

NOTES:

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE CONTRACT DOCUMENTS AND DETAILED SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE LATEST REVISIONS OF THE CITY OF ANN ARBOR PUBLIC SERVICE DEPARTMENT STANDARD SPECIFICATIONS AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION 2020 EDITION AS APPLICABLE.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE DESIGNED IN ACCORDANCE WITH THE 2018 AASHTO "POLICY ON THE GEOMETRIC DESIGN OF HIGHWAYS AND STREETS", THE 2012 AASHTO "GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF BICYCLE FACILITIES", AND THE 2011 "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

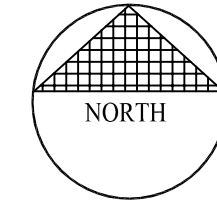
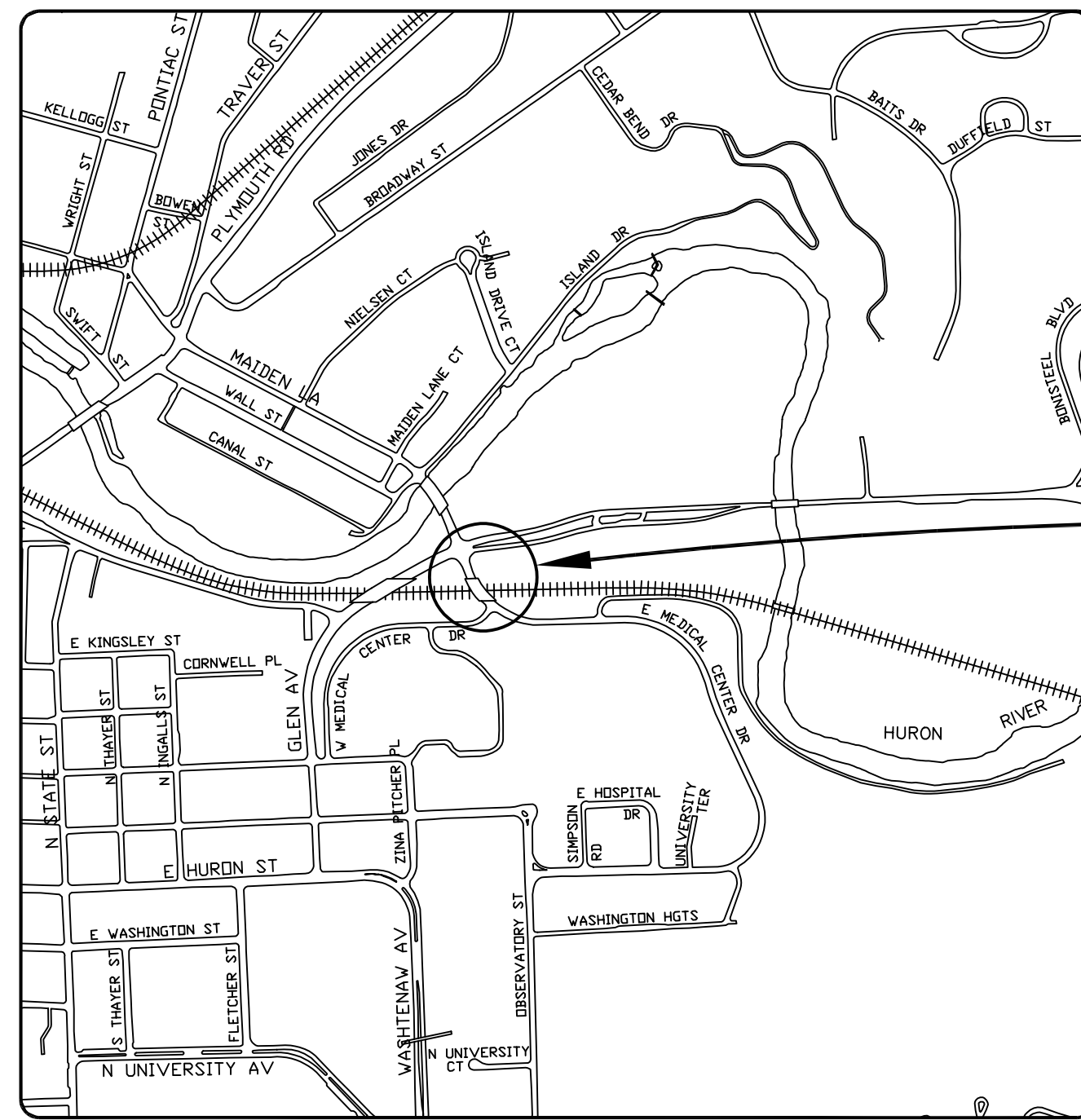
CITY OF ANN ARBOR ENGINEERING

IN COOPERATION WITH THE
UNIVERSITY OF MICHIGAN

E. MEDICAL CENTER DRIVE BRIDGE REHABILITATION AND WIDENING

TRAFFIC DATA	
PRESENT ADT	18,500 (2021)
FUTURE ADT	20,000 (2041)
% COMMERCIAL	2.0%
POSTED SPEED	25 MPH
DESIGN SPEED	30 MPH

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION AT NO COST TO CONTRACTOR.	
PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT	CITY OF ANN ARBOR ENGINEERING UNIT
"NO PARKING" SIGNS PERMIT	CITY OF ANN ARBOR ENGINEERING UNIT
GRADING/ SOIL EROSION & SEDIMENTATION CONTROL PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT
ACCESS AGREEMENT	UNIVERSITY OF MICHIGAN



STR 11065
EAST MEDICAL CENTER DRIVE OVER NORFOLK SOUTHERN RAILROAD

CITY FILE NO. 2021-008

CONTRACT FOR: DECK REPLACEMENT AND WIDENING, STRUCTURAL STEEL REPAIRS, BEAM GALVANIZATION, PIER CAP REPLACEMENT, SUBSTRUCTURE PATCHING, SUBSTRUCTURE WIDENING.

PREPARED UNDER THE SUPERVISION OF

CARRIE HAMEL, P.E., MICHIGAN LICENSE NO.

DATE

CONTRACT FOR: APPROACH WORK, ROADWAY WIDENING, SIDEWALK REPLACEMENT, HMA RESURFACING AND RECONSTRUCTION, SIGNAL WORK AND MAINTENANCE OF TRAFFIC.

PREPARED UNDER THE SUPERVISION OF

LEIGH MERRILL P.E., MICHIGAN LICENSE NO.

DATE

SEAL

DRAWING NO.

2021-008-C1

SHEET 1 OF 155

3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

X:\Projects\2021\2141\ConstDocs\CAD\EMCD_Project_Index_Sheet

PUBLIC UTILITY CONTACT INFORMATION		
WATER	CITY OF ANN ARBOR FIELD OPERATIONS SERVICE UNIT W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108 (734) 794-3304 M-F 7:30 AM - 5:30 PM (734) 994-2840 OFF HOURS	JASON MCDONALD
SANITARY		TRAVIS CONLEY
STORM		MARK SIRLS
SIGNS SIGNALS STREET LIGHTS		MARC MORENO

PRIVATE UTILITY CONTACT INFORMATION		
GAS	DTE ENERGY 3150 E. MICHIGAN AVE YPSILANTE TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ELECTRIC	RAFAEL RAMIREZ-INCIARTE (313) 597-4411 rafael.ramirezinciart2@ dteenergy.com
CABLE	COMCAST 25626 TELEGRAPH ROAD SOUTHFIELD, MI 48034	JEFF DOBIES (734) 359-1669
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	MICHAEL ZAREMA (734) 277-4855
FIBER OPTIC	VERIZON BUSINESS/MCI 3 PARKLANE BOULEVARD DEARBORN, MI 48126	MARLON REDD (313) 588-0849 marlon.redd@verizon.com
FIBER OPTIC	FIBER LINK, INC.	JOEL JARVIS Missdigdsg@ fiberlink.com
FIBER OPTIC	WINDSTREAM COMMUNICATIONS	JEFF WEBB (734) 790-6556 jeff.webb@windstream.com
FIBER OPTIC	LUMEN/CENTURYLINK 19675 WEST 10 MILE ROAD SOUTHFIELD, MI 48075	DAVE HUCKFELDT (517) 812-2592 dave.huckfeldt@lumen.com
ITS/FIBER OPTIC	UNIVERSITY OF MICHIGAN	KEVIN MCLAUGHLIN (734) 615-5699 mckevin@umich.edu

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STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

STD. PLAN NO.	ITEM OF WORK
ANN ARBOR STANDARD PLANS	
SD-SESC-1 SC-SESC-3 SD-GU-5 SD-GU-5 SD-GU-8 SD-M-1 SD-R-1 SD-R-4 SD-R-10 SD-R-15 SD-SL-1 SD-TD-1A SD-TD-6 SD-TD-7 SD-TD-9	INLET PROTECTION SILT FENCE STANDARD CASTING SCHEDULE MANHOLE CASTING ADJUSTMENT MANHOLE & VALVE/MOMUMENT BOX LOWERING TREE PROTECTION BARRIER CURB & GUTTER SPILL-OUT BARRIER CURB & GUTTER SIDEWALK & CURB & GUTTER JOINTS URBAN GUARDRAIL LOCATION STREETLIGHT FOUNDATION UTILITY TRENCH - TYPE I UTILITY TRENCH - TYPE VI UTILITY TRENCH - TYPE VII UTILITY TRENCH - TYPE IX
UNIVERSITY OF MICHIGAN STANDARD PLANS	
	EXPANSION JOINT REPLACEMENT PAVEMENT EXPANSION JOINT (E.J.) 18" CURB & GUTTER, SPILLOUT 18" CURB & GUTTER (U OF M STANDARD) SIDEWALK CONTROL JOINT LAYOUT MILLED EDGE MANHOLE COVER ADJUSTMENT & STRUCTURE REBUILD SIGN MOUNT - TURF SIGN MOUNT - CONCRETE SURFACE BICYCLE HOOP - CONCRETE BICYCLE HOOP - MULCH BICYCLE HOOP - CORED BICYCLE HOOP - PAVERS BICYCLE HOOP - SURFACE MOUNT MULCH BLANKET INSTALLATION SILT FENCE INLET FILTER SACK SEEDED AREA
M.D.O.T. STANDARD PLANS	
R-28-J R-53-A* B-25-K B-41-C B-102-C B-103-E MOT TYPICAL A 163-INT-LD-OUT	SIDEWALK RAMP & DETECTABLE WARNING DETAILS TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION BRIDGE RAILING, AESTHETIC PARAPET TUBE FENCING FOR BRIDGE RAILING, AESTHETIC PARAPET TUBE STANDARD SLOPE PAVING DETAILS MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS SIGNAL WORK AT INTERSECTION LONGER THAN 1 HOUR ON E. MEDICAL CENTER DR. AT W. MEDICAL CENTER DR. OR CANCER CENTER SIGNAL WORK AT INTERSECTION OUTSIDE ROADWAY LONGER THAN 1 HOUR ON A 4-LANE UNDIVIDED ROADWAY
* DENOTES SPECIAL DETAIL	

3 WORKING DAYS
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(TOLL FREE)



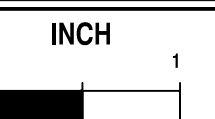
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

PROJECT INFORMATION SHEET

SCALE
NONE

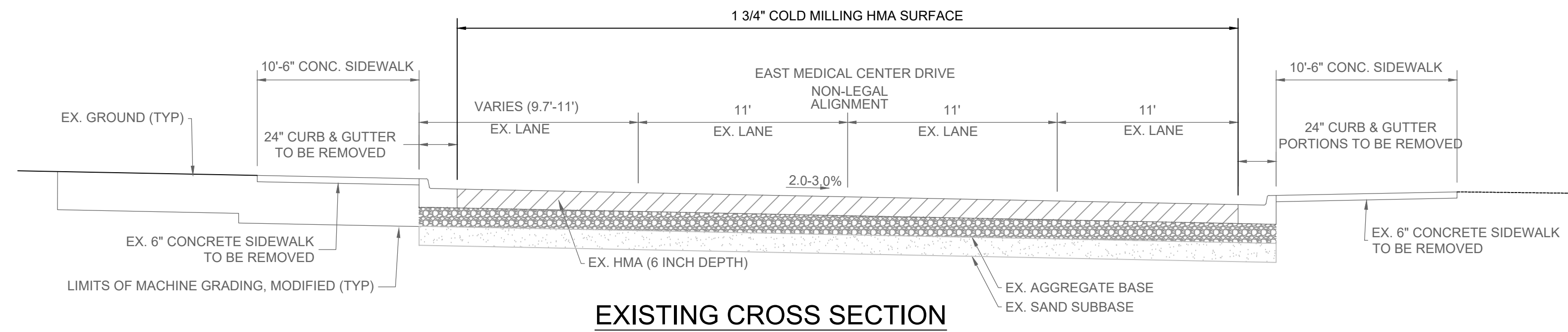


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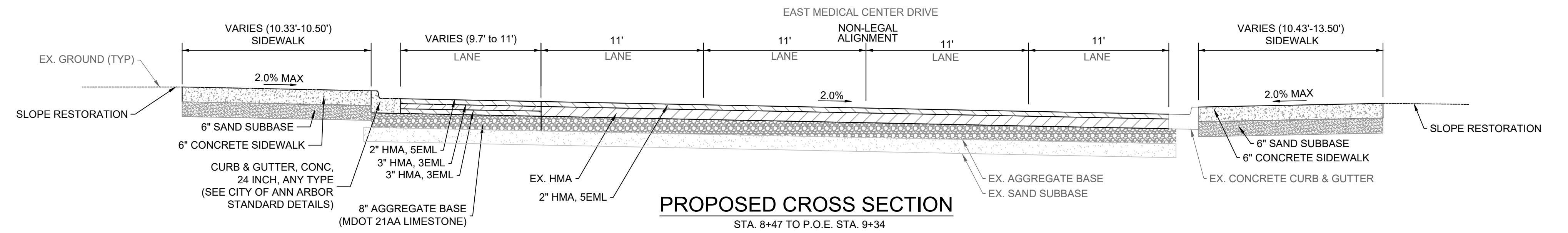
2021-008-C2

SHEET NO. 2 OF 155

APPROVED BY: _____
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

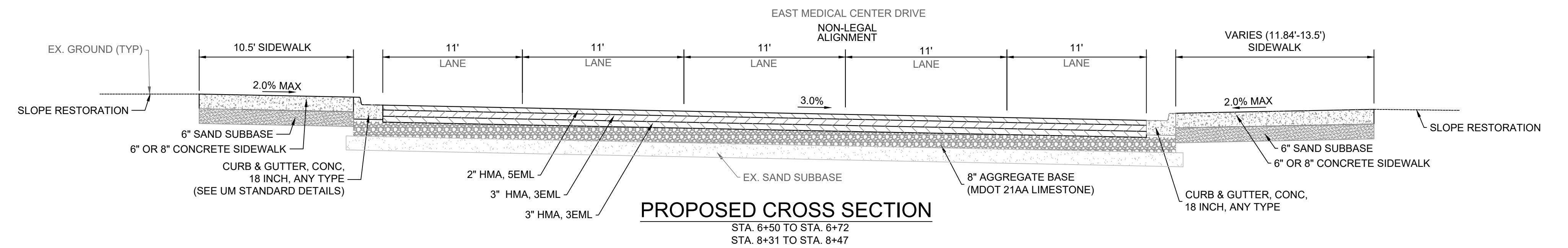


EXISTING CROSS SECTION



PROPOSED CROSS SECTION

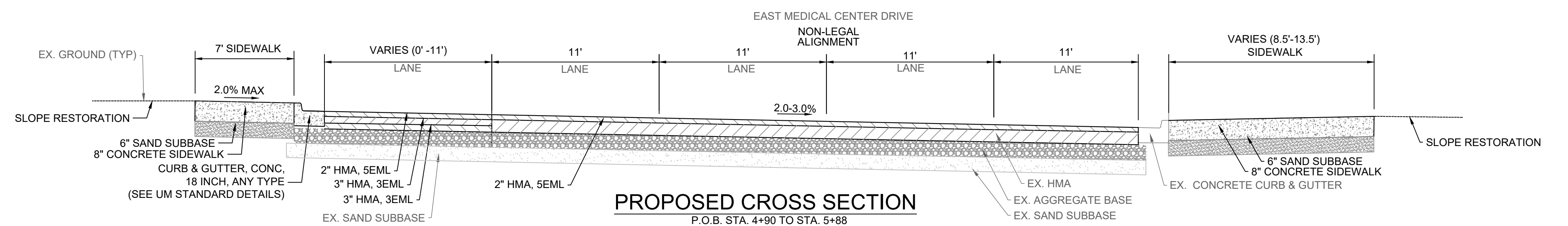
STA. 8+47 TO P.O.E. STA. 9+34



PROPOSED CROSS SECTION

STA. 6+50 TO STA. 6+72
STA. 8+31 TO STA. 8+47

NOTE:
PROPOSED AGGREGATE BASE IS MDOT 21AA LIMESTONE.



