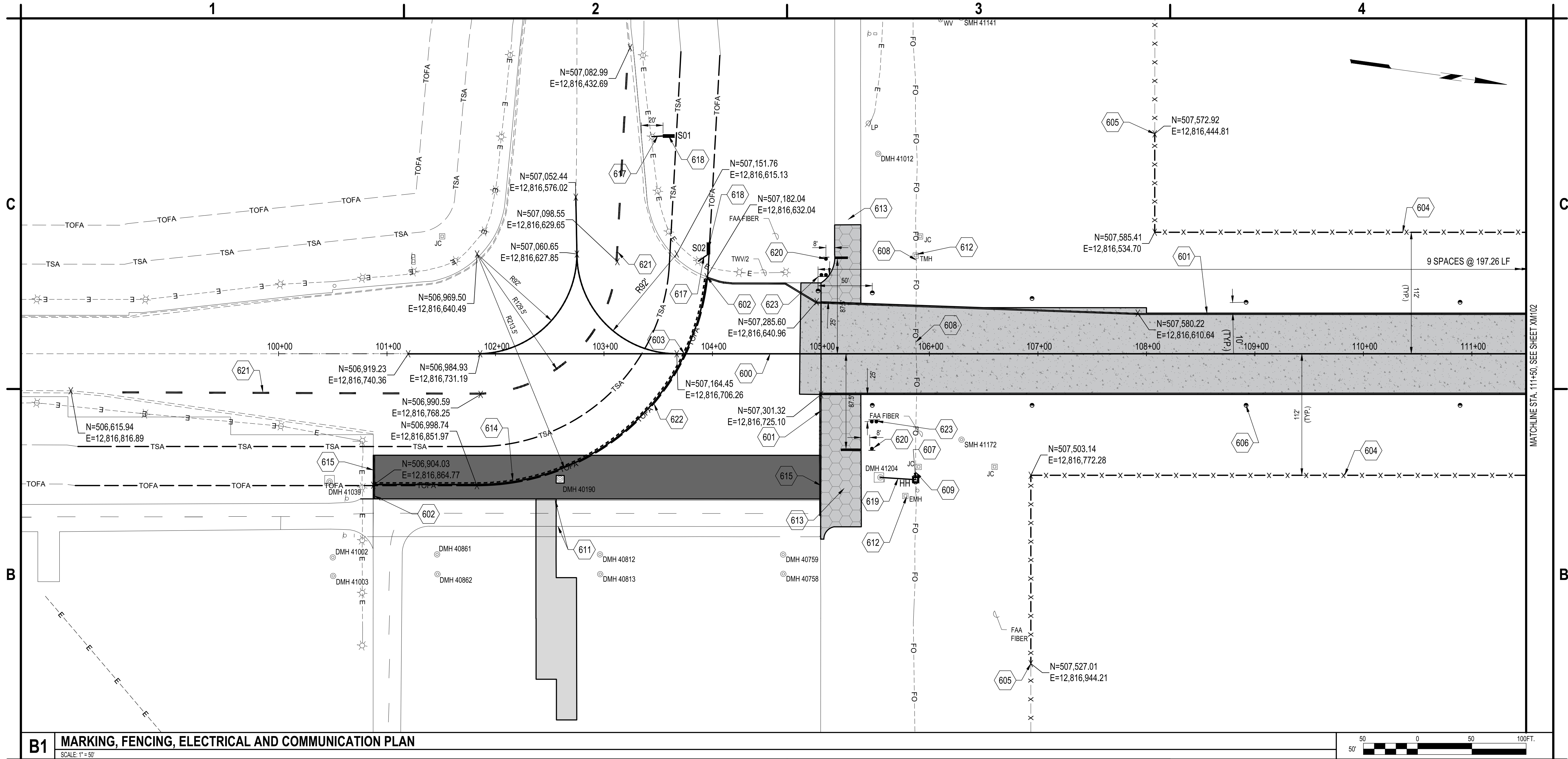
WATER MAIN DETAILS

CU503

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B1 MARKING, FENCING, ELECTRICAL AND COMMUNICATION PLAN
SCALE: 1" = 50'

- | | |
|---|--|
| <p>600. TAXIWAY CENTERLINE MARKING, 12" WIDE, YELLOW WITH 6" WIDE BLACK BORDER ITEM P-620.</p> <p>601. CONTINUOUS TAXIWAY EDGE MARKING, YELLOW WITH 6" WIDE BLACK BORDER, ITEM P-620. SEE DETAIL A4/XM501.</p> <p>602. CONTINUOUS TAXIWAY EDGE MARKING INTERRUPTED BY NON-MOVEMENT AREA BOUNDARY MARKING, SEE DETAIL A1/XM501.</p> <p>603. CENTERLINE MARKING INTERRUPTED BY NON MOVEMENT AREA BOUNDARY MARKING, SEE DETAIL A1/XM501.</p> <p>604. 10-FOOT CHAIN LINK FENCE WITH BARBED WIRE, ITEM F-162. SEE DETAIL A2/XM501.</p> <p>605. PROPOSED FENCE TO CONNECT TO EXISTING FENCE, INCIDENTAL TO ITEM F-162.</p> <p>606. RETRORREFLECTIVE MARKER, ITEM L-125, SEE DETAIL B3/XM501 (TYP.).</p> <p>607. ELECTRICAL HANDHOLE, ITEM L-115. SEE DETAIL B2/XM501.</p> <p>608. EXISTING FIBER OPTIC CONDUIT TO BE LOWERED TO A DEPTH OF 4 FEET BELOW PROPOSED GRADE. PROVIDE SPLIT CONDUIT AS NECESSARY TO CONNECT EXISTING CONDUIT TO PROPOSED OR EXISTING HAND HOLE. NO SPLICES SHALL BE INTRODUCED FOR THE LOWERING OF THE FIBER OPTIC CABLE, ITEM L-110. SEE FIBER OPTIC NOTES, A3 THIS SHEET</p> <p>609. CONNECT EXISTING CONDUIT TO PROPOSED HAND HOLE, INCIDENTAL TO ITEM L-115 (BASE BID).</p> <p>611. ALL DISTURBED PERIMETER ROAD MARKINGS SHALL BE REPLACED IN KIND. ALL PERIMETER ROAD MARKINGS SHALL BE 6 INCHES, WHITE WITH 6 INCH BLACK BORDER, INCIDENTAL TO OTHER ITEMS OF WORK.</p> <p>612. EXISTING FIBER OPTIC MANHOLE, PROTECT IN PLACE.</p> <p>613. ROADWAY STOP BAR, 2' WIDE WHITE, ITEM P-620.</p> <p>614. NON-MOVEMENT AREA BOUNDARY MARKING TO BE REPLACED IN KIND, ITEM P-620. SEE DETAIL A1/XM501.</p> | <p>615. CONTINUOUS TAXIWAY EDGE MARKING, YELLOW WITH 6" WIDE BLACK BORDER, ITEM P-620. SEE DETAIL A4/XM501.</p> <p>617. INSTALL PVC CONDUIT, INCIDENTAL TO THE SIGN INSTALLATION. SEE DETAIL C3/XM501.</p> <p>618. TAXIWAY GUIDANCE SIGN, ITEM L-125. SEE DETAIL C1/XM501. CONTRACTOR SHALL PROVIDE NEW CABLE AND CONNECTORS FROM THE ADJACENT TAXIWAY EDGE LIGHT TO THE PROPOSED SIGN. CABLE AND CONNECTORS SHALL BE INCLUDED WITH THE SIGN INSTALLATION.</p> <p>619. 2-INCH DIA. PVC CONDUIT FOR DRAINAGE, INCIDENTAL TO HANDHOLE INSTALLATION, SEE DETAIL B2/XM501</p> <p>620. ACCESS ROAD STOP SIGN ASSEMBLY, 24" MUTCD R1-1 ON BREAKAWAY SIGN POST. MAX HEIGHT SHALL BE 48 INCHES AS MESURED FROM THE BOTTOM OF THE SIGN, ITEM L-125 STAKE MOUNTED GUIDJANCE SIGN.</p> <p>621. DASHED TAXIWAY EDGE MARKING, YELLOW WITH 6" WIDE BLACK BORDER, ITEM P-620. SEE DETAIL C4/XM501.</p> <p>622. NON-MOVEMENT AREA BOUNDARY MARKING, ITEM P-620. SEE DETAIL A1/XM501.</p> <p>623. ACCESS ROAD NO ENTRY SIGN ASSEMBLY, SEE DETAIL A3/XM501, ITEM L-125 STAKE MOUNTED GUIDJANCE SIGN.</p> |
|---|--|