PROPOSED CROSS SECTION

P.O.B. STA. 4+90 TO STA. 5+88

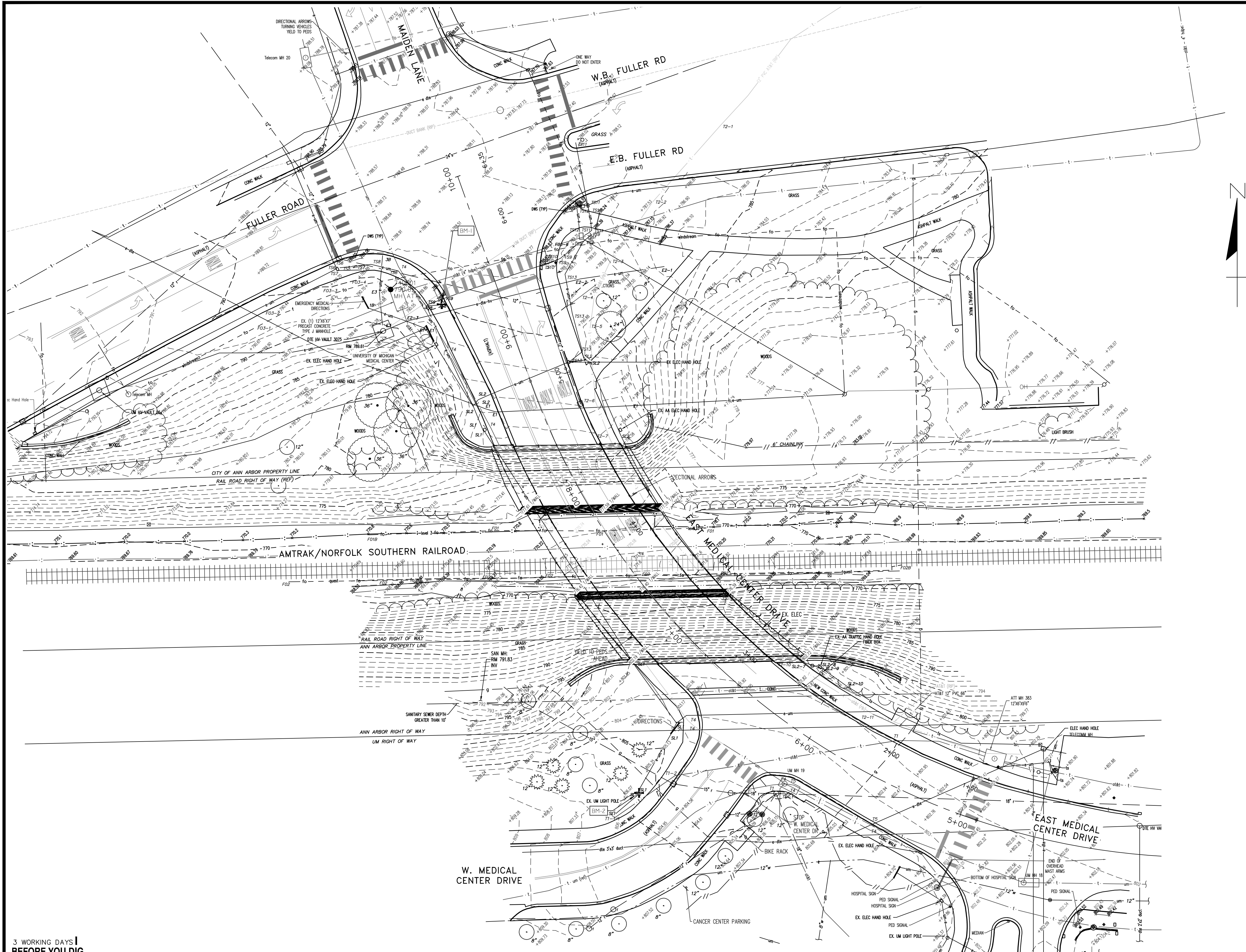
HMA APPLICATION ESTIMATE			
PAY ITEM	RATE (LBS/SYD)	PERFORMANCE GRADE	REMARKS
HMA, 5EML	220	64-22	HMA, 5EML TOP COURSE AWI=260.
HMA, 3EML	330	64-22	HMA, 3EML LEVELING COURSE
HMA, 3EML	330	58-22	HMA, 3EML BASE COURSE
BOND COAT	0.10 GAL/SYD		FOR INFORMATION ONLY. SHALL NOT BE PAID SEPARATELY BUT IS INCLUDED IN PAY ITEM OF HMA COURSE BEING APPLIED

3 WORKING DAYS
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800-482-7171
(TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE ROADWAY CROSS SECTIONS	
SCALE NTS	0 INCH 1
DRAWING NO.	2021-008-TSCS
SHEET NO.	5 OF 155

APPROVED BY _____
LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



BENCHMARKS

BM#1
ELEV=790.619'
TOP OF SW TRAFFIC SIGNAL BASE BOLT AT THE SW CORNER OF THE INTERSECTION OF FULLER AVE AND MAIDEN AVENUE/E. MEDICAL CENTER DRIVE

BM#2
ELEV=806.437'
TOP OF NE LIGHT POLE BASE BOLT ON NORTH SIDE OF W MEDICAL CENTER DRIVE +/- 40' FROM THE INTERSECTION OF E. MEDICAL CENTER DRIVE

NOTE

FOR UTILITY STRUCTURE INFORMATION, SEE STRUCTURE TABLE - SHEET 59.

NOTES

VERTICAL DATUM: NAVD 1988, BASED ON NGS CONCRETE MONUMENT DESIGNATED AS 0014A AND HAVING A PID OF AAS177.

HORIZONTAL DATUM: MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE 2113, INTERNATIONAL FEET, NAD 83, 2011 ADJUSTMENT YEAR

UTILITIES SHOWN ARE BASED OFF MARKED LOCATIONS PROVIDED BY T2 UTILITY ENGINEERS AND PLAN INFORMATION RECEIVED FROM UTILITY OWNERS IN RESPONSE TO A MISS DIG TICKET. UTILITY INFORMATION SHOULD BE CONSIDERED APPROXIMATE AND WILL NEED TO BE VERIFIED PRIOR TO ANY CONSTRUCTION.

MISS DIG TICKET #: B13010469

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	EXISTING HAND HOLE	DECIDUOUS TREE
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- EXISTING PEDESTRIAN SIGNAL	(Circle with horizontal lines)
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- BENCHMARK	(Circle with cross)
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- TREE/BRUSH LINE	(Circle with radiating lines)
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL		

		SEE ABOVE			
		BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION
			ORIGINAL ISSUE	10/6/23	INB
			DATE		LCM
			DR.BY		CH.BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE	
EXISTING CONDITIONS (E MED CNTR DR)	
SCALE	INCH
1"=30'	0 1
DRAWING NO.	
2021-008-TS1	
SHEET NO.	6 OF 155
APPROVED BY	

Coordinate System: State Plane Grid
 Zone: Michigan Southern 2113
 Ellipsoid: GRS 80
 Horizontal Datum: NAD 83 (NRS 2011)
 Vertical Datum: Geoid 128
 Units: International Feet

Control

CONTROL POINT # 1
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of the Amtrak tracks.

COORDINATES: N=287044.0144 E=1324949.5600 EL=770.64'
COMBINED FACTOR: 0.99992963
WITNESSES:
 1. N79844'E 50.75 TO WEST SIDE OF NORTHERN PIER OF E MEDICAL CENTER DRIVE BRIDGE.
 2. S545'E 22.51' TO THE NORTHERN AMTRAK RAIL
 3. S8646'W 93.43' TO REBAR CONTROL POINT 8
 4. N2220'W 34.24' TO REBAR CONTROL POINT 3

CONTROL POINT # 2
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of the Amtrak tracks, EAST OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=287046.5865 E=13295189.4300 EL=769.97'
COMBINED FACTOR: 0.99992966
WITNESSES:
 1. N01043'W 45.47' TO 6' HIGH CHAINLINK FENCE
 2. N830 05'E 93.12' TO UTILITY POLE
 3. S01009'E TO NORTHERN AMTRAK RAIL
 4. N8520'W 105.09 FEET TO THE EAST SIDE OF THE NORTHERN PIER FOR THE E MEDICAL CENTER DRIVE BRIDGE OVER AMTRAK.

CONTROL POINT # 3
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of the Amtrak tracks, WEST OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=287075.7543 E=13294936.7100 EL=779.11'
COMBINED FACTOR: 0.99992921
WITNESSES:
 1. N04041'W 39.31' TO 36" TREE
 2. S20028'E 66.70' TO THE WEST SIDE OF THE NORTHERN PIER TO THE EAST MEDICAL CENTER BRIDGE OVER AMTRAK
 3. S2220'W 34.24' TO CONTROL POINT 1 (REBAR)
 4. N72053'W 27.10' TO 36" TREE.

CONTROL POINT # 4
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground at the SW CORNER OF THE INTERSECTION OF EAST MEDICAL CENTER DRIVE AND FULLER AVENUE.
COORDINATES: 287188.4723 E=13294921.5700 EL=790.30'
COMBINED FACTOR: 0.99992819
WITNESSES:
 1. S79009'E 27.63' TO THE SW CORNER OF DETEABLE WARNING SURFACE
 2. S40039'E 34.41' TO NORTH CORNER OF UNIVERSITY OF MICHIGAN MEDICAL SIGN
 3. S58031'W 17.89 FEET TO THE NORTH CORNER OF UNIVERSITY OF MICHIGAN MEDICAL SIGN
 4. N48204'W 20.58' TO THE SE CORNER OF DETEABLE WARNING SURFACE

CONTROL POINT # 5
 MAG NAIL SET IN CONCRETE BRIDGE EXPANSION JOINT ON THE EAST SIDE OF THE BRIDGE OVER THE NORTH PIER.
COORDINATES: N=287055.2020 E=13295078.6000 EL=797.58'
COMBINED FACTOR: 0.99992838
WITNESSES:
 1. N56024'E 1.79' TO BOTTOM OF PARAPET WALL
 2. S29024'E 57.80' TO BRIDGE EXPANSION JOINT AT EDGE OF SIDEWALK
 3. S88021'W 9.97 FEET TO BRIDGE EXPANSION JOINT AT EDGE OF SIDEWALK
 4. N57044'W 14.52' TO DIRECTIONAL ARROWS SIGN

CONTROL POINT # 6
 SET MAG IN CONCRETE SIDEWALK JOINT AT SOUTHERN CORNER OF EAST MEDICAL CENTER DRIVE AND WEST MEDICAL CENTER DRIVE
COORDINATES: N=286890.9640 E=13295149.6300 EL=804.56'
COMBINED FACTOR: 0.99992806
WITNESSES:
 1. N76005'E 5.59' TO CENTER OF TELEPHONE MANHOLE
 2. S59041'W 32.80' TO CENTER OF CATCH BASIN
 3. S74054'W 37.52' TO STOP SIGN
 4. S81014'W 26.42' TO CENTER OF SANITARY MANHOLE.

CONTROL POINT # 7
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the SOUTHWEST CORNER OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=286959.8056 E=13295063.1500 EL=802.00'
COMBINED FACTOR: 0.999928174
WITNESSES:
 1. S42016'E 43.83 FEET TO A DIRECTION SIGN
 2. S7038'E 48.10' TO A 12" TREE
 3. S28052'W TO A 8" TREE
 4. S72054'W 35.50 TO SW CORNER OF RETAINING WALL

CONTROL POINT # 8
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of the Amtrak tracks, WEST OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=287038.7366 E=13294856.2800 EL=770.34'
COMBINED FACTOR: 0.999929648
WITNESSES:
 1. N86046'E 93.43' TO CONTROL POINT 1
 2. S01006'E TO NORTH AMTRAK RAIL
 3. N62021'W 86.12' TO CONTROL POINT 11
 4. N01019'E 29.05' TO A 12" TREE

CONTROL POINT # 9
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the south side of the Amtrak tracks, EAST OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=287006.6709 E=13295259.7600 EL=769.98'
COMBINED FACTOR: 0.999929683
WITNESSES:
 1. N01012'W 16.30' TO THE SOUTHERN AMTRAK RAIL
 2. N83051'W 78.32' TO A TELEPHONE HAND HOLE
 3. S35003'W 62.92' TO THE NE CORNER OF RETAINING WALL

CONTROL POINT # 10
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the south side of the Amtrak tracks, WEST OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=287005.0369 E=13295024.8000 EL=769.98'
COMBINED FACTOR: 0.999929683
WITNESSES:
 1. N01009'W 13.09' TO THE SOUTHERN AMTRAK RAIL
 2. S70038'E 7.08' TO THE WEST EDGE OF THE SOUTHERN PIER OF THE EAST MEDICAL CENTER BRIDGE OVER AMTRAK
 3. S02045'E 53.30' TO THE NE CORNER OF RETAINING WALL.

CONTROL POINT # 11
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the south side of the Amtrak tracks, WEST OF THE EAST MEDICAL CENTER DRIVE BRIDGE.
COORDINATES: N=287078.6776 E=13294780.0000 EL=781.27'

COMBINED FACTOR: 0.999929105

WITNESSES:
 1. N21030'W 28.36' TO THE SE CORNER OF RETAINING WALL
 2. N14056'W 44.52' TO THE CENTER OF TELEPHONE MANHOLE
 3. S62021'E 86.12' TO CONTROL POINT 8.
 4. S0048'E 93.68' TO CENTER OF TELEPHONE HAND HOLE.

CONTROL POINT # 12
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the south side of FULLER AVENUE APPROXIMATELY 225' EAST OF EAST MEDICAL CENTER DRIVE.
COORDINATES: N=287233.2356 E=13295233.0800 EL=780.90'
COMBINED FACTOR: 0.999929048
WITNESSES:
 1. N06013'W 30.95' TO THE SOUTHERN EDGE OF FULLER AVENUE.
 2. N78020'E 43.39' TO THE INTERSECTION OF THE CURB AND SIDEWALK.
 3. S19002'E TO THE NORTHERN EDGE OF SIDEWALK
 4. S730 55'W 49.55 TO THE CENTER OF TELEPHONE HAND HOLE.

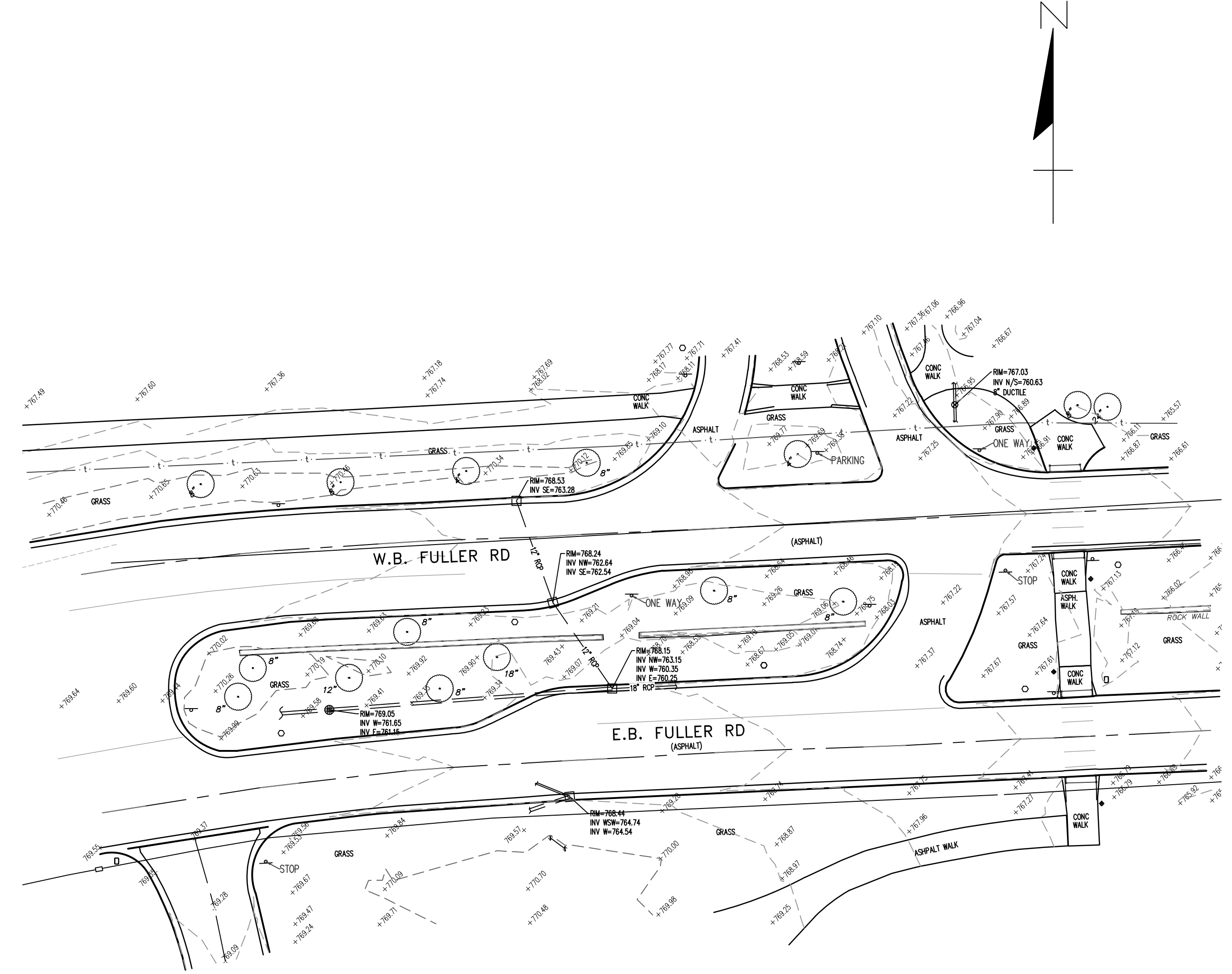
CONTROL POINT # 13
 Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the EAST/SOUTHEAST SIDE OF PARKING LOT ALONG THE SOUTH SIDE OF FULLER AVENUE.
COORDINATES: N=287138.8876 E=13295231.2700 EL=776.44'
COMBINED FACTOR: 0.99992931
WITNESSES:
 1. N45009'E 36.14' TO LAMP POST
 2. S62059'E TO SW CORNER OF PARKING LOT
 3. S44005'E 12.92' TO UTILITY POLE
 4. S73021'W TO UTILITY POLE

BENCHMARKS:

BENCHMARK # 1
DESCRIPTION: TOP OF THE SW TRAFFIC SIGNAL BASE BOLT AT THE SW CORNER OF THE INTERSECTION OF FULLER AVENUE AND MAIDEN AVENUE/EAST MEDICAL CENTER DRIVE.
COORDINATES: N=287174.7856 E=13294953.2000 EL=806.619'

BENCHMARK # 2
DESCRIPTION: TOP OF NE LIGHT POLE BASE BOLT ON NORTH SIDE OF WEST MEDICAL CENTER DRIVE +/- 40' FROM THE INTERSECTION OF EAST MEDICAL CENTER DRIVE.
COORDINATES: N=286886.7248 E=13295069.5700 EL=806.437'

GOVERNMENT CORNERS:
DESIGNATION: 0014A
PID: A45137
DESCRIPTION: STATION 0014A IS LOCATED ON THE EASTERLY SIDE OF MAIDEN LANE APPROXIMATELY 140 FT (42.7 M) NORTHERLY OF THE NORTHERLY BACK OF CURB OF FULLER ROAD, SAID STATION BEING IN THE SOUTHWEST 1/4 OF SECTION 21, ANN ARBOR TOWNSHIP IN THE CITY OF ANN ARBOR, MICHIGAN. THE STATION IS LOCATED 5 FT (1.5 M) EASTERLY OF THE EASTERLY EDGE OF THE STONE WALL AND 71 FT (21.6 M) SOUTHEASTERLY OF THE SOUTHERLY MOST POINT OF THE CONCRETE BRIDGE ABUTMENT ON THE EASTERLY SIDE OF MAIDEN LANE. SAID STATION IS A PRIMARY CONTROL MONUMENT AND IS DESCRIBED AS THE 1993 EDITION OF THE CITY OF ANN ARBOR BRASS DISC, SET IN CONCRETE PER DETAIL AND IS FLUSH WITH THE GROUND. THIS POINT WAS SET BY THE CITY OF ANN ARBOR IN 1993 AND IS PAIRED WITH POINT 0014B.