A1 KEYED NOTES
SCALE: NOT TO SCALE

- NOTES:
1. THE CONTRACTOR SHALL LOWER THE EXISTING FIBER OPTIC CONDUIT TO A DEPTH OF 4 FEET BELOW THE PROPOSED GRADE. THE CONDUIT CONSISTS OF 3" HDPE WITH THREE 1" INNER DUCTS. THE FOLLOWING PROCEDURES MUST BE FOLLOWED IN EXECUTING THIS WORK.
 - 1.1. CAREFULLY EXPOSE THE EXISTING HDPE CONDUIT BETWEEN THE EXISTING FIBER OPTIC MANHOLES. CONDUIT IS LOCATED 12-24 INCHES BELOW GRADE, AS INDICATED BY RECORDS.
 - 1.2. EXCAVATE THE PROPOSED HANDHOLE AT THE DESIGNATED LOCATION.
 - 1.3. CAREFULLY CUT THE 3" CONDUIT WITHOUT DAMAGING THE FIBER OPTIC CABLES.
 - 1.4. TRENCH AT THE REQUIRED DEPTH BETWEEN HANDHOLES, RUNNING PARALLEL TO THE EXPOSED HDPE CONDUIT.
 - 1.5. RELOCATE THE EXISTING CONDUIT INTO THE NEWLY EXCAVATED TRENCH. THE TRENCHES SHALL BE BACKFILLED AND COMPACTED PER L-110.
 - 1.6. CONNECT THE EXISTING CONDUIT TO THE HANDHOLES USING SPLIT DUCT FOR THE 3-1" INNERDUCT AND THE 3 INCH HDPE CONDUIT AS NECESSARY.

A3 FIBER OPTIC MODIFICATION NOTES
SCALE: NOT TO SCALE



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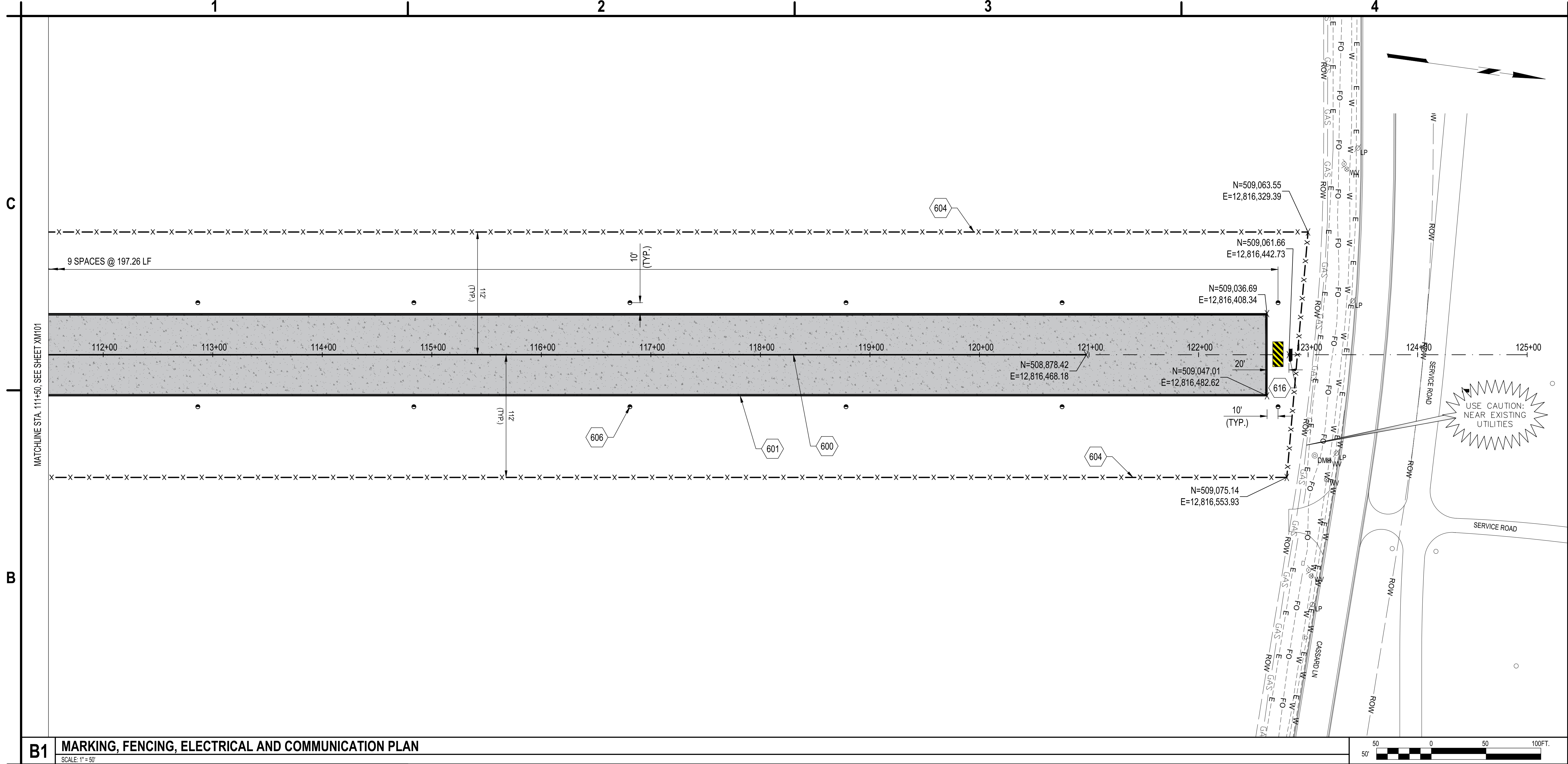
MARKING, FENCING,
ELECTRICAL AND
COMMUNICATION
PLAN

XM101

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B1 MARKING, FENCING, ELECTRICAL AND COMMUNICATION PLAN
SCALE: 1" = 50'