3 WORKING DAYS!
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 (TOLL FREE)

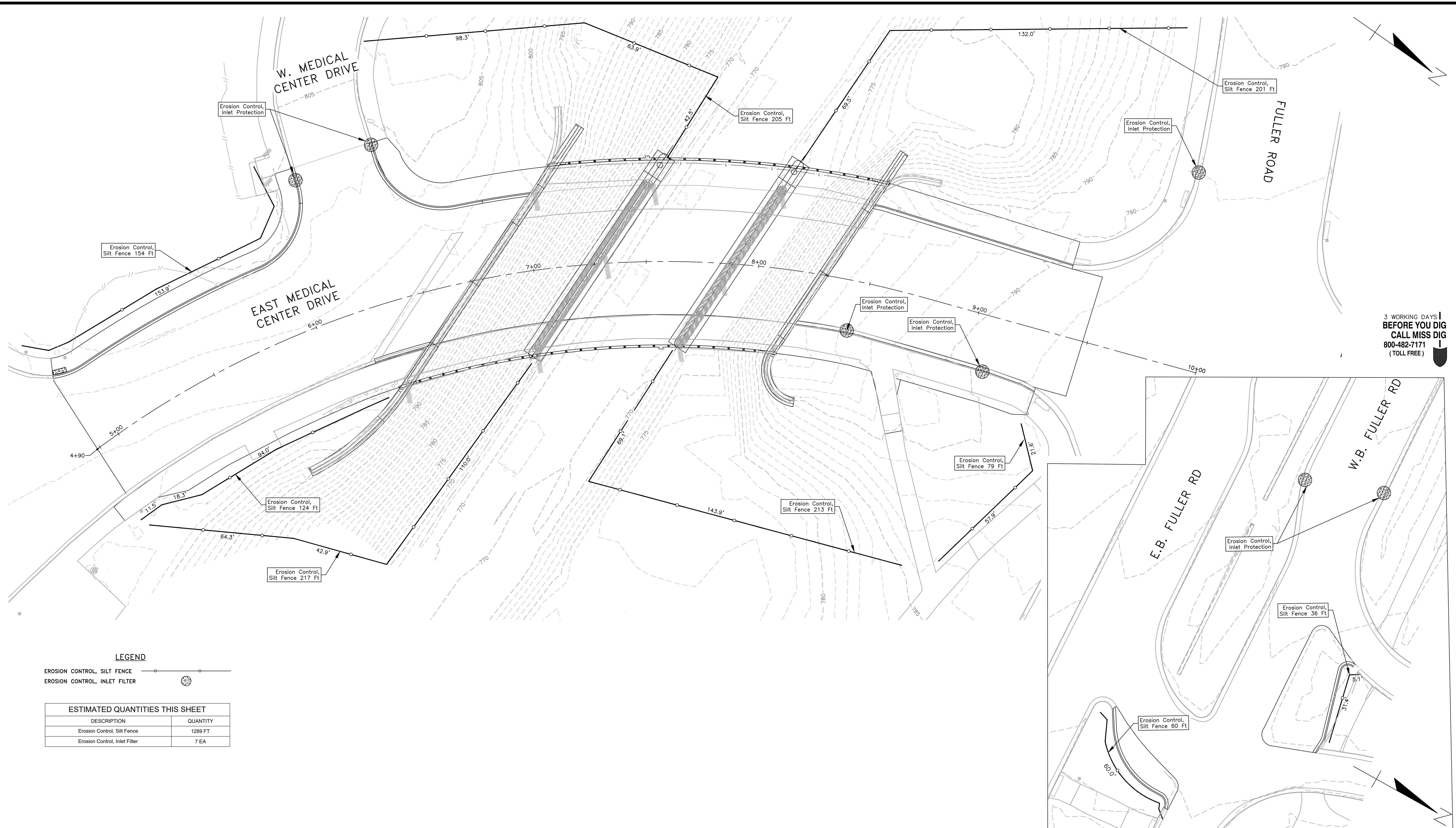
LEGEND

EXISTING FENCE - - - - - CONTOUR - 847 - STORM SEWER & CAT. BAS. - [Symbol] - WATER MAIN & VALVE-IN-WELL - [Symbol] - WATER MAIN & VALVE-IN-BOX - [Symbol] -	EXISTING SANITARY SEWER & MANHOLE - S - UTILITY POLE & GUY - [Symbol] - FIRE HYDRANT ASSEMBLY - [Symbol] - LIGHT POLE - [Symbol] - END SECTION - [Symbol] -	EXISTING TELEPHONE - t - GAS LINE - G - CABLE T.V. - [Symbol] - ELECTRIC - e - SIGN - [Symbol] -	EXISTING RD. & GRADE - [Symbol] - LEFT EDGE/RD. GRADE - [Symbol] - RIGHT EDGE/RD. GRADE - [Symbol] - CURB & GUTTER - [Symbol] - EDGE/GRAVEL - [Symbol] -	EXISTING HAND HOLE - [Symbol] - EXISTING PEDESTRIAN SIGNAL - [Symbol] - BENCHMARK - [Symbol] - TREE/BRUSH LINE - [Symbol] -	DECIDUOUS TREE - [Symbol] - CONIFEROUS TREE - [Symbol] -
---	--	---	---	--	---

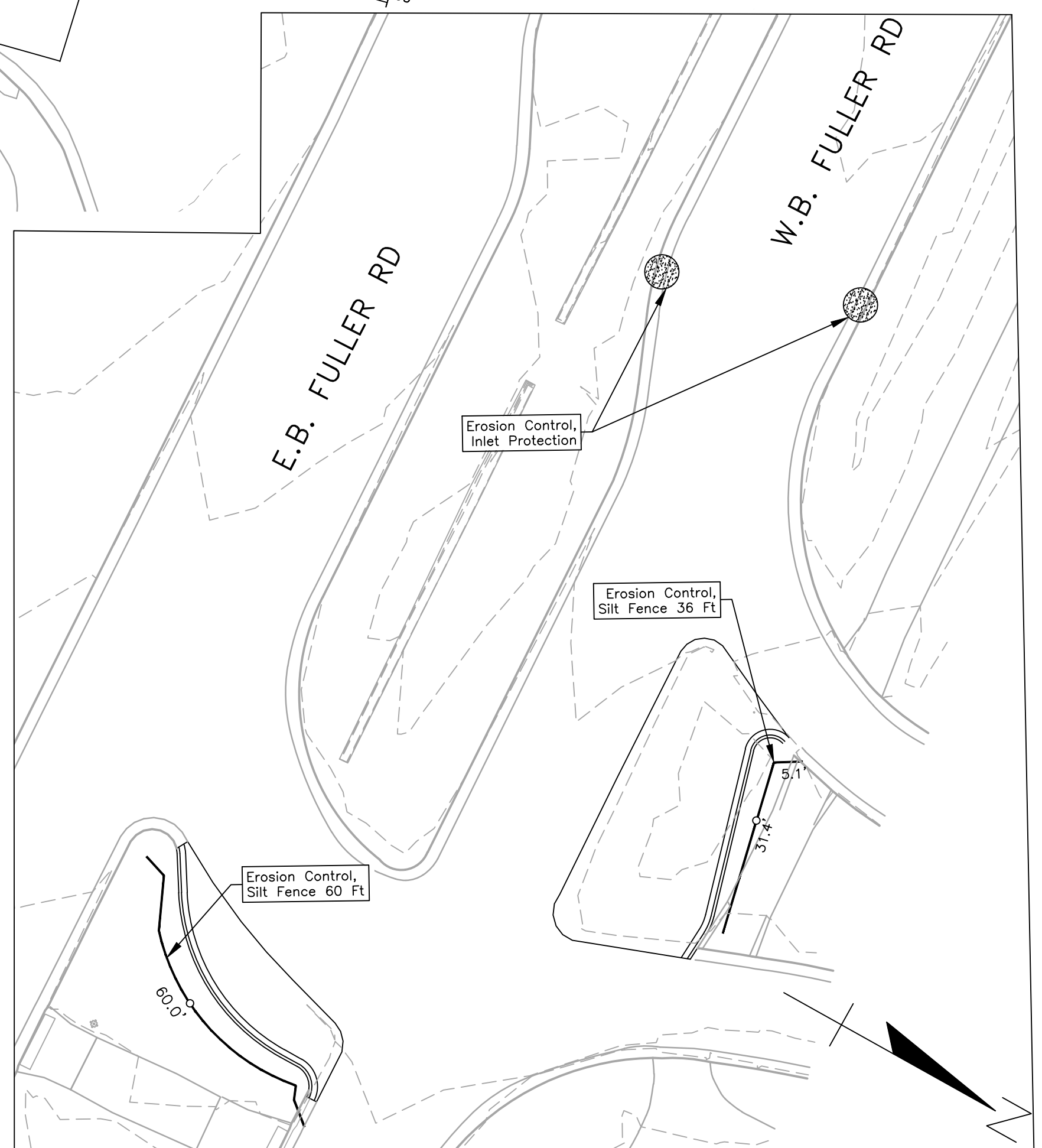
SEE ABOVE	
BENCH MARK	
SURVEY BOOK	

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE EXISTING CONDITIONS (FULLER RD.)	
SCALE 1"=30'	INCH 0 1
DRAWING NO. 2021-008-TS2	
SHEET NO. <u> 7 </u> OF <u> 155 </u>	
APPROVED BY _____	



3 WORKING DAYS |
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 800-482-7171
 (TOLL FREE)



LEGEND

- EROSION CONTROL, SILT FENCE
- EROSION CONTROL, INLET FILTER

ESTIMATED QUANTITIES THIS SHEET

DESCRIPTION	QUANTITY
Erosion Control, Silt Fence	1289 FT
Erosion Control, Inlet Filter	7 EA

LEGEND

- EXISTING FENCE
- EXISTING SANITARY SEWER & MANHOLE
- EXISTING TELEPHONE
- EXISTING RD. @ GRADE
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED CURB & GUTTER
- PROPOSED SILT FENCE
- SEE ABOVE
- BENCH MARK
- SURVEY BOOK
- ORIGINAL ISSUE
- DATE
- DR. BY
- CH. BY



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

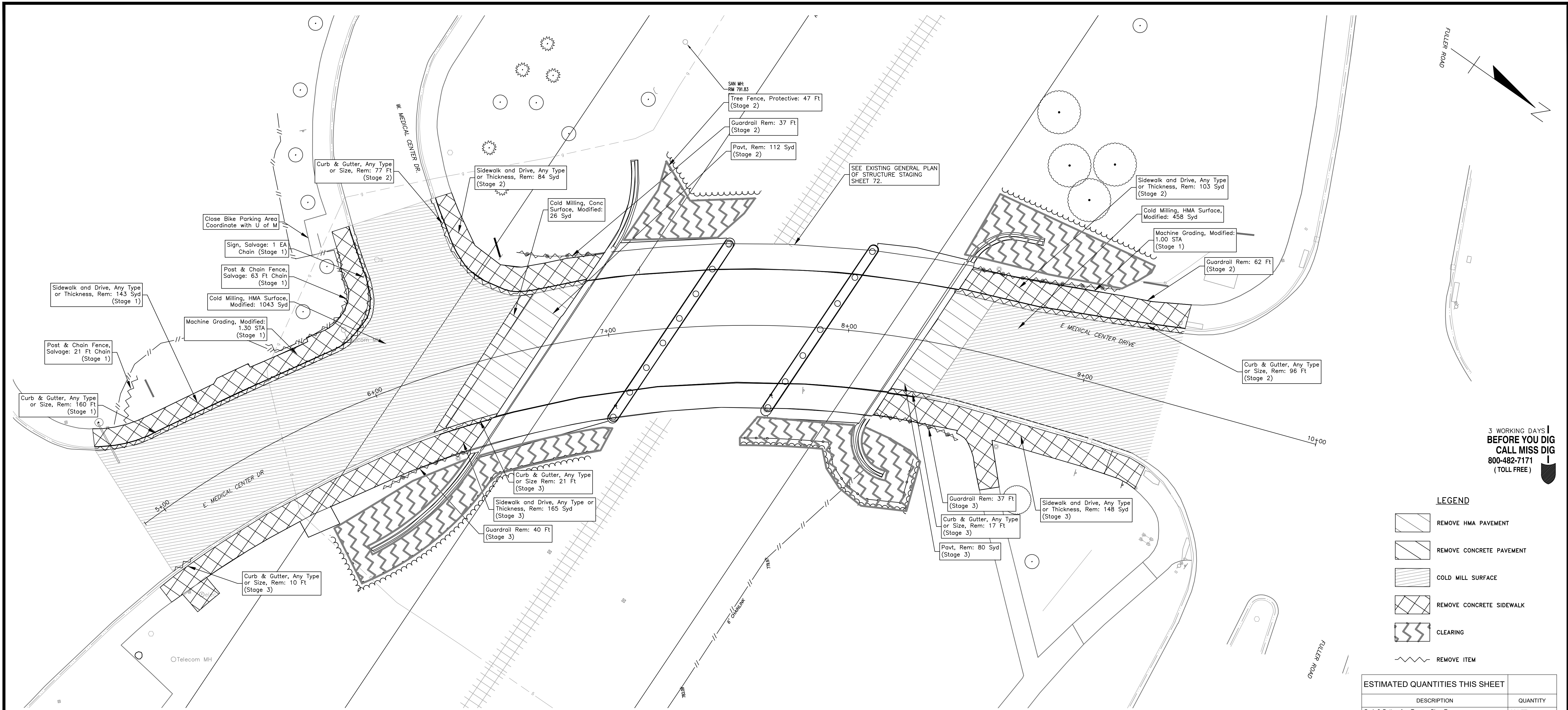
**E. MEDICAL CENTER DRIVE
 SOIL EROSION CONTROL MEASURES**

SCALE
 1"=20'

DRAWING NO.
2021-008-SECM

SHEET NO. **8** OF 155

APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



3 WORKING DAYS
BEFORE YOU DIG
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800-482-7171
(TOLL FREE)

LEGEND

- REMOVE HMA PAVEMENT
- REMOVE CONCRETE PAVEMENT
- COLD MILL SURFACE
- REMOVE CONCRETE SIDEWALK
- CLEARING
- REMOVE ITEM

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Curb & Gutter, Any Type or Size, Rem	381 FT
Sidewalk and Drive, Any Type or Thickness, Rem	641 SYD
Pavt, Rem	192 SYD
Guardrail, Rem	176 FT
Cold Milling, HMA Surface, Modified	1501 SYD
Cold Milling, Conc Surface, Modified	26 SYD
Tree Fence, Protective	47 FT
Post and Chain Fence, Salvage	84 FT
Sign, Salvage	1 EA
Machine Grading, Modified	2.3 STA
Clearing	0.20 ACRE

NOTE:
THE CONTRACTOR SHALL NOTE THAT THIS WORK IS TO BE DONE IN STAGES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND CONSTRUCTION SEQUENCE DEFINED ELSEWHERE IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ONLY REMOVE THOSE ITEMS THAT ARE COMPATIBLE WITH THE PHASE OF WORK CURRENTLY BEING UNDERTAKEN WITH NO ADJUSTMENT IN THE UNIT PRICE AS BID FOR THE WORK. ALL REMOVALS PERFORMED SHALL PROVIDE FOR THE SAFE AND ORDERLY MAINTENANCE OF TRAFFIC.

LEGEND

- EXISTING FENCE
- CONTOUR
- STORM SEWER & CAT. BAS.
- WATER MAIN & VALVE-IN-WELL
- WATER MAIN & VALVE-IN-BOX
- EXISTING SANITARY SEWER & MANHOLE
- UTILITY POLE & GUY
- FIRE HYDRANT ASSEMBLY
- LIGHT POLE
- END SECTION
- EXISTING TELEPHONE
- GAS LINE
- CABLE T.V.
- ELECTRIC
- SIGN
- EXISTING RD. @ GRADE
- LEFT EDGE/RD. GRADE
- RIGHT EDGE/RD. GRADE
- CURB & GUTTER
- EDGE/GRAVEL
- PROPOSED SANITARY SEWER & MANHOLE
- STORM SEWER & CAT. BAS.
- WATER MAIN W/F.H. ASSEM.
- CONTOUR
- ROAD @ GRADE
- PROPOSED CURB & GUTTER

DLZ

SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

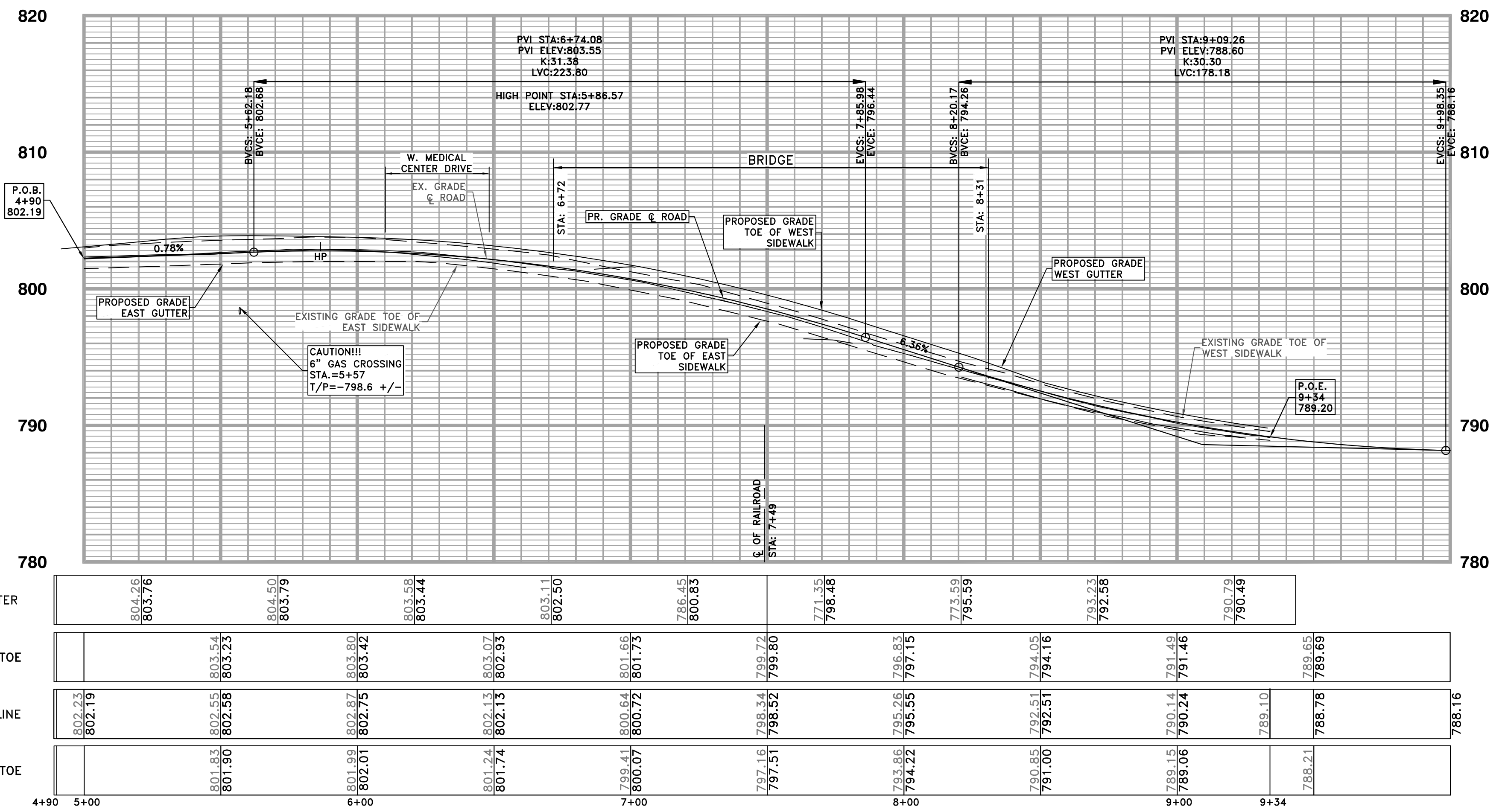
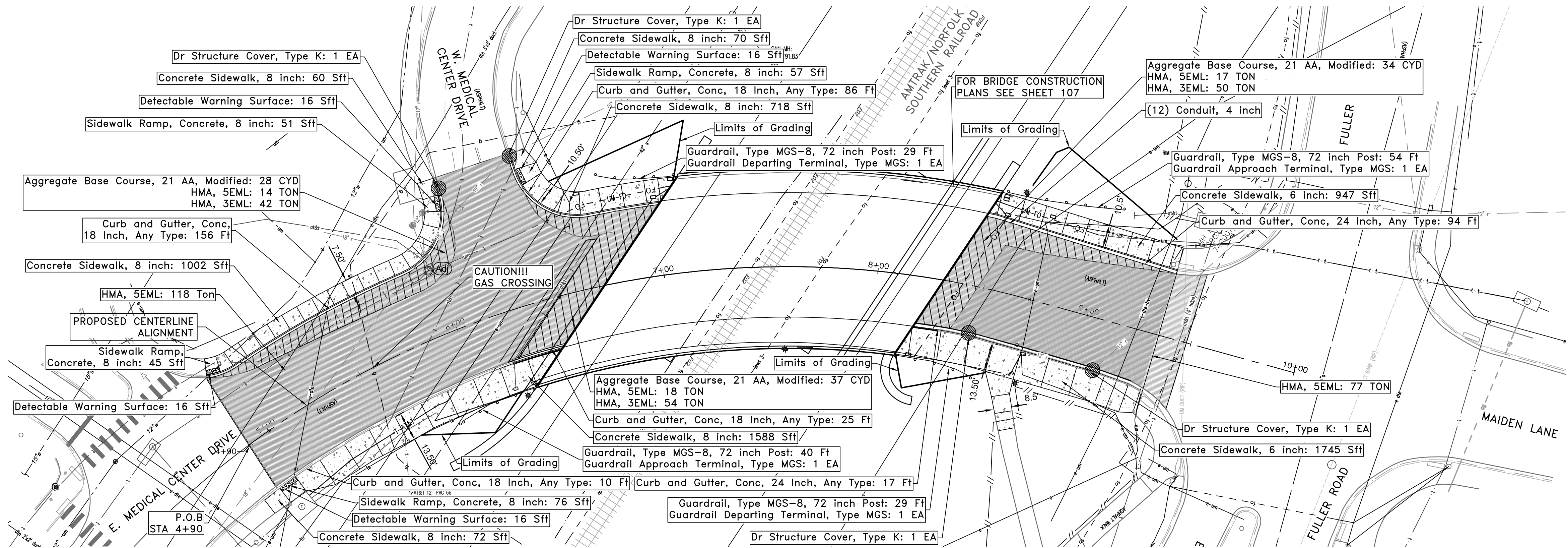
E. MEDICAL CENTER DRIVE ROADWAY REMOVAL PLAN

SCALE 1"=20' INCH

DRAWING NO. 2021-008-R1

SHEET NO. 9 OF 155

APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



PROFILE ALONG ROAD CENTERLINE
STATIONING PER ROAD CENTERLINE

NOTE:
CONTRACTOR TO SAW-CUT ALL CONCRETE AT THE REMOVAL LIMITS. CONTRACTOR TO SEAL CONCRETE JOINTS IN ACCORDANCE WITH UM STANDARD SIDEWALK DETAIL. INCLUDED IN "Concrete Sidewalk, 6 inch" AND "Sidewalk Ramps, Concrete, 8 inch" SEE SHEETS 52-53 FOR SIDEWALK DETAILED GRADES.

3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
800-482-7171
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HORIZONTAL CURVE DATA (ROAD CENTERLINE)

Δ	71°58'59.16"
D	N44°46'59.86"W
R	422.00'
T	306.51'
L	530.18'
P.C.	+1+58.25 (286848.74 N, 13295414.37 E)
P.I.	1+06.84
P.T.	3+71.93
P.C. TO P.I.	N73°31'19"W

LEGEND

[Hatched Box]	HMA Reconstruction
[Solid Grey Box]	HMA & Resurfacing
[Circle with 'Adj']	Adjust Structure
[Circle with 'X']	Inlet Protection, Fabric Drop

ESTIMATED QUANTITIES THIS SHEET

DESCRIPTION	QUANTITY
HMA 3EML	146 TON
HMA 5EML	244 TON
Curb and Gutter, Conc, 18 Inch, Any Type	277 FT
Curb and Gutter, Conc, 24 Inch, Any Type	111 FT
Concrete, Sidewalk, 6 Inch	2833 SFT
Concrete, Sidewalk, 8 Inch	3510 SFT
Aggregate Base Course, 21AA, Modified	99 CYD
Curb Ramp Opening, Conc, 6 Inch	40 FT
Detectable Warning Surface	64 SFT
Sidewalk Ramp, Concrete, 8 Inch	229 SFT
Guardrail, Type MGS-8, 72 Inch Post	152 FT
Guardrail Departing Terminal, Type MGS	2 EA
Guardrail Approach Terminal, Type 2M	2 EA
Dr Structure, Temp Lowering	4 EA
Dr Structure Cover, Adj	2 EA
Dr Structure Cover, Type K	4 EA
Dr Structure Cover, Adj, Case 1	2 EA
Sand Subbase Course, Class II, CIP	110 CYD
Slope Restoration	250 SYD

LEGEND

EXISTING FENCE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	ELECTRIC	CURB & GUTTER	ROAD & GRADE	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	SIGN	EDGE/GRAVEL		

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1	ORIGINAL ISSUE	10/6/23	INB	LCM

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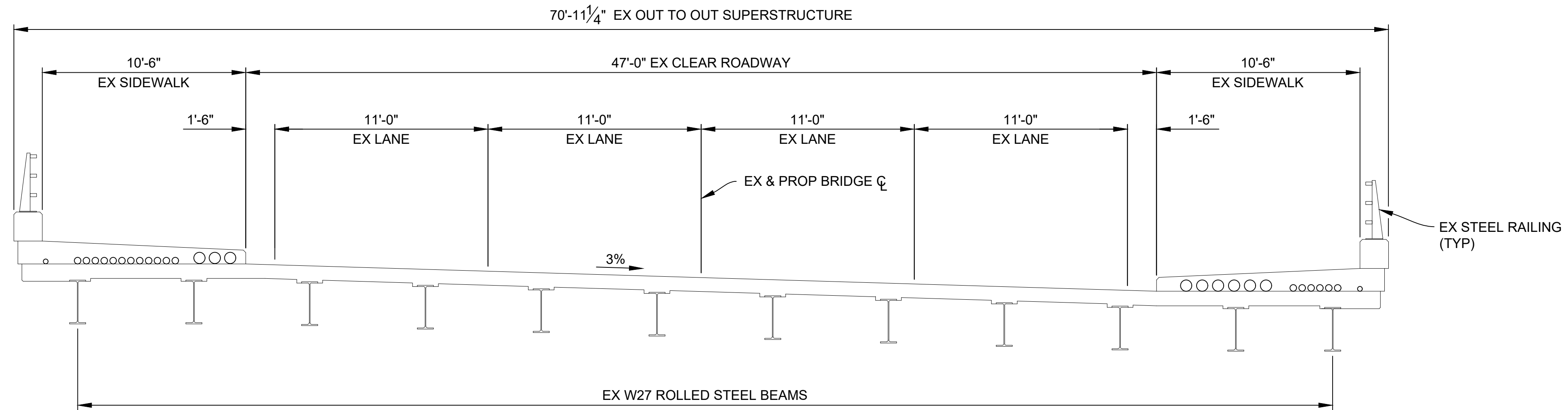
E. MEDICAL CENTER DRIVE ROADWAY CONSTRUCTION

SCALE: HOR. 1"=40' VERT. 1"=4'

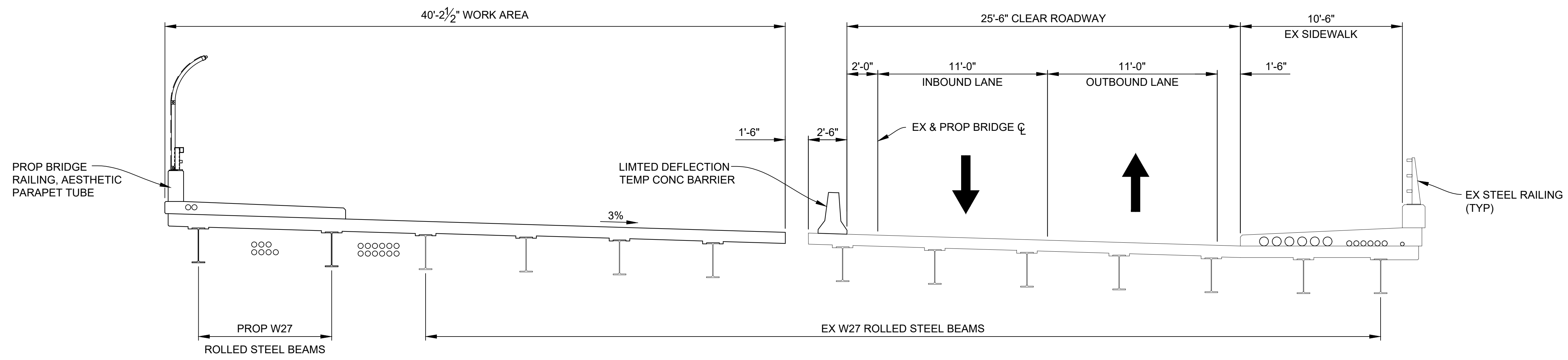
DRAWING NO. **2021-008-R2**

SHEET NO. 10 OF 155

APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



EXISTING SECTION
(LOOKING UPSTATION)



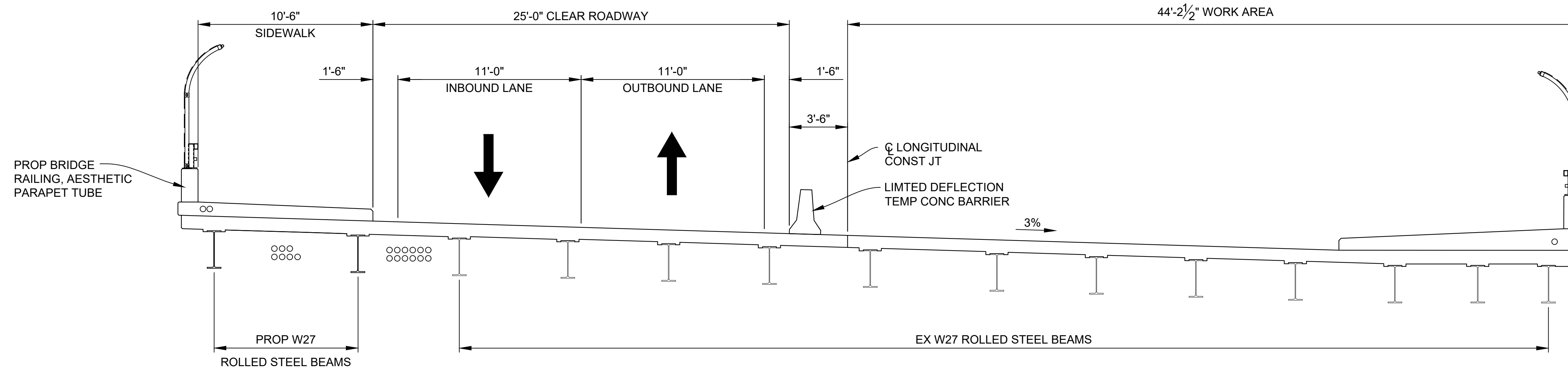
STAGE 2
(LOOKING UPSTATION)

NOTES:

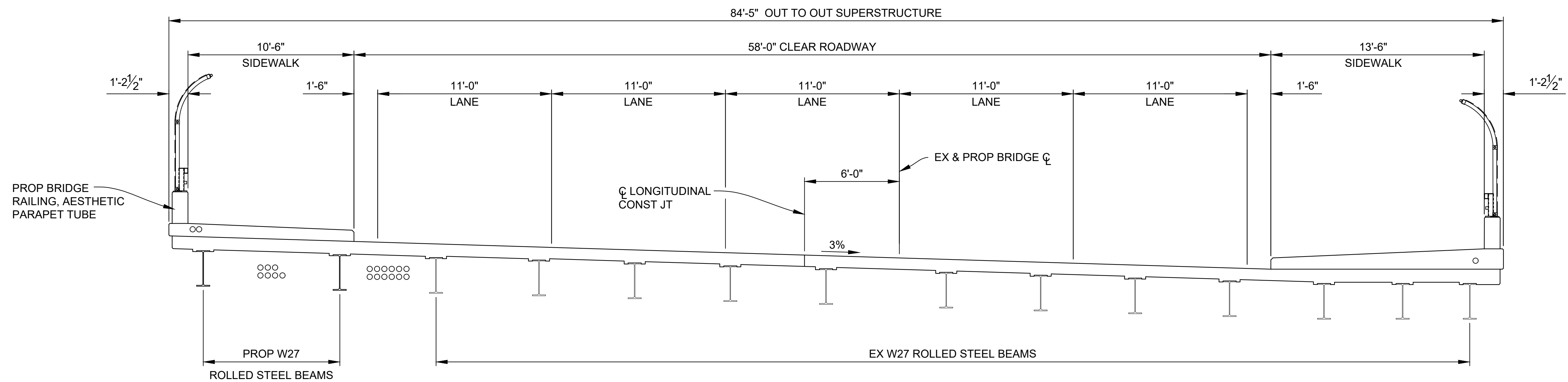
- STAGE 1 IS A PREPARATORY STAGE
- PLACE LIMITED DEFLECTION TEMPORARY BARRIER ACCORDING TO MDOT STANDARD PLAN R-53 SERIES.

					PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
					EAST MEDICAL CENTER DRIVE	
					BRIDGE CONSTRUCTION STAGING DETAILS	
					SCALE HOR. 1/4"=1'-0"	INCH 0 1
					DRAWING NO. 2021-008-S1	
					SHEET NO. <u>11</u> OF <u>155</u>	
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY _____	
	ORIGINAL ISSUE	10-6-23	DAF	CLH		

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STAGE 3
(LOOKING UPSTATION)



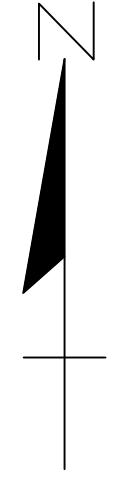
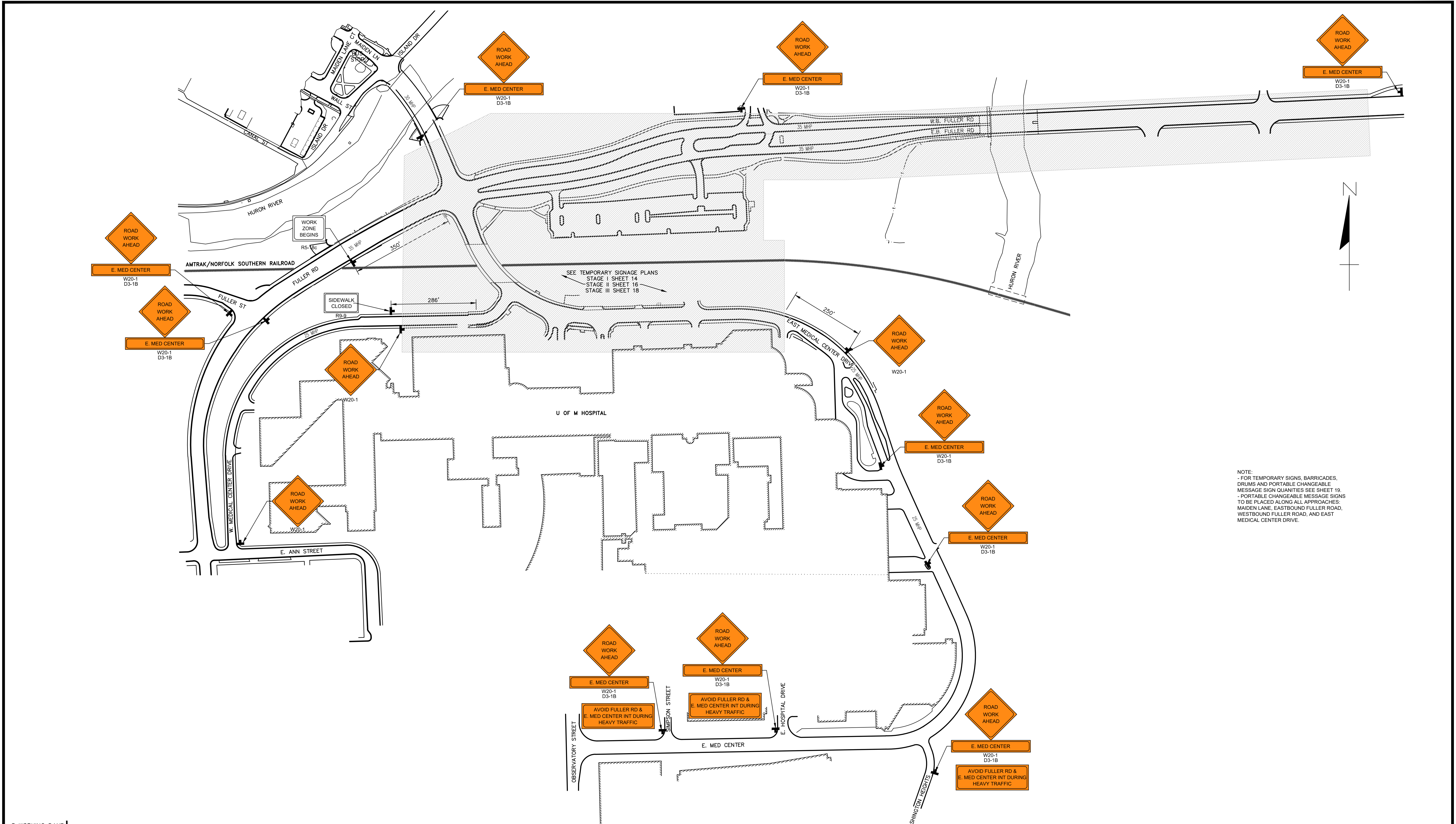
PROPOSED SECTION
(LOOKING UPSTATION)

NOTES:

PLACE LIMITED DEFLECTION TEMPORARY BARRIER ACCORDING TO MDOT STANDARD PLAN R-53 SERIES.

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR		
EAST MEDICAL CENTER DRIVE		SCALE HOR. 1/4"=1'-0"
BRIDGE CONSTRUCTION STAGING DETAILS		INCH 0 1
DRAWING NO. 2021-008-S2		DRAWING NO.
SHEET NO. 12 OF 155		SHEET NO.
APPROVED BY _____		



NOTE:
 - FOR TEMPORARY SIGNS, BARRICADES, DRUMS AND PORTABLE CHANGEABLE MESSAGE SIGN QUANTITIES SEE SHEET 19.
 - PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED ALONG ALL APPROACHES: MAIDEN LANE, EASTBOUND FULLER ROAD, WESTBOUND FULLER ROAD, AND EAST MEDICAL CENTER DRIVE.