600. TAXIWAY CENTERLINE MARKING, 12" WIDE, YELLOW WITH 6" WIDE BLACK BORDER ITEM P-620.
601. CONTINUOUS TAXIWAY EDGE MARKING, YELLOW WITH 6" WIDE BLACK BORDER, ITEM P-620. SEE DETAIL A4/XM501.
604. 10-FOOT CHAIN LINK FENCE WITH BARBED WIRE, ITEM F-162. SEE DETAIL A2/XM501.
606. RETROREFLECTIVE MARKER, ITEM L-125. SEE DETAIL B3/XM501 (TYP.).
616. UNLIGHTED TAXIWAY ENDING MARKER, ITEM L-125, SEE DETAIL B1/XM501

A1 KEYED NOTES
SCALE: NOT TO SCALE



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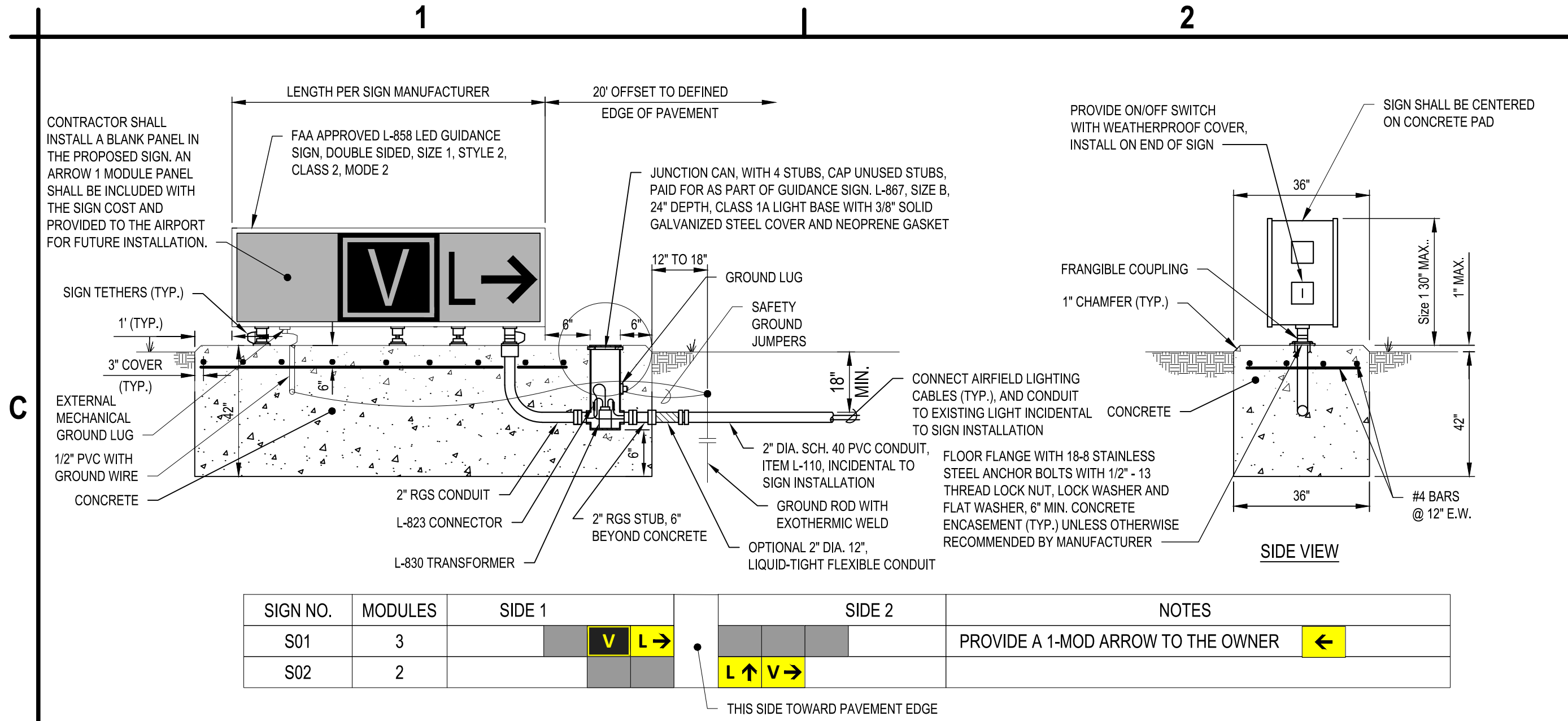
MARKING, FENCING,
ELECTRICAL AND
COMMUNICATION
PLAN