3 WORKING DAYS!
 BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	S	t	---	S	---
- - - - -	U	g	---	W	---
- - - - -	F	c	---	W	---
- - - - -	L	e	---	W	---
- - - - -	E	s	---	W	---
- - - - -	END SECTION		---	W	---

SEE ABOVE					
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

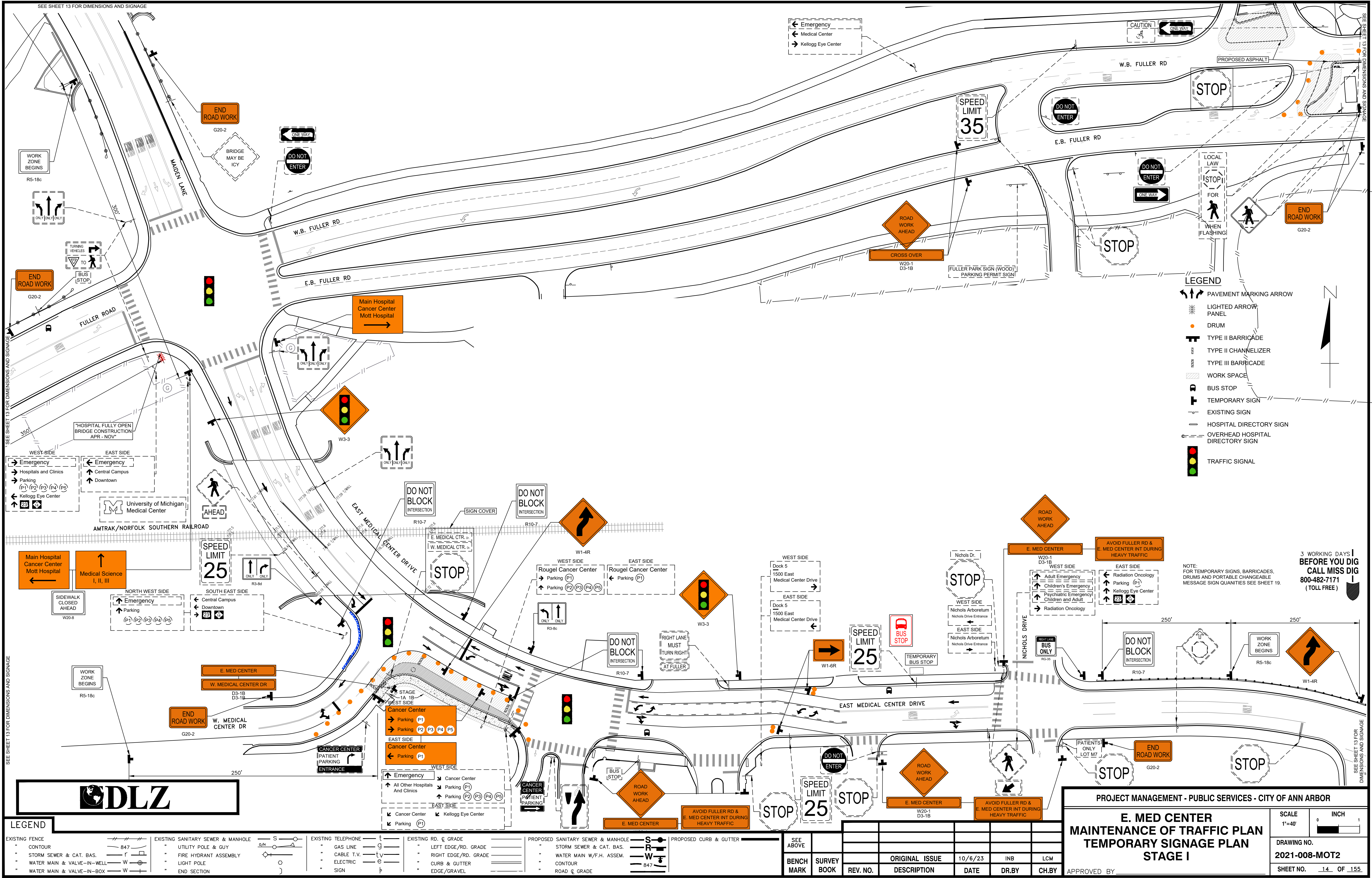
**E. MED CENTER
 MAINTENANCE OF TRAFFIC PLAN
 ADVANCED WARNING SIGNAGE PLAN**

SCALE: 1"=150'

DRAWING NO. 2021-008-MOT1

SHEET NO. 13 OF 155

APPROVED BY: _____



- LEGEND**
- PAVEMENT MARKING ARROW
 - LIGHTED ARROW PANEL
 - DRUM
 - TYPE II BARRICADE
 - TYPE II CHANNELIZER
 - TYPE III BARRICADE
 - WORK SPACE
 - BUS STOP
 - TEMPORARY SIGN
 - EXISTING SIGN
 - HOSPITAL DIRECTORY SIGN
 - OVERHEAD HOSPITAL DIRECTORY SIGN
 - TRAFFIC SIGNAL

NOTE:
FOR TEMPORARY SIGNS, BARRICADES,
DRUMS AND PORTABLE CHANGEABLE
MESSAGE SIGN QUANTITIES SEE SHEET 19.

3 WORKING DAYS!
BEFORE YOU DIG
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800-482-7171
(TOLL FREE)

- LEGEND**
- EXISTING FENCE
 - CONTOUR
 - STORM SEWER & CAT. BAS.
 - WATER MAIN & VALVE-IN-WELL
 - WATER MAIN & VALVE-IN-BOX

- EXISTING SANITARY SEWER & MANHOLE
- UTILITY POLE & GUY
- FIRE HYDRANT ASSEMBLY
- LIGHT POLE
- END SECTION

- EXISTING TELEPHONE
- GAS LINE
- CABLE T.V.
- ELECTRIC
- SIGN
- EXISTING RD. & GRADE
- LEFT EDGE/RD. GRADE
- RIGHT EDGE/RD. GRADE
- CURB & GUTTER
- EDGE/GRAVEL

- PROPOSED SANITARY SEWER & MANHOLE
- STORM SEWER & CAT. BAS.
- WATER MAIN W/F.H. ASSEM.
- CONTOUR
- ROAD & GRADE
- PROPOSED CURB & GUTTER

SEE ABOVE					
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

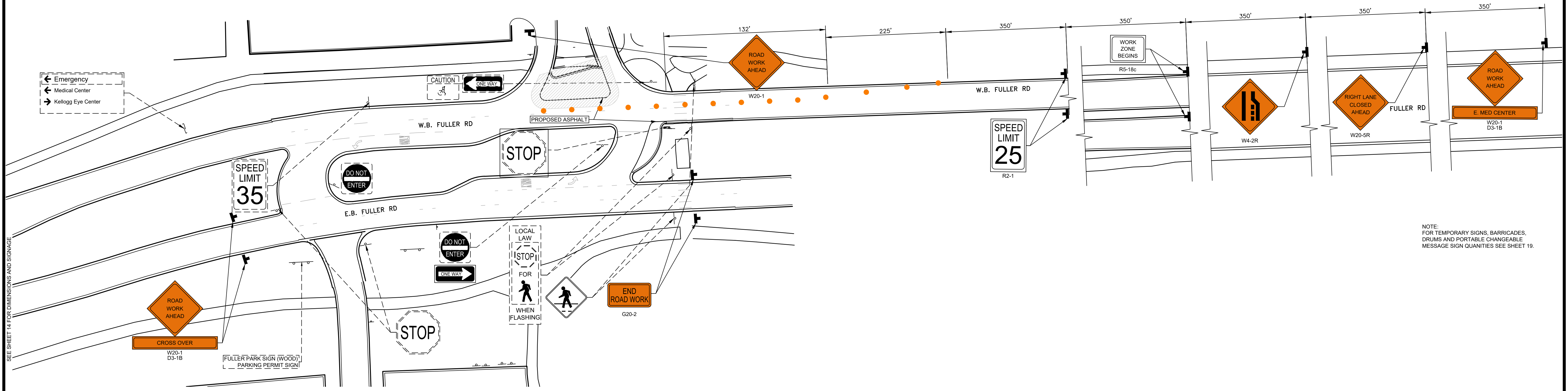
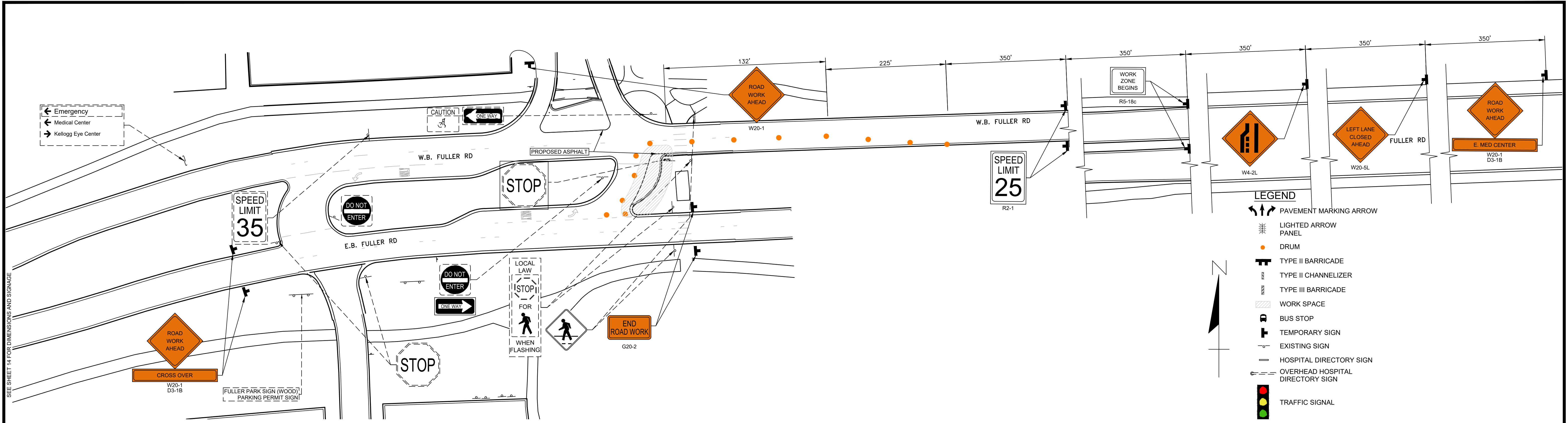
**E. MED CENTER
MAINTENANCE OF TRAFFIC PLAN
TEMPORARY SIGNAGE PLAN
STAGE I**

SCALE 1"=40'

DRAWING NO. 2021-008-MOT2

SHEET NO. 14 OF 155

APPROVED BY: _____



NOTE:
FOR TEMPORARY SIGNS, BARRICADES,
DRUMS AND PORTABLE CHANGEABLE
MESSAGE SIGN QUANTITIES SEE SHEET 19.

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

EXISTING FENCE		EXISTING SANITARY SEWER & MANHOLE		EXISTING TELEPHONE		EXISTING RD. & GRADE		PROPOSED SANITARY SEWER & MANHOLE		PROPOSED CURB & GUTTER	
-	CONTOUR	-	UTILITY POLE & GUY	-	GAS LINE	-	LEFT EDGE/RD. GRADE	-	STORM SEWER & CAT. BAS.	-	SEE ABOVE
-	STORM SEWER & CAT. BAS.	-	FIRE HYDRANT ASSEMBLY	-	CABLE T.V.	-	RIGHT EDGE/RD. GRADE	-	WATER MAIN W/F.H. ASSEM.	-	BENCH MARK
-	WATER MAIN & VALVE-IN-WELL	-	LIGHT POLE	-	ELECTRIC	-	CURB & GUTTER	-	CONTOUR	-	SURVEY BOOK
-	WATER MAIN & VALVE-IN-BOX	-	END SECTION	-	SIGN	-	EDGE/GRAVEL	-	ROAD & GRADE	-	REV. NO.

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10/6/23	INB	LCM	

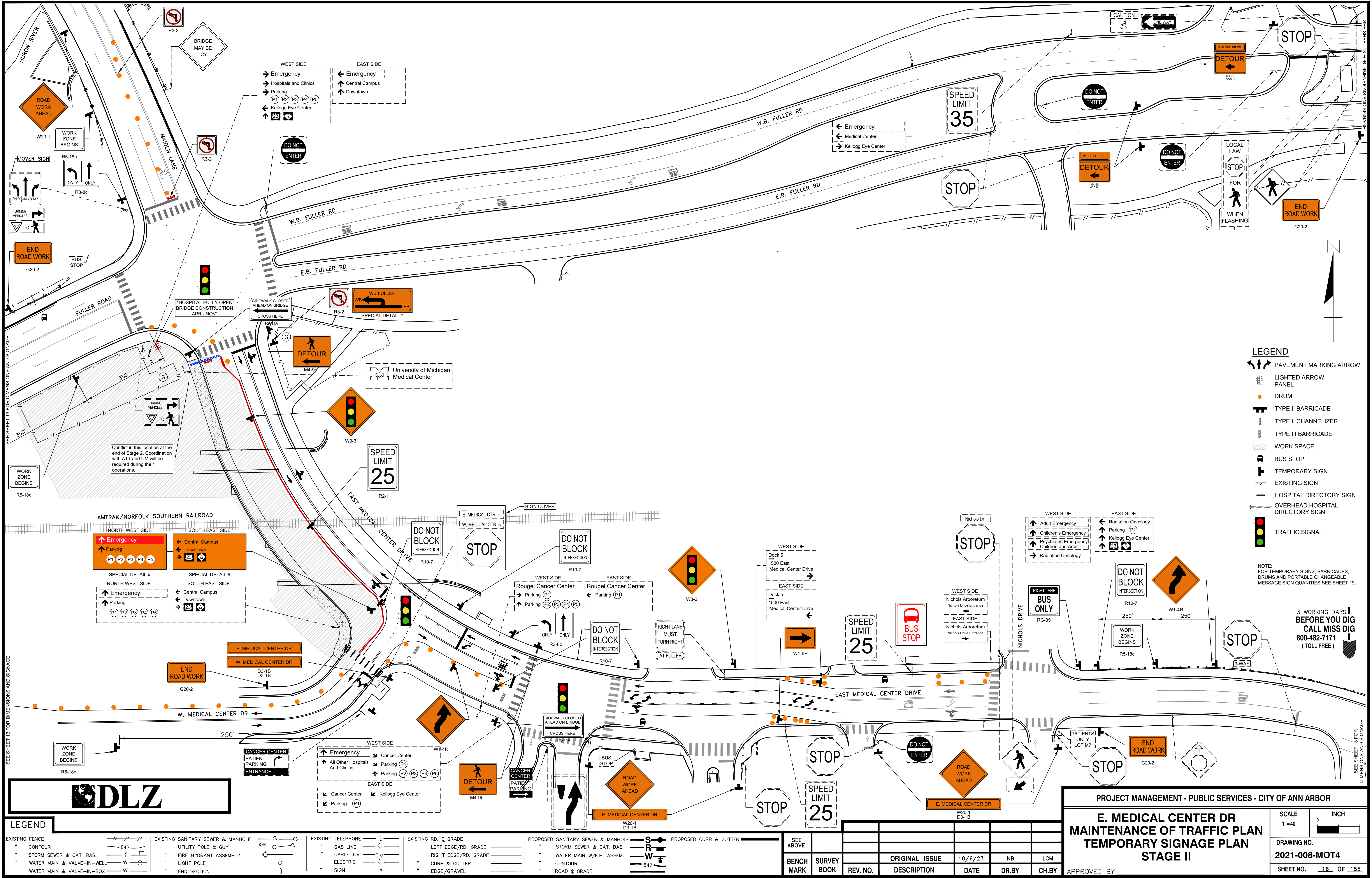
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MED CENTER MAINTENANCE OF TRAFFIC PLAN TEMPORARY SIGNAGE (FULLER) STAGE I

SCALE: 1"=40'

DRAWING NO. 2021-008-MOT3

SHEET NO. 15 OF 155



SEE SHEET 13 FOR DIMENSIONS AND SIGNAGE

SEE SHEET 13 FOR DIMENSIONS AND SIGNAGE

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DR MAINTENANCE OF TRAFFIC PLAN TEMPORARY SIGNAGE PLAN STAGE II

SCALE 1"=40'

DRAWING NO. 2021-008-MOT4

SHEET NO. 16 OF 155

APPROVED BY: _____

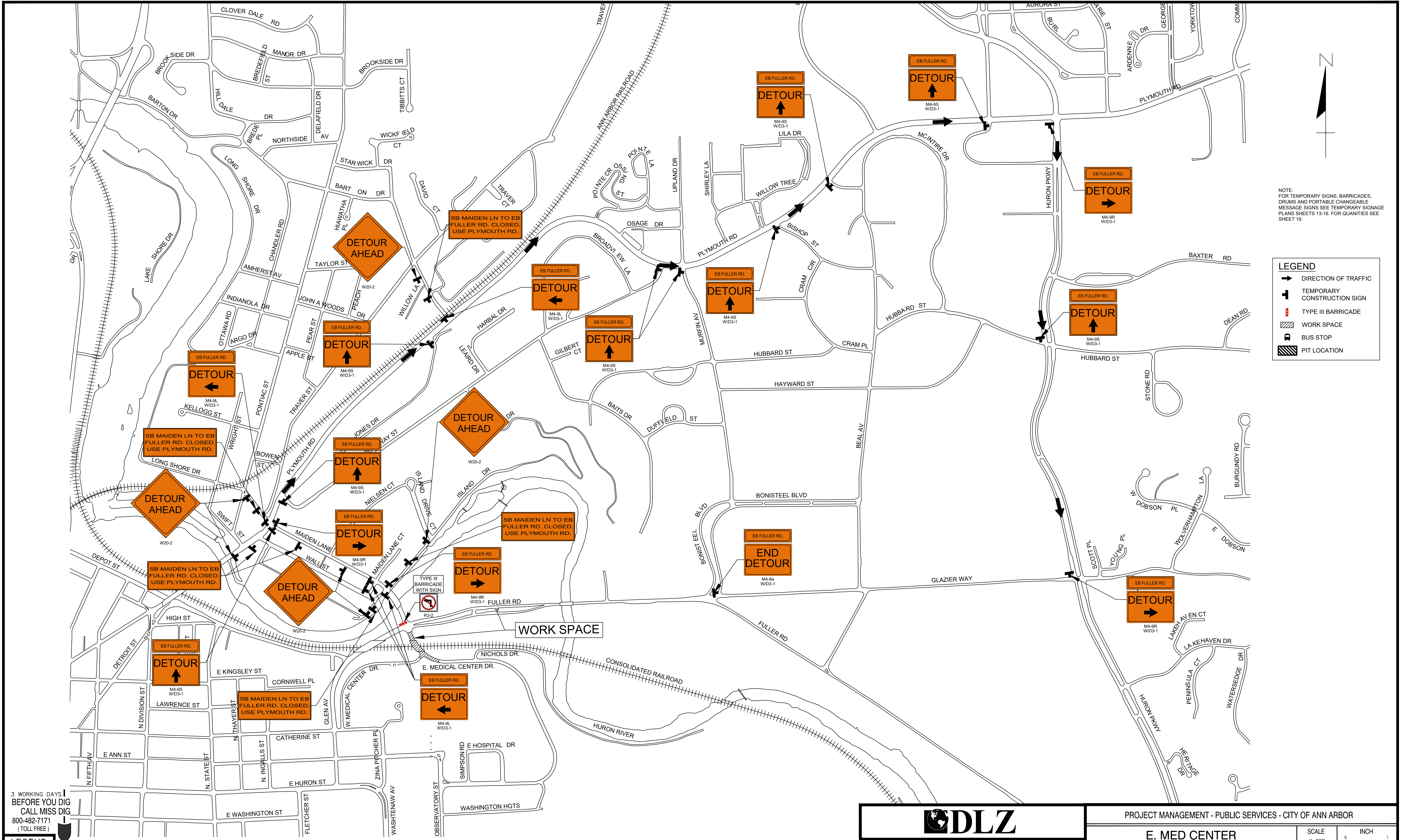
LEGEND

↔↔↔	PAVEMENT MARKING ARROW
⬇	LIGHTED ARROW PANEL
●	DRUM
⊥	TYPE II BARRICADE
⊥	TYPE II CHANNELIZER
⊥	TYPE III BARRICADE
▨	WORK SPACE
⊥	BUS STOP
⊥	TEMPORARY SIGN
⊥	EXISTING SIGN
⊥	HOSPITAL DIRECTORY SIGN
⊥	OVERHEAD HOSPITAL DIRECTORY SIGN
🚦	TRAFFIC SIGNAL

NOTE: FOR TEMPORARY SIGNS, BARRICADES, DRUMS AND PORTABLE CHANGEABLE MESSAGE SIGN QUANTITIES SEE SHEET 19.

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

SEE SHEET 13 FOR DIMENSIONS AND SIGNAGE



NOTE:
FOR TEMPORARY SIGNS, BARRICADES,
DRUMS AND PORTABLE CHANGEABLE
MESSAGE SIGNS SEE TEMPORARY SIGNAGE
PLANS SHEETS 13-16. FOR QUANTITIES SEE
SHEET 19.