XM102

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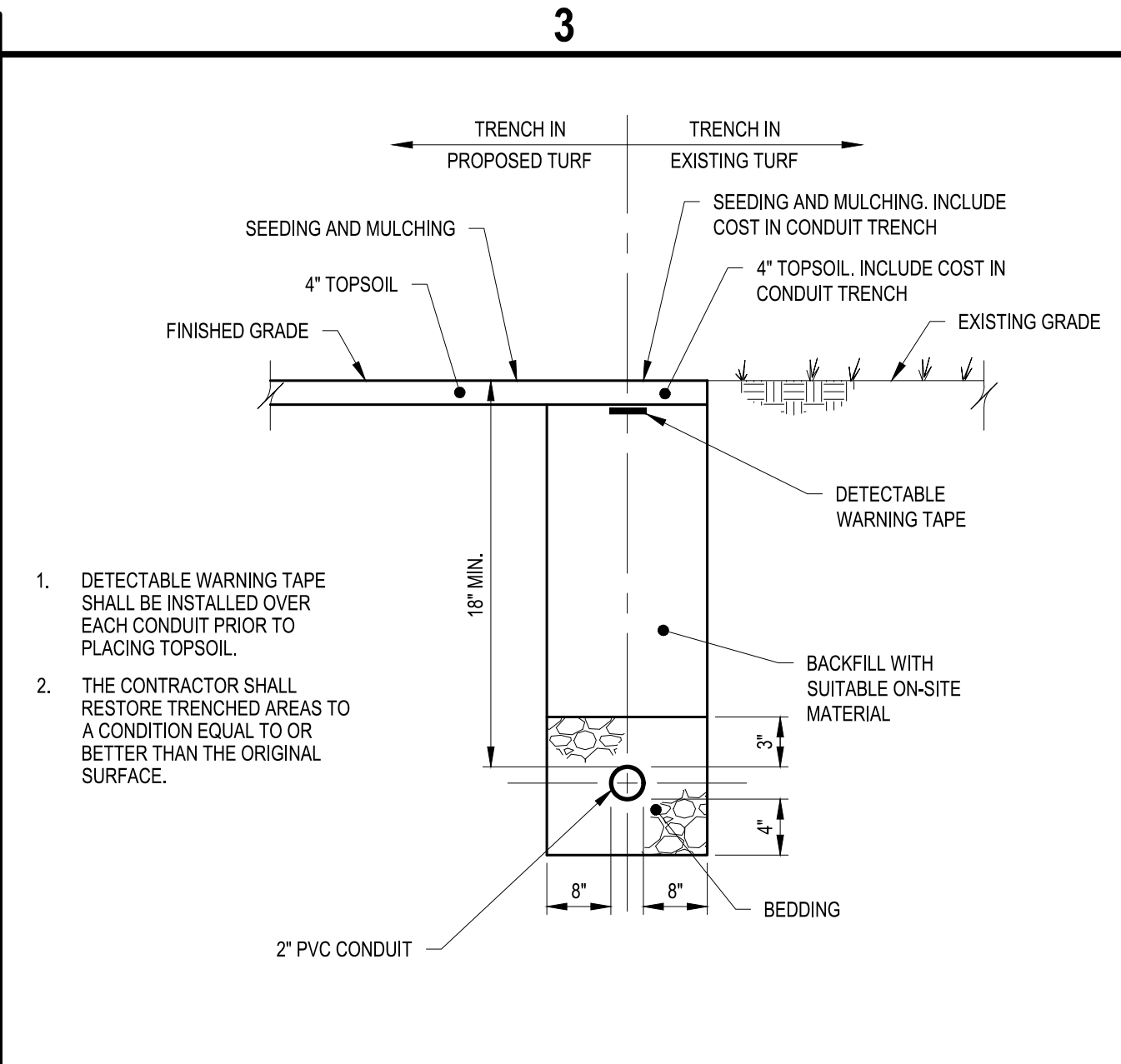
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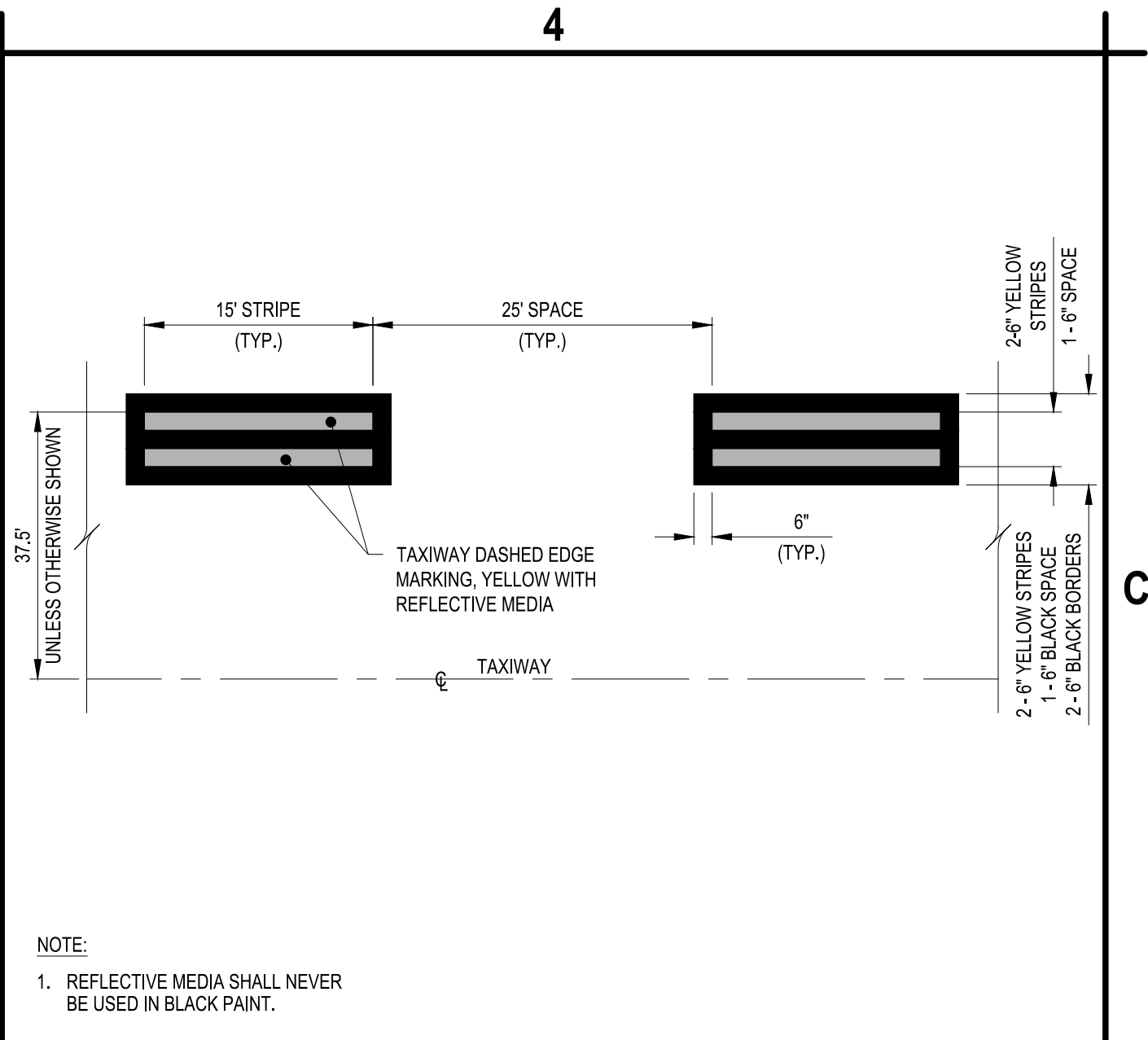
C1 GUIDANCE SIGN DETAIL

SCALE: NOT TO SCALE



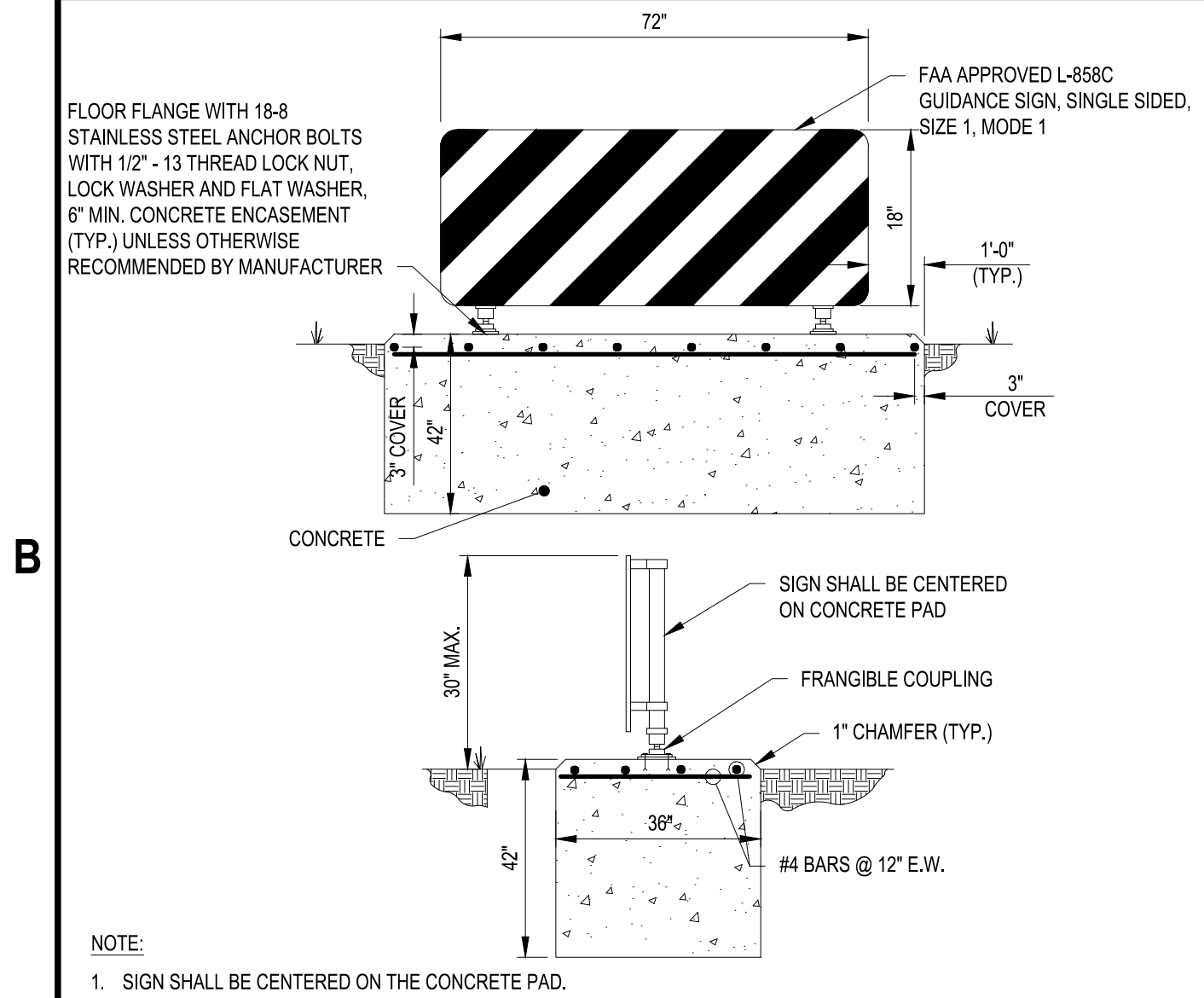
C3 CONDUIT TRENCHING DETAIL (IN TURF)

SCALE: NOT TO SCALE



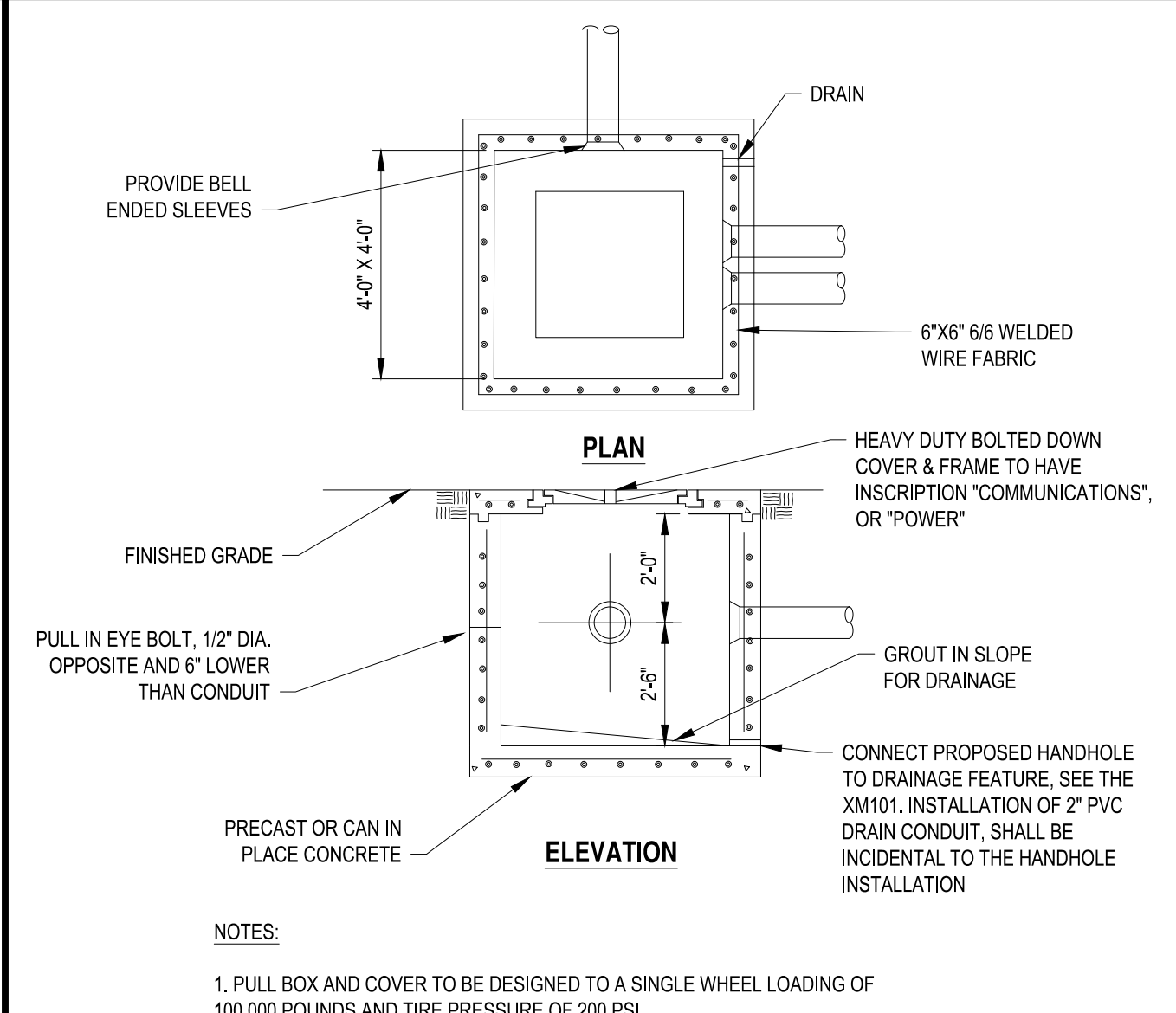
C4 DASHED TAXIWAY EDGE MARKING DETAIL

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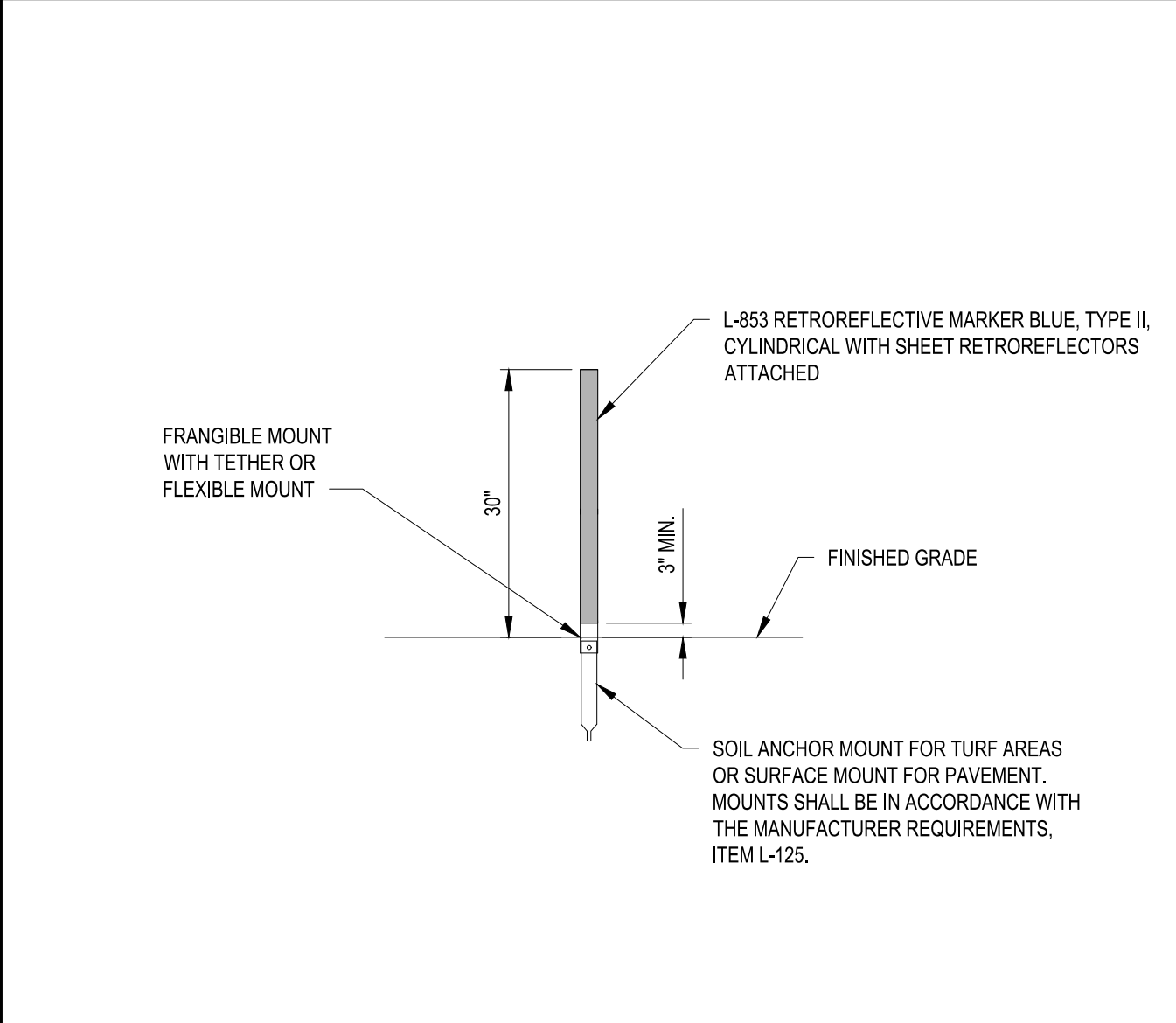
B1 TAXIWAY ENDING MARKER SIGN DETAIL (UNLIGHTED)