LEGEND

- ➔ DIRECTION OF TRAFFIC
- ⊥ TEMPORARY CONSTRUCTION SIGN
- ▬ TYPE III BARRICADE
- ▨ WORK SPACE
- ⊞ BUS STOP
- ⊞ PIT LOCATION

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

<ul style="list-style-type: none"> - - - EXISTING FENCE - - - CONTOUR - - - STORM SEWER & CAT. BAS. - - - WATER MAIN & VALVE-IN-WELL - - - WATER MAIN & VALVE-IN-BOX 	<ul style="list-style-type: none"> - - - EXISTING SANITARY SEWER & MANHOLE - - - UTILITY POLE & GUY - - - FIRE HYDRANT ASSEMBLY - - - LIGHT POLE - - - END SECTION 	<ul style="list-style-type: none"> - - - EXISTING TELEPHONE - - - GAS LINE - - - CABLE T.V. - - - ELECTRIC - - - SIGN 	<ul style="list-style-type: none"> - - - EXISTING RD. & GRADE - - - LEFT EDGE/RD. GRADE - - - RIGHT EDGE/RD. GRADE - - - CURB & GUTTER - - - EDGE/GRAVEL 	<ul style="list-style-type: none"> - - - PROPOSED SANITARY SEWER & MANHOLE - - - STORM SEWER & CAT. BAS. - - - WATER MAIN W/F.H. ASSEM. - - - CONTOUR - - - ROAD & GRADE 	<ul style="list-style-type: none"> - - - PROPOSED CURB & GUTTER
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MED CENTER
MAINTENANCE OF TRAFFIC PLAN
DETOUR PLAN**

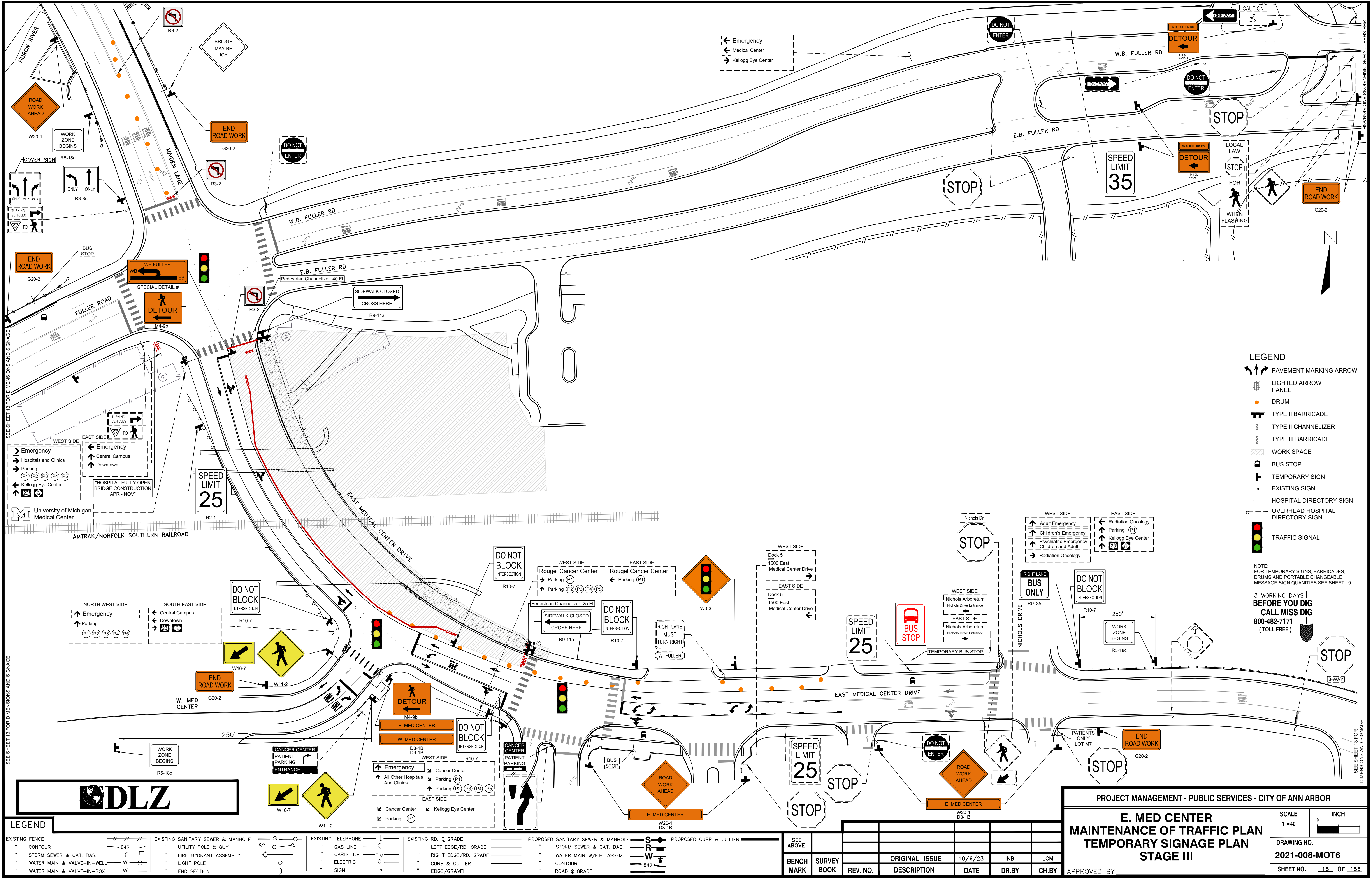
SCALE 1"=500'

DRAWING NO. 2021-008-MOT5

SHEET NO. 17 OF 155

SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
					10/6/23	INB	LCM

APPROVED BY _____



SEE SHEET 13 FOR DIMENSIONS AND SIGNAGE

SEE SHEET 13 FOR DIMENSIONS AND SIGNAGE

- LEGEND**
- PAVEMENT MARKING ARROW
 - LIGHTED ARROW PANEL
 - DRUM
 - TYPE II BARRICADE
 - TYPE II CHANNELIZER
 - TYPE III BARRICADE
 - WORK SPACE
 - BUS STOP
 - TEMPORARY SIGN
 - EXISTING SIGN
 - HOSPITAL DIRECTORY SIGN
 - OVERHEAD HOSPITAL DIRECTORY SIGN
 - TRAFFIC SIGNAL

NOTE:
FOR TEMPORARY SIGNS, BARRICADES,
DRUMS AND PORTABLE CHANGEABLE
MESSAGE SIGN QUANTITIES SEE SHEET 19.

**3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)**

- LEGEND**
- EXISTING FENCE
 - CONTOUR
 - STORM SEWER & CAT. BAS.
 - WATER MAIN & VALVE-IN-WELL
 - WATER MAIN & VALVE-IN-BOX
 - EXISTING SANITARY SEWER & MANHOLE
 - UTILITY POLE & GUY
 - FIRE HYDRANT ASSEMBLY
 - LIGHT POLE
 - END SECTION
 - EXISTING TELEPHONE
 - GAS LINE
 - CABLE T.V.
 - ELECTRIC
 - SIGN
 - EXISTING RD. & GRADE
 - LEFT EDGE/RD. GRADE
 - RIGHT EDGE/RD. GRADE
 - CURB & GUTTER
 - EDGE/GRAVEL
 - PROPOSED SANITARY SEWER & MANHOLE
 - STORM SEWER & CAT. BAS.
 - WATER MAIN W/F.H. ASSEM.
 - CONTOUR
 - ROAD & GRADE
 - PROPOSED CURB & GUTTER

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MED CENTER
MAINTENANCE OF TRAFFIC PLAN
TEMPORARY SIGNAGE PLAN
STAGE III**

SCALE	1"=40'	INCH			
DRAWING NO.	2021-008-MOT6				
SHEET NO.	18 OF 155				

APPROVED BY: _____

SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
				ORIGINAL ISSUE	10/6/23	INB	LCM

ITEM NUMBER	ITEM DESCRIPTION	QUANTITY	UNIT	PHASE	BRIDGE				MAX COUNT	QUANTITY	NOTES	
					ADV	1	2	3				4
JN												
LENGTH												
LENGTH/AREA/NUMBER PER STAGE(Ft/Sft/Ea)												
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn - \$Ea	12	Ea			6	12	4		12	12	
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper - \$Ea	12	Ea							12	12	
8120026	Pedestrian Type II Barricade, Temp - \$Ea	4	Ea			4	4	4		4	4	
8120027	Pedestrian Type II Channelizer, Temp - \$Ft	60	Ft			41	60	60		60	60	
8120252	Plastic Drum, Fluorescent, Furn - \$Ea	50	Ea			39	50	23		50	50	
8120253	Plastic Drum, Fluorescent, Oper - \$Ea	50	Ea							50	50	
SIGNS												
					SIGN NUMBER	SIGN DESCRIPTION	Sign Area (Sft)	NUMBER PER STAGE (Ea)				
8120340	Sign, Type A, Temp, Prismatic, Furn - \$\$ft	30	Sft								27	
8120341	Sign, Type A, Temp, Prismatic, Oper - \$\$ft	30	Sft								27	
					R1-1	Stop	36 x 36	9	1		1	9
					R3-2	No Left Turn	36 x 36	9		2	1	18
8120350	Sign, Type B, Temp, Prismatic, Furn - \$\$ft	1022	Sft								929	
8120351	Sign, Type B, Temp, Prismatic, Oper - \$\$ft	1022	Sft								929	
					G20-2	End Road Work	48 x 24	8	6			48
					W20-1	Road Work Ahead	48 x 48	16	15	6	4	336
					R5-18c	Work Zone Begins	48 x 48	16	6			96
					W20-2	Detour Ahead	48 x 48	16		4	4	64
					W3-3	Signal Ahead	48 x 48	16	1	1	1	16
					M4-8	Detour	24 x 12	2				0
					M4-8a	End Detour	24 x 18	3		1		3
					M4-9b	Pedestrian Detour	30 x 24	5		2	2	10
					M4-9R	Detour R	30 x 24	5		4	4	20
					M4-9L	Detour L	30 x 24	5		8	8	40
					M4-9S	Detour Straight	30 x 24	5		8	8	40
					M5-1L	Ahead-Left Arrow	21 x 15	2.2				0
					M5-1R	Ahead-Right Arrow	21 x 15	2.2				0
					M5-2R	Ahead-Angle-Right Arrow	21 x 15	2.2				0
					M6-2R	Angle-Right Arrow	21 x 15	2.2				0
					M6-1L	Left	21 x 15	2.2				0
					M6-1R	Right	21 x 15	2.2				0
					M6-3b	Straight	21 x 25	3.6				0
					R2-1	Speed Limit (35)	30 x 36	7.5	2			15
					R3-8d	Thru-Right Only	36 x 30	7.5	1			8
					R3-8c	Thru-Left Only	36 x 30	7.5	2	1	1	15
					R9-11a	Sidewalk Closed	48 x 24	8		1	2	16
					W20-8	Sidewalk Closed Ahead	24 x 18	3	1			3
					R10-7	Do Not Block Intersection	24 x 24	4	5	5	5	20
					RG-35	Right Lane Bus Only	24 x 24	4	1	1	1	4
					W1-4R	Shift Right	48 x 48	16	1	2		32
					W1-6L	One-Direction Large Arrow Left	60 x 30	12.5				0
					W1-6R	One-Direction Large Arrow Right	60 x 30	12.5	2	2		25
					W4-2L	Left Lane Ends	48 x 48	16	1			16
					W4-2R	Right Lane Ends	48 x 48	16	1			16
					W11-2	Pedestrian Crossing	48 x 48	16		3	3	48
					W16-7P	Diagonal Arrow	24 x 12	2		2		4
					W16-9P	Ahead	24 x 12	2		1		2
					W20-5L	Left Lane Closed Ahead	48 x 48	16	1			16
					W20-5R	Right Lane Close Ahead	48 x 48	16	1			16
					MISC	Engineer's Discretion		1				0
8120352	Sign, Type B, Temp, Prismatic, Spec, Furn - \$\$ft	386	Sft								351	
8120353	Sign, Type B, Temp, Prismatic, Spec, Oper - \$\$ft	386	Sft								351	
					D3-1B	E. MEDICAL CENTER DR.	48 x 12	4	11	4	1	60
					D3-1B	W. MEDICAL CENTER DR.	48 x 12	4			1	4
						Cancer Center Information	60 x 48	20	1			20
						Hospital/Cancer Signage	48 x 36	12	2			24
						Medical Science Signage	48 x 36	12	1			12
						Sidewalk Closed Ahead on Bridge	48 x 24	8		1		8
					R3-2	Fuller Left Turn	60 x 36	15		1	1	15
						EB Fuller Rd	48 x 12	4		19	19	76
						WB Fuller Rd	48 x 12	4		3		12
						Alternate Route	60 x 36	15	3			45
						SB Maiden Lane to EB Fuller Closed	60 x 36	15		5		75

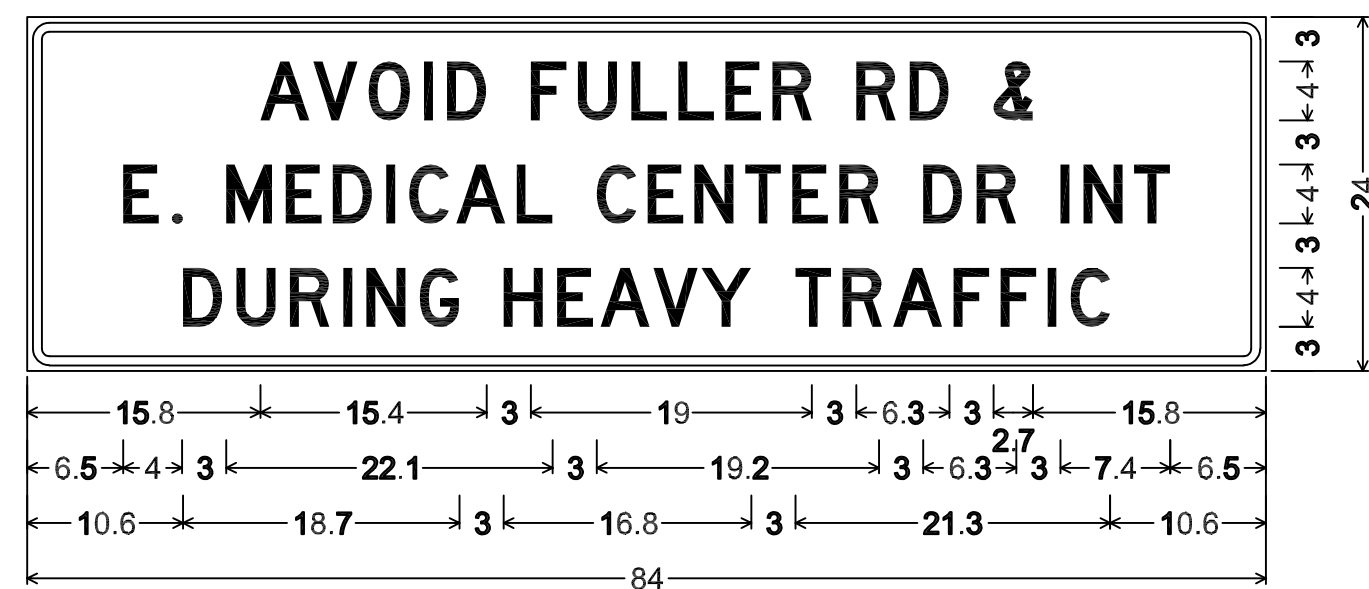
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

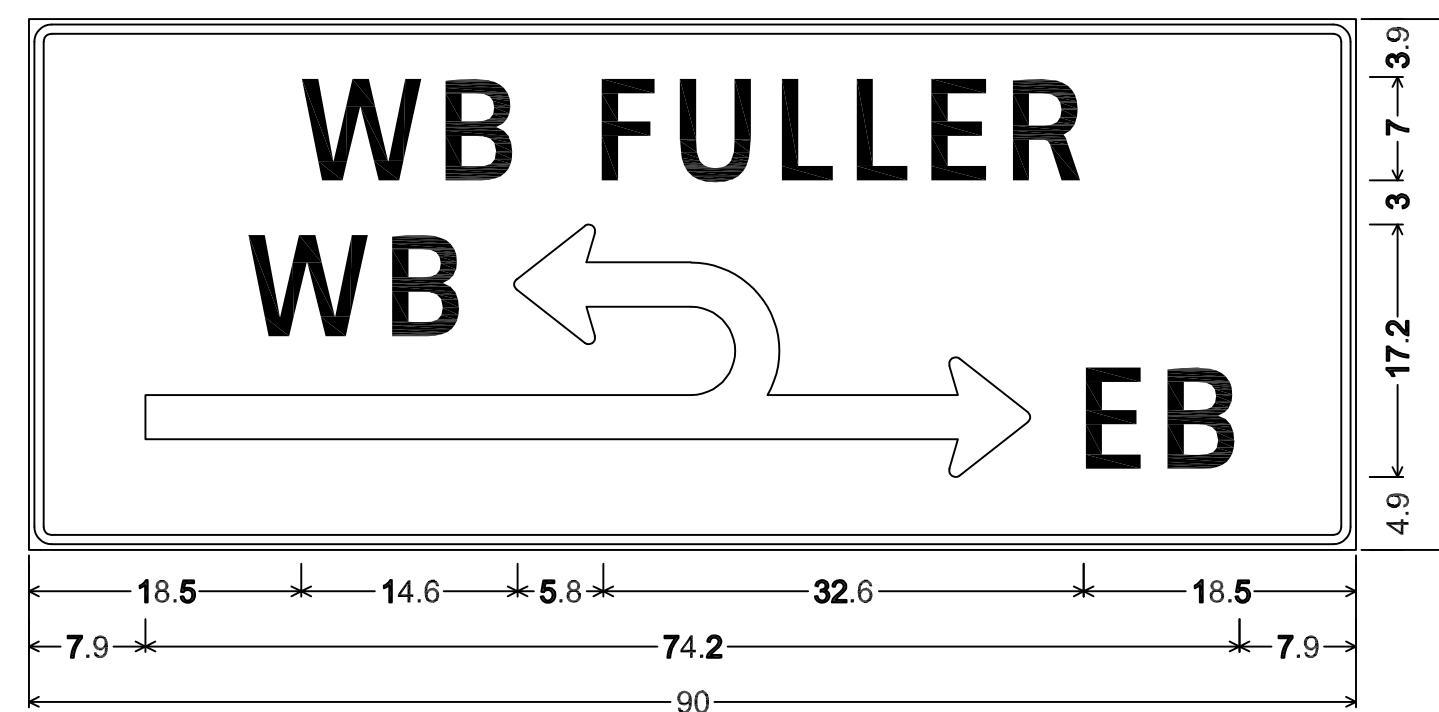
EXISTING FENCE --- --- ---	EXISTING SANITARY SEWER & MANHOLE ---S---	EXISTING TELEPHONE ---t---	EXISTING RD. & GRADE ---g---	PROPOSED SANITARY SEWER & MANHOLE ---S---	PROPOSED CURB & GUTTER ---c---
--- CONTOUR	--- UTILITY POLE & GUY	--- GAS LINE	--- LEFT EDGE/RD. GRADE	--- STORM SEWER & CAT. BAS.	--- SEE ABOVE
--- STORM SEWER & CAT. BAS.	--- FIRE HYDRANT ASSEMBLY	--- CABLE T.V.	--- RIGHT EDGE/RD. GRADE	--- WATER MAIN W/F.H. ASSEM.	--- BENCH MARK
--- WATER MAIN & VALVE-IN-WELL	--- LIGHT POLE	--- ELECTRIC	--- CURB & GUTTER	--- CONTOUR	--- SURVEY BOOK
--- WATER MAIN & VALVE-IN-BOX	--- END SECTION	--- SIGN	--- EDGE/GRAVEL	--- ROAD & GRADE	--- REV. NO.