SCALE: NOT TO SCALE



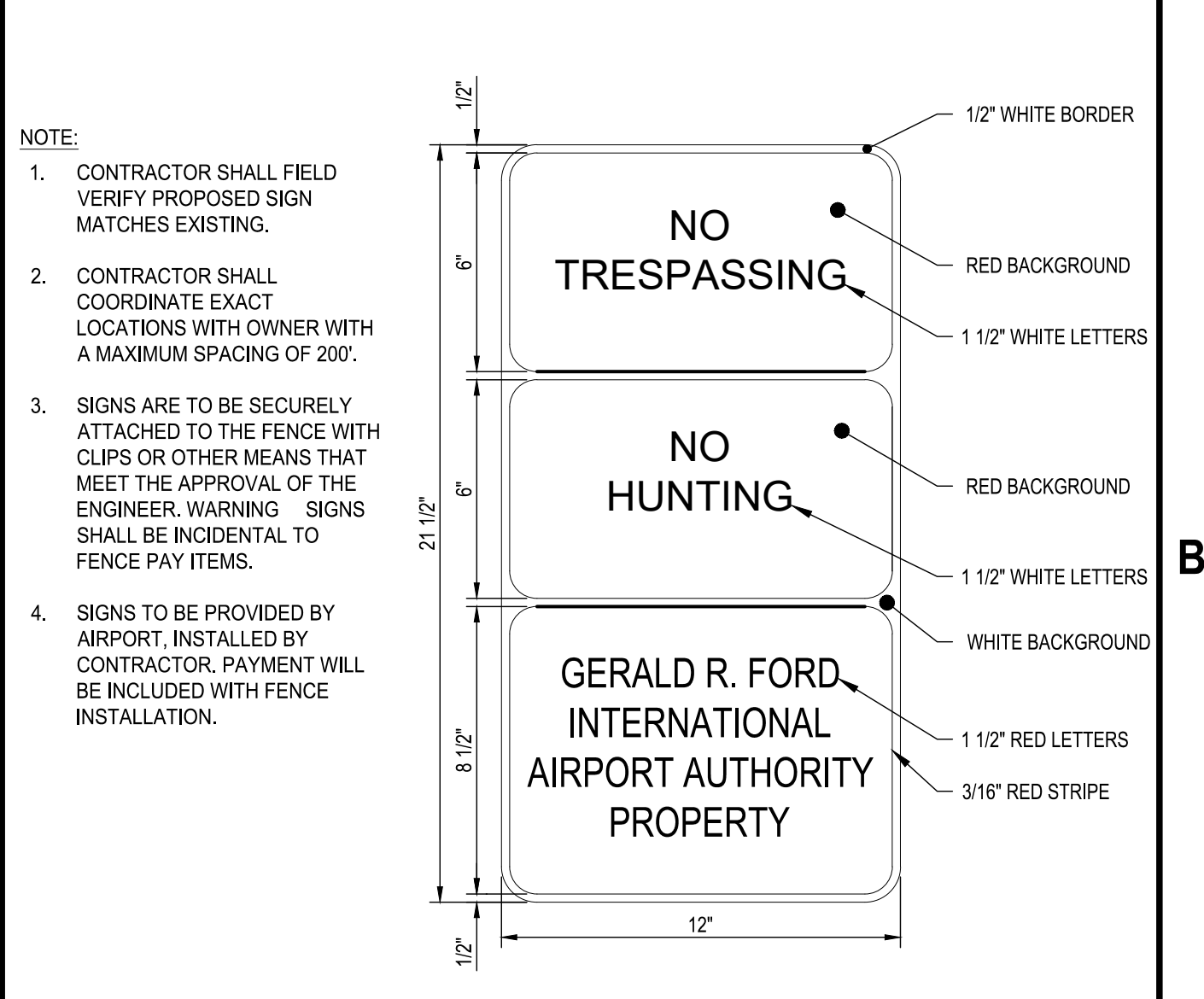
B2 ELECTRICAL HAND HOLE DETAIL

SCALE: NOT TO SCALE



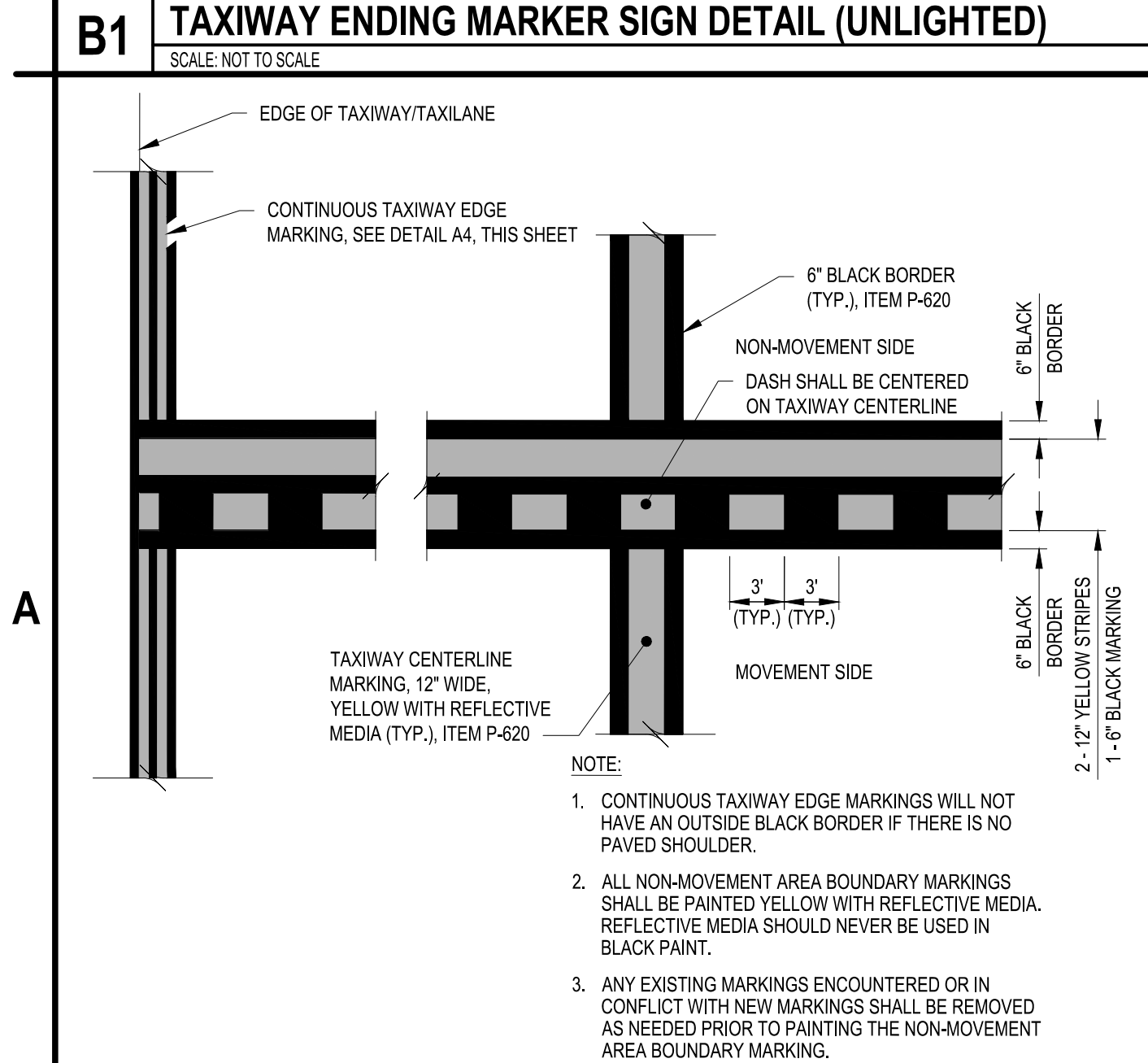
B3 RETROREFLECTIVE MARKER DETAIL

SCALE: NOT TO SCALE



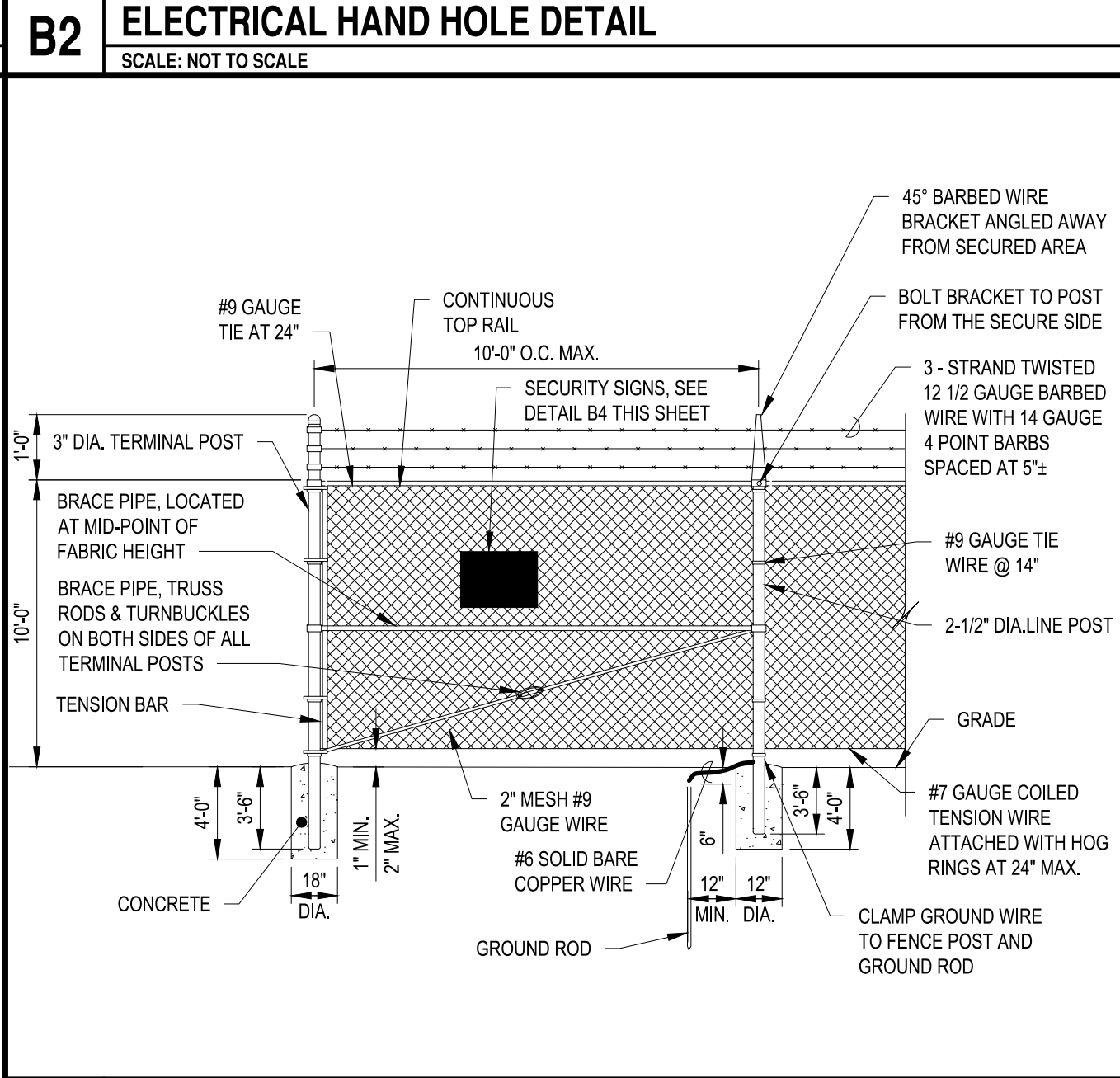
B4 WARNING SIGN DETAIL