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

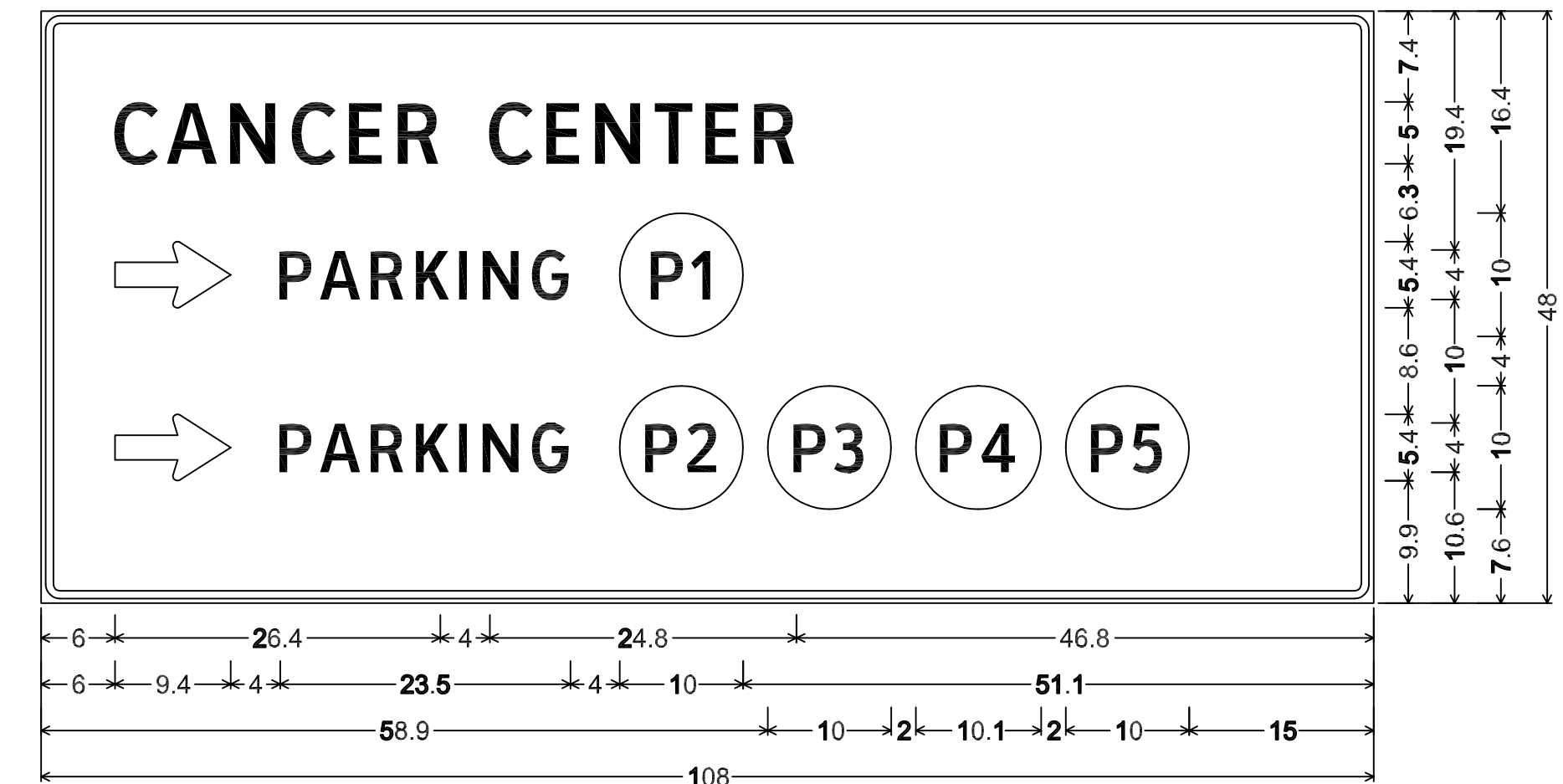
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE MAINTENANCE OF TRAFFIC PLAN M.O.T. QUANTITIES	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT7	
SHEET NO. <u>19</u> OF <u>155</u>	
APPROVED BY: _____	



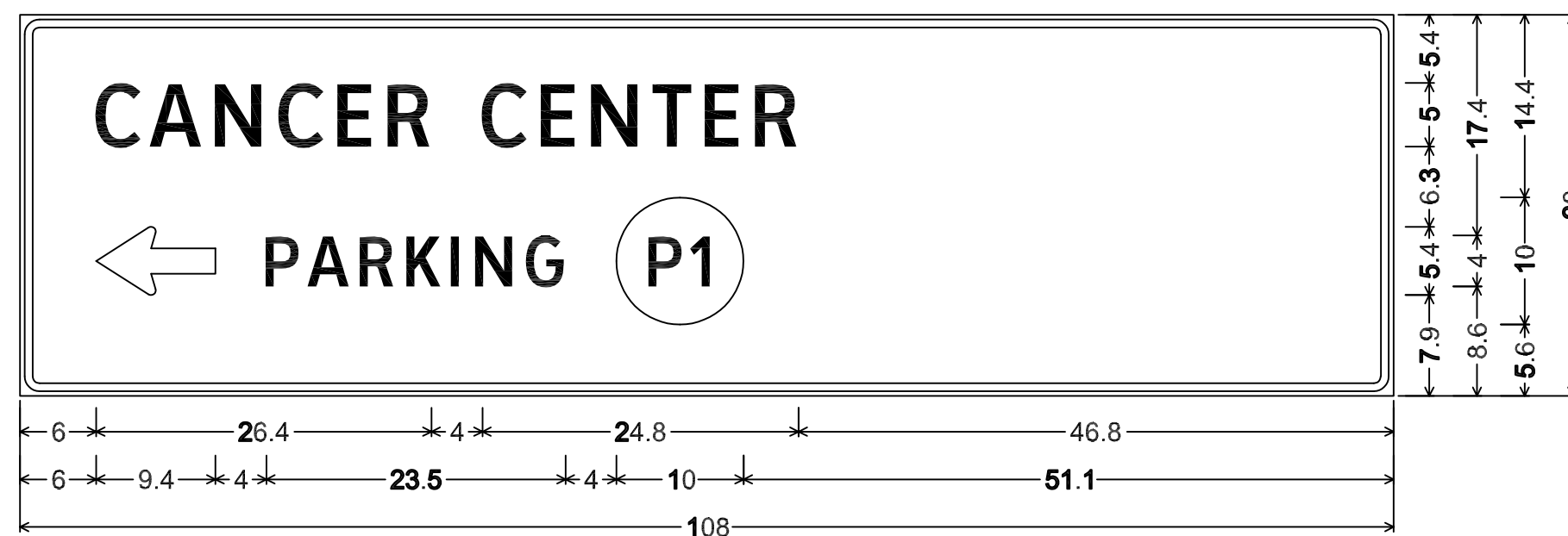
SPECIAL DETAIL A:
 1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
 "AVOID", D; "FULLER", D; "RD", D; "&", D; "E.", D; "MEDICAL", D;
 "CENTER", D; "DR", D; "INT", D; "DURING", D; "HEAVY", D;
 "TRAFFIC", D;



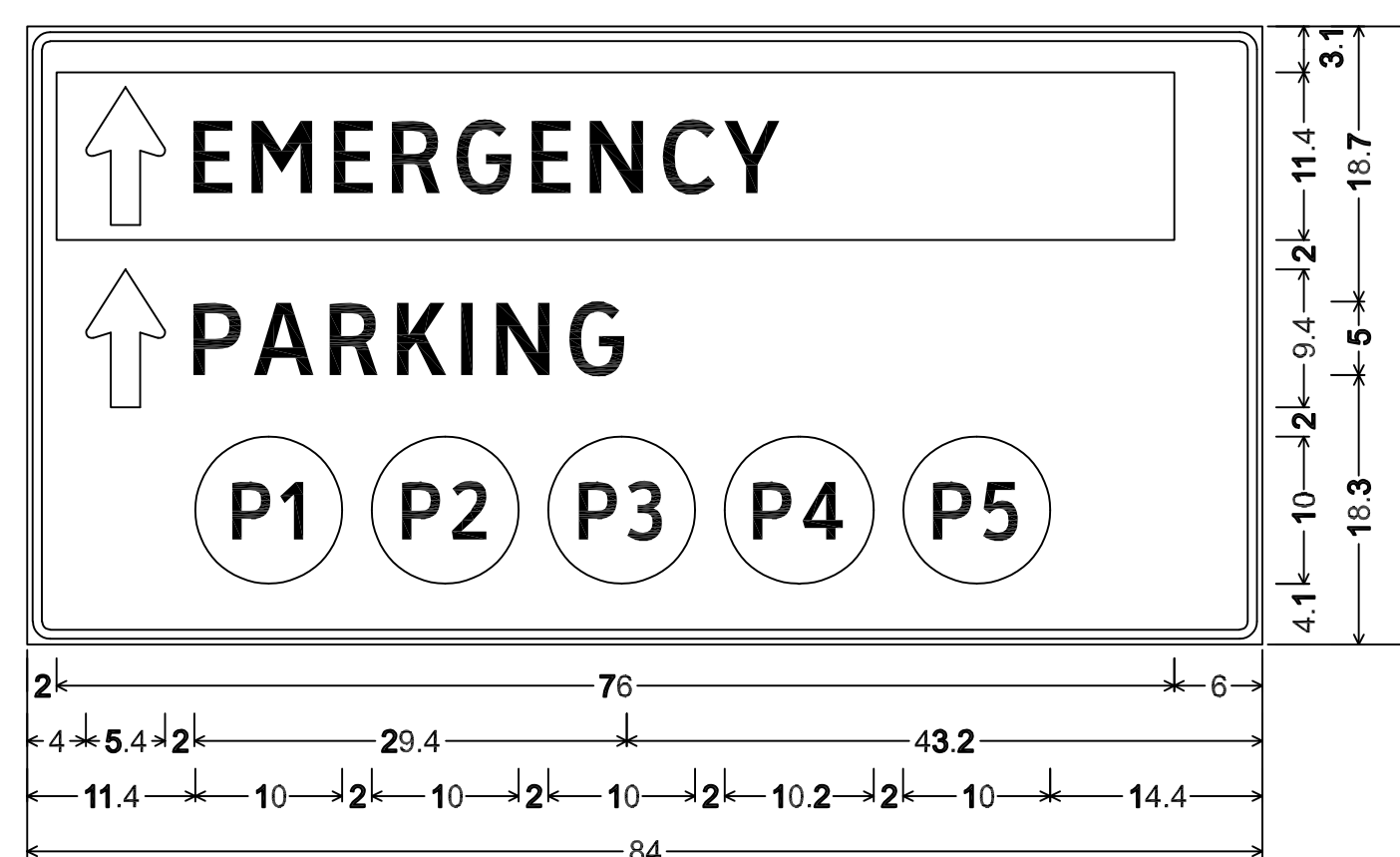
SPECIAL DETAIL B:
 0.6" Border, 0.4" Indent, Black on Orange;
 "WB FULLER", ClearviewHwy-3-W;



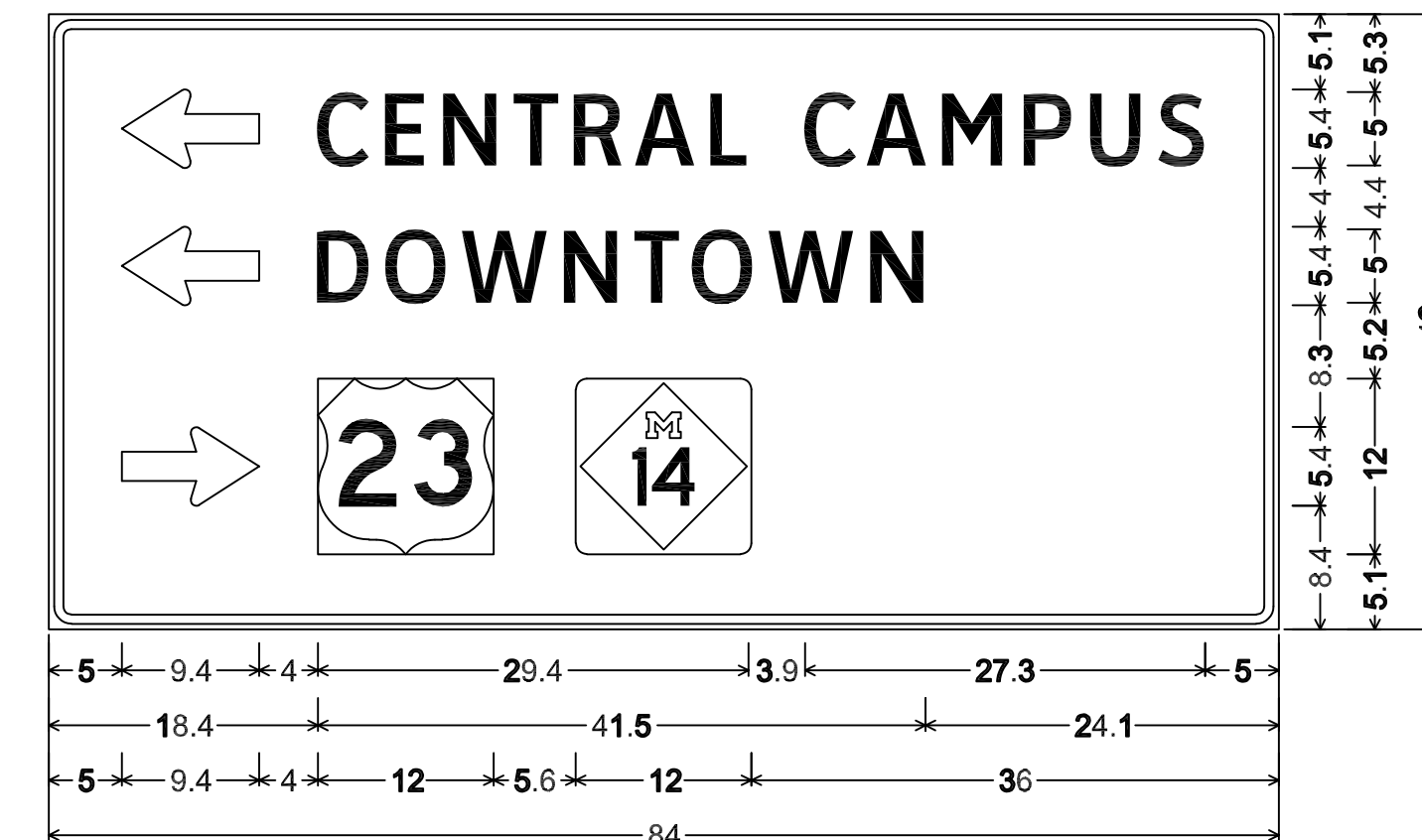
SPECIAL DETAIL B:
 0.6" Border, 0.4" Indent, Black on Orange;
 "CANCER CENTER", ClearviewHwy-3-W; Standard Arrow Custom 9.4" X 5.4" 0°;
 "PARKING", ClearviewHwy-3-W; Rounded Rectangle 5.0" Radius;
 Standard Arrow Custom 9.4" X 5.4" 0°; "PARKING", ClearviewHwy-3-W; Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;



SPECIAL DETAIL B:
 0.6" Border, 0.4" Indent, Black on Orange;
 "CANCER CENTER", ClearviewHwy-3-W; Standard Arrow Custom 9.4" X 5.4" 180°;
 "PARKING", ClearviewHwy-3-W; Rounded Rectangle 5.0" Radius;



SPECIAL DETAIL B:
 0.6" Border, 0.4" Indent, Black on Orange;
 Rectangle Red;
 " " White, E Mod; Standard Arrow Custom 9.4" X 5.4" 90°;
 "PARKING", ClearviewHwy-3-W; " " White, E Mod;
 Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;
 Rounded Rectangle 5.0" Radius;



SPECIAL DETAIL B:
 0.6" Border, 0.4" Indent, Black on Orange;
 Standard Arrow Custom 9.4" X 5.4" 180°;
 "CENTRAL CAMPUS", ClearviewHwy-3-W;
 Standard Arrow Custom 9.4" X 5.4" 180°; "DOWNTOWN", ClearviewHwy-3-W;
 Standard Arrow Custom 9.4" X 5.4" 0°;
 State Highway 14 M1-6b;

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. @ GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER	SEE ABOVE
* CONTOUR	* UTILITY POLE & GUY	* GAS LINE	* LEFT EDGE/RD. GRADE	* STORM SEWER & CAT. BAS.	847	BENCH MARK
* STORM SEWER & CAT. BAS.	* FIRE HYDRANT ASSEMBLY	* CABLE T.V.	* RIGHT EDGE/RD. GRADE	* WATER MAIN W/F.H. ASSEM.	847	SURVEY BOOK
* WATER MAIN & VALVE-IN-WELL	* LIGHT POLE	* ELECTRIC	* CURB & GUTTER	* CONTOUR		
* WATER MAIN & VALVE-IN-BOX	* END SECTION	* SIGN	* EDGE/GRAVEL	* ROAD @ GRADE		