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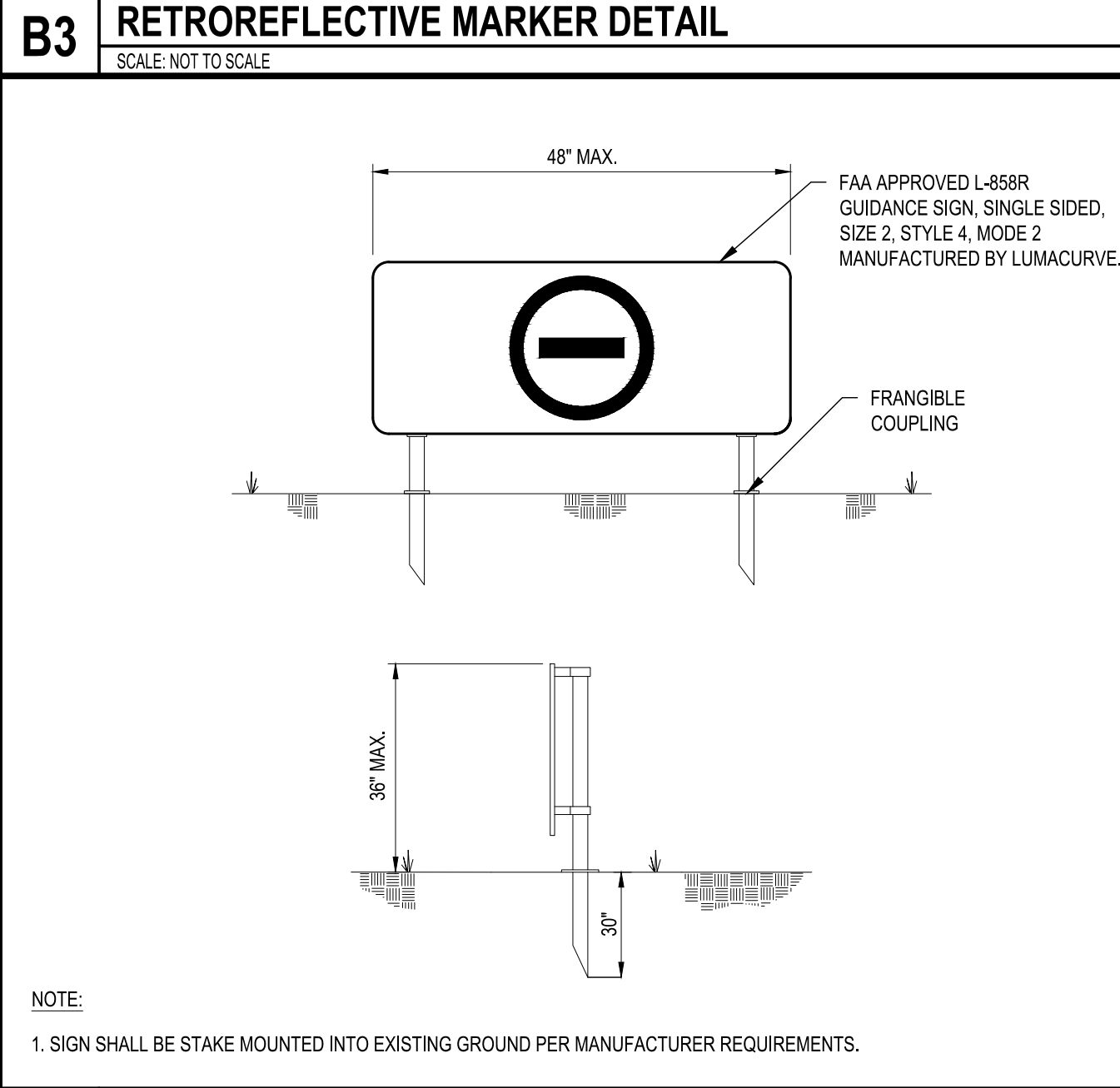
A1 NON-MOVEMENT AREA BOUNDARY MARKING DETAIL

NOT TO SCALE



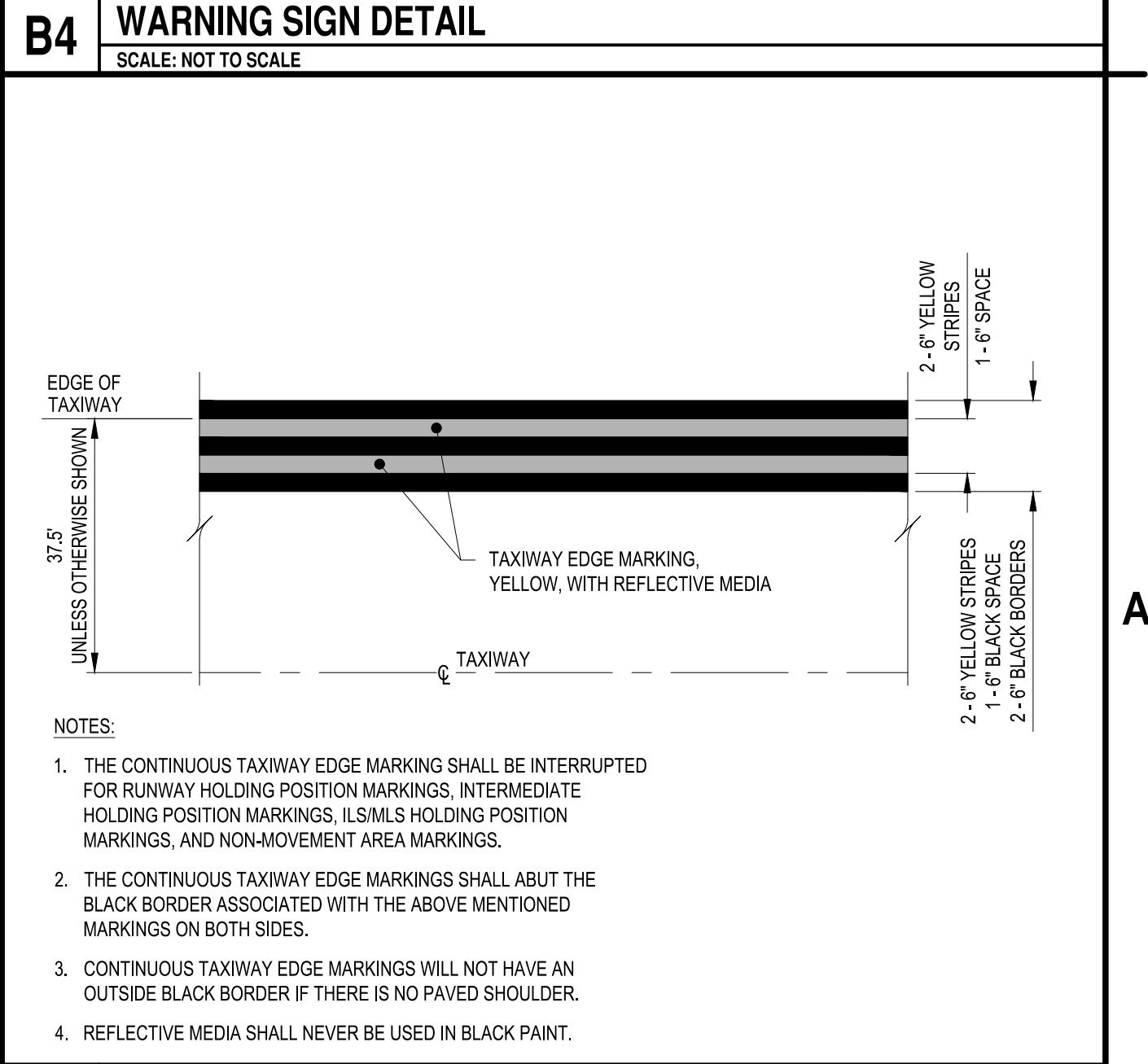
A2 CHAIN-LINK FENCE DETAIL

SCALE: NOT TO SCALE



A3 NO ENTRY SIGN ASSEMBLY DETAIL

SCALE: NOT TO SCALE



A4 CONTINUOUS TAXIWAY EDGE MARKING DETAIL

SCALE: NOT TO SCALE



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MARKING, FENCING, ELECTRICAL AND COMMUNICATION DETAILS

XM501

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