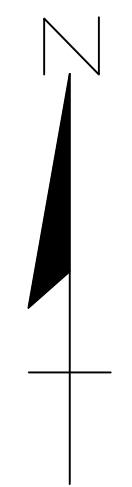
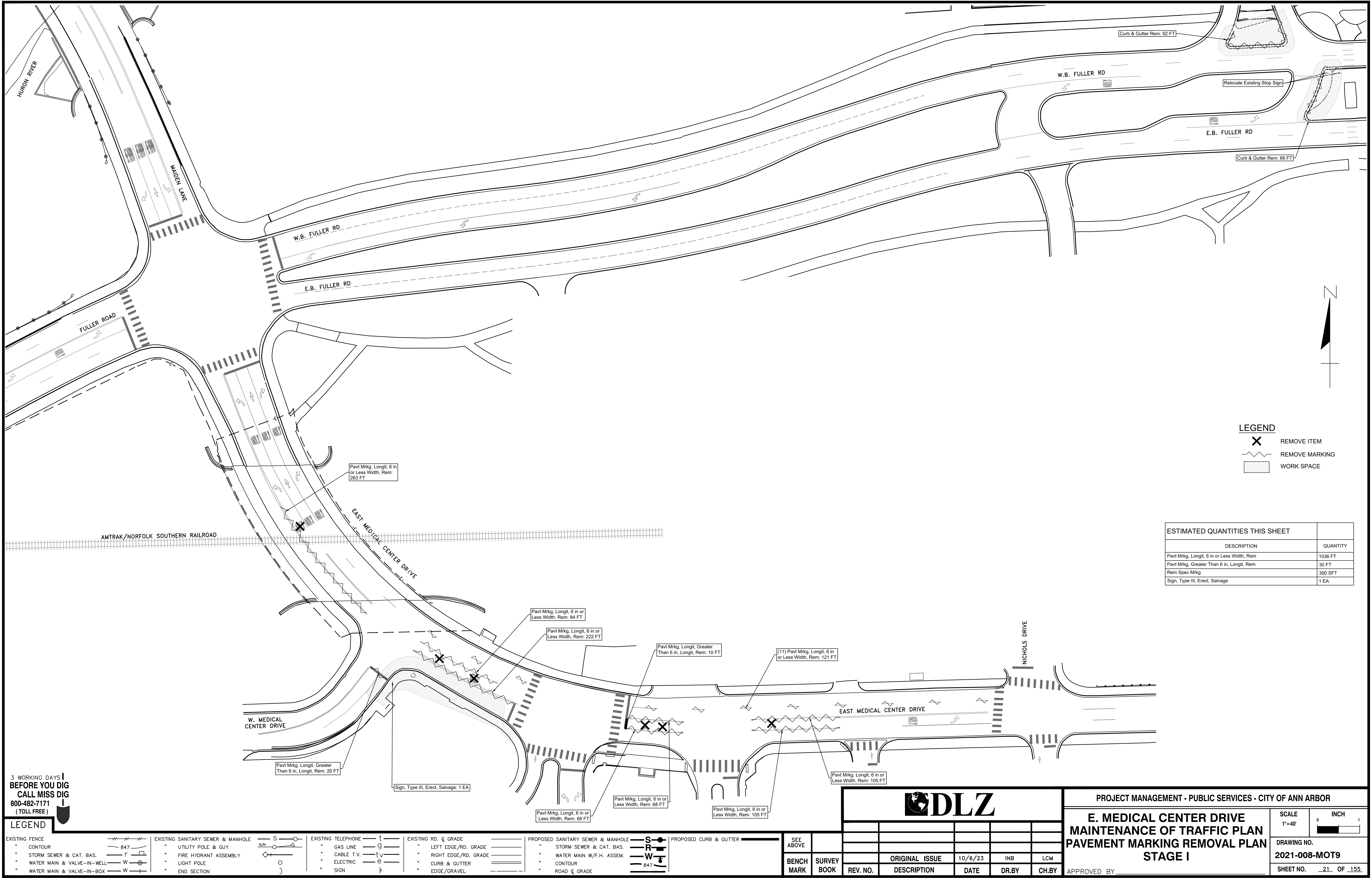
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
 SIGN DETAIL
 FULLER RD AT E. MEDICAL CENTER RD**

SCALE HOR. 1"=40' VERT. 1"=4'	INCH 0 1
DRAWING NO. 2021-008-MOT8	
SHEET NO. <u>20</u> OF 155	

APPROVED BY _____



LEGEND

- REMOVE ITEM
- REMOVE MARKING
- WORK SPACE

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pavt Mrkg, Longit, 6 in or Less Width, Rem	1036 FT
Pavt Mrkg, Greater Than 6 in, Longit, Rem	30 FT
Rem Spec Mrkg	300 SFT
Sign, Type III, Erect, Salvage	1 EA

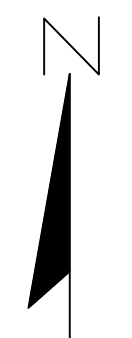
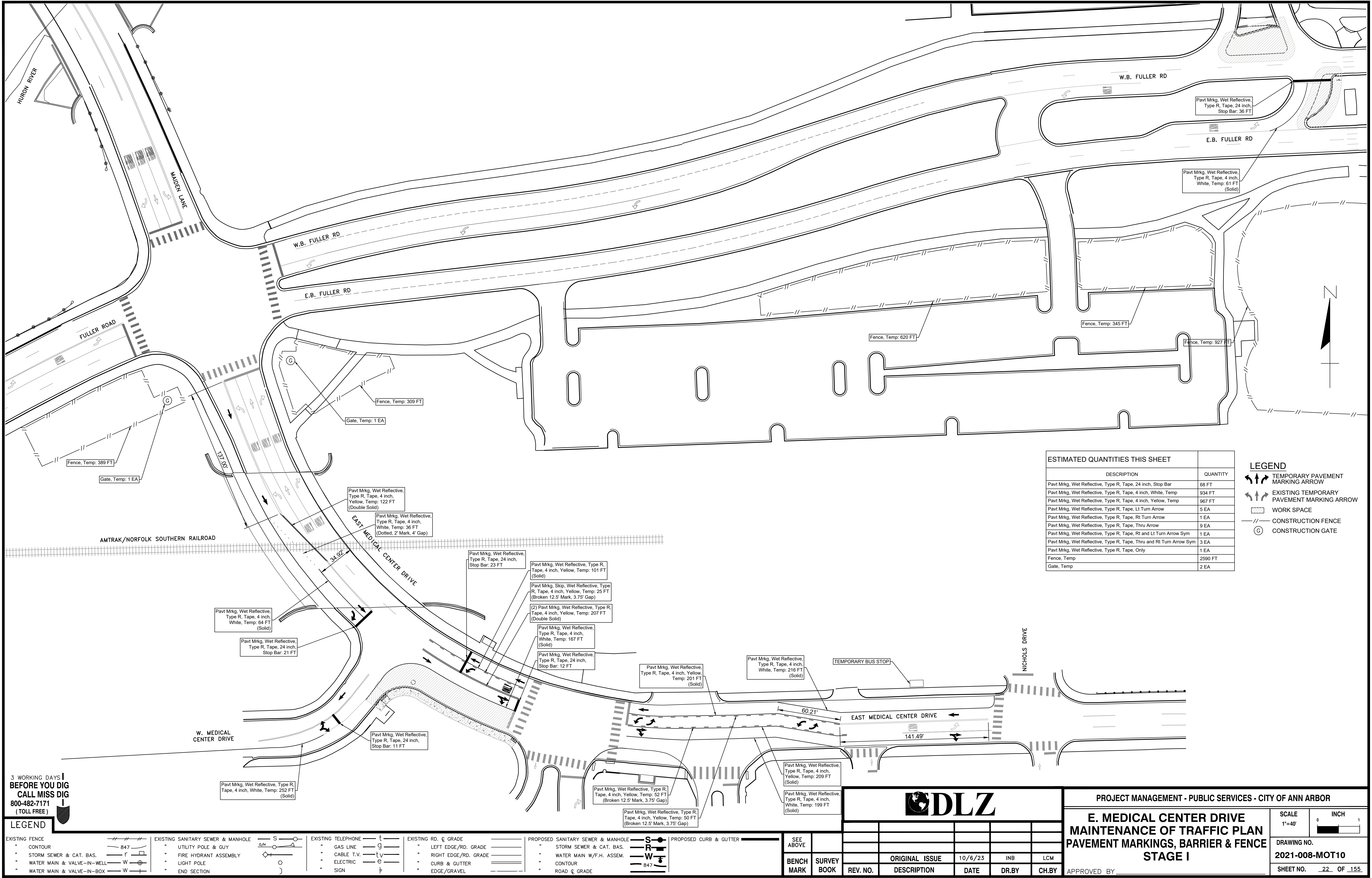
3 WORKING DAYS!
BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD, C GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD C GRADE	REV. NO.

DLZ					

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR					
E. MEDICAL CENTER DRIVE MAINTENANCE OF TRAFFIC PLAN PAVEMENT MARKING REMOVAL PLAN STAGE I					
SCALE	1"=40'	INCH	0	1	
DRAWING NO.	2021-008-MOT9				
SHEET NO.	21	OF	155		
APPROVED BY					



ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pavt Mrkg, Wet Reflective, Type R, Tape, 24 inch, Stop Bar	68 FT
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp	934 FT
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	967 FT
Pavt Mrkg, Wet Reflective, Type R, Tape, Lt Turn Arrow	5 EA
Pavt Mrkg, Wet Reflective, Type R, Tape, Rt Turn Arrow	1 EA
Pavt Mrkg, Wet Reflective, Type R, Tape, Thru Arrow	9 EA
Pavt Mrkg, Wet Reflective, Type R, Tape, Rt and Lt Turn Arrow Sym	1 EA
Pavt Mrkg, Wet Reflective, Type R, Tape, Thru and Rt Turn Arrow Sym	3 EA
Pavt Mrkg, Wet Reflective, Type R, Tape, Only	1 EA
Fence, Temp	2590 FT
Gate, Temp	2 EA

LEGEND	
	TEMPORARY PAVEMENT MARKING ARROW
	EXISTING TEMPORARY PAVEMENT MARKING ARROW
	WORK SPACE
	CONSTRUCTION FENCE
	CONSTRUCTION GATE

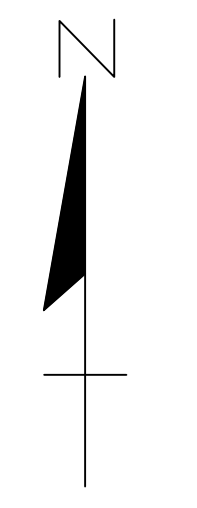
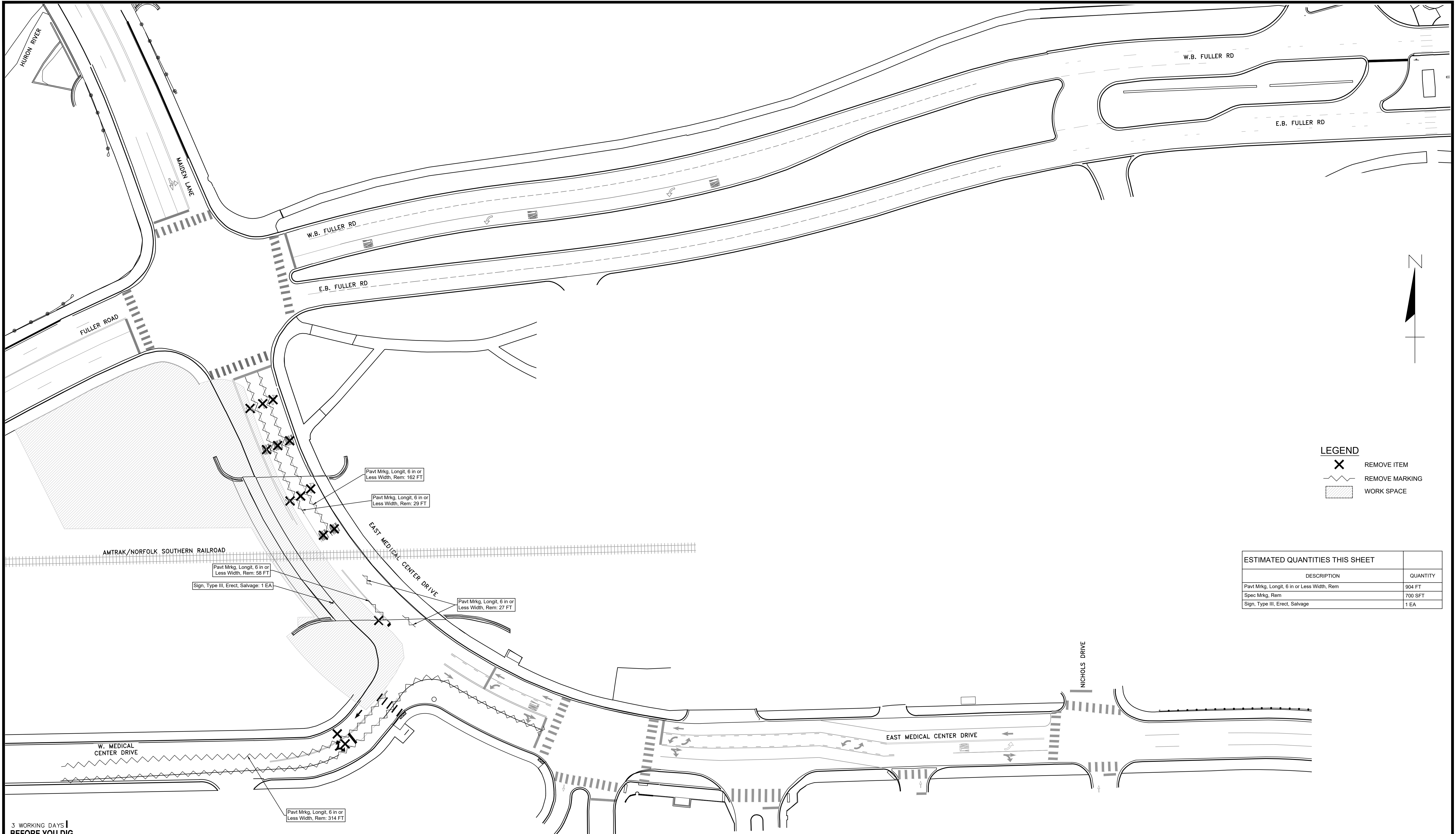
3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE MAINTENANCE OF TRAFFIC PLAN PAVEMENT MARKINGS, BARRIER & FENCE STAGE I	
SCALE 1"=40'	INCH 0 1
DRAWING NO. 2021-008-MOT10	
SHEET NO. 22 OF 155	



LEGEND

- REMOVE ITEM
- REMOVE MARKING
- WORK SPACE

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pavt Mrkg, Longit, 6 in or Less Width, Rem	904 FT
Spec Mrkg, Rem	700 SFT
Sign, Type III, Erect, Salvage	1 EA

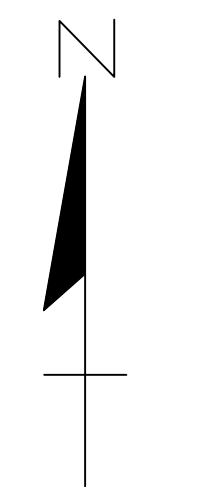
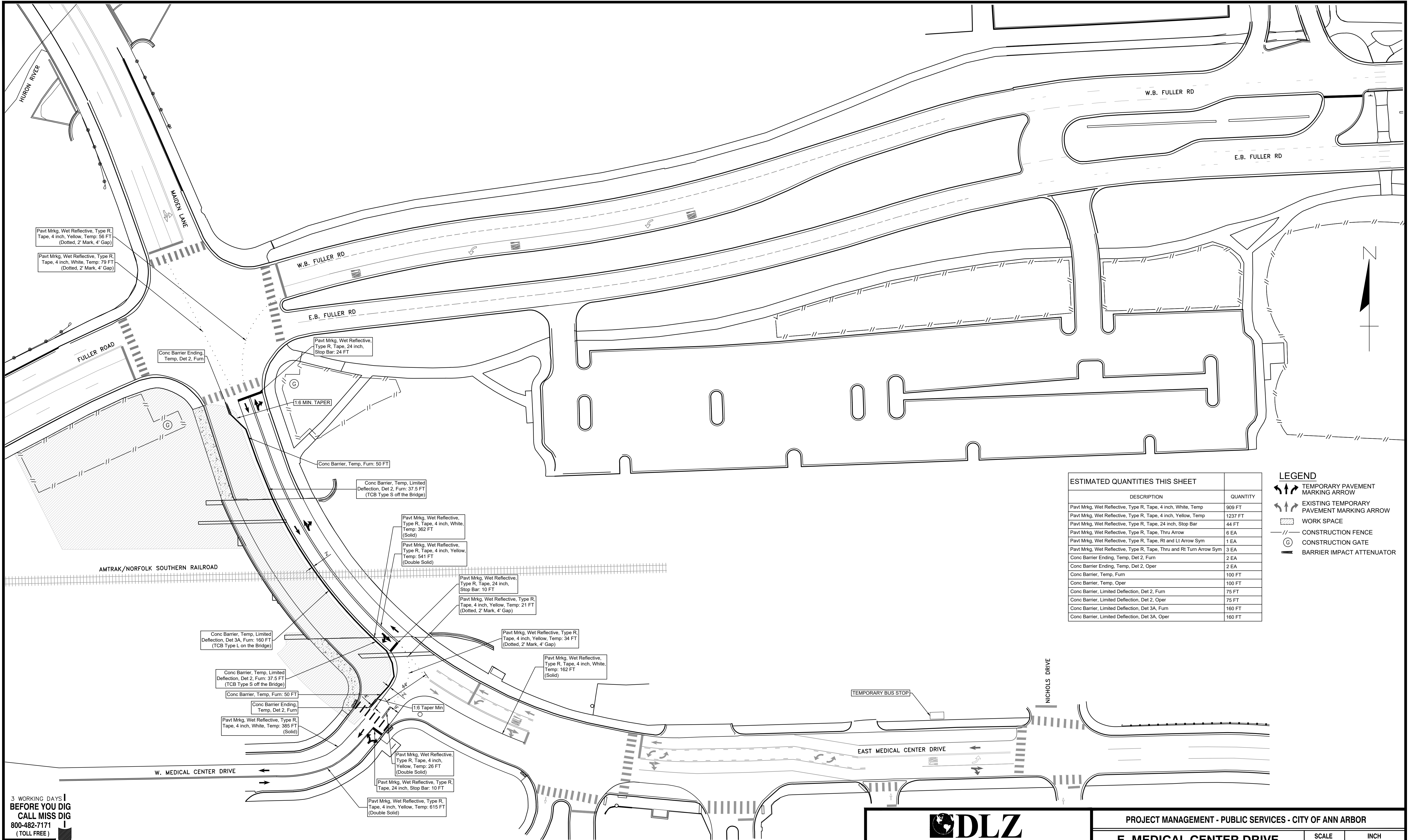
3 WORKING DAYS!
BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. C/ GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- S -	- t -	- - - - -	- S -	- - - - -
- - - - -	- UPG -	- g -	- - - - -	- S -	- - - - -
- - - - -	- FHA -	- c -	- - - - -	- S -	- - - - -
- - - - -	- LP -	- e -	- - - - -	- W -	- - - - -
- - - - -	- ES -	- s -	- - - - -	- W -	- - - - -
- - - - -		- b -	- - - - -	- W -	- - - - -
				- W -	- - - - -
				- W -	- - - - -

DLZ					
SEE ABOVE					
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY
			ORIGINAL ISSUE	10/6/23	INB
					LCM
					CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE MAINTENANCE OF TRAFFIC PLAN PAVEMENT MARKING REMOVAL PLAN STAGE II	
SCALE 1"=40'	INCH 0 1
DRAWING NO. 2021-008-MOT11	
SHEET NO. <u>23</u> OF <u>155</u>	
APPROVED BY _____	



ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pav't M'kg, Wet Reflective, Type R, Tape, 4 inch, White, Temp	909 FT
Pav't M'kg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	1237 FT
Pav't M'kg, Wet Reflective, Type R, Tape, 24 inch, Stop Bar	44 FT
Pav't M'kg, Wet Reflective, Type R, Tape, Thru Arrow	6 EA
Pav't M'kg, Wet Reflective, Type R, Tape, Rt and Lt Arrow Sym	1 EA
Pav't M'kg, Wet Reflective, Type R, Tape, Thru and Rt Turn Arrow Sym	3 EA
Conc Barrier Ending, Temp, Det 2, Furn	2 EA
Conc Barrier, Temp, Furn	100 FT
Conc Barrier, Temp, Oper	100 FT
Conc Barrier, Limited Deflection, Det 2, Furn	75 FT
Conc Barrier, Limited Deflection, Det 2, Oper	75 FT
Conc Barrier, Limited Deflection, Det 3A, Furn	160 FT
Conc Barrier, Limited Deflection, Det 3A, Oper	160 FT

LEGEND	
	TEMPORARY PAVEMENT MARKING ARROW
	EXISTING TEMPORARY PAVEMENT MARKING ARROW
	WORK SPACE
	CONSTRUCTION FENCE
	CONSTRUCTION GATE
	BARRIER IMPACT ATTENUATOR

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
MAINTENANCE OF TRAFFIC PLAN
PAVEMENT MARKINGS, BARRIER & FENCE
STAGE II**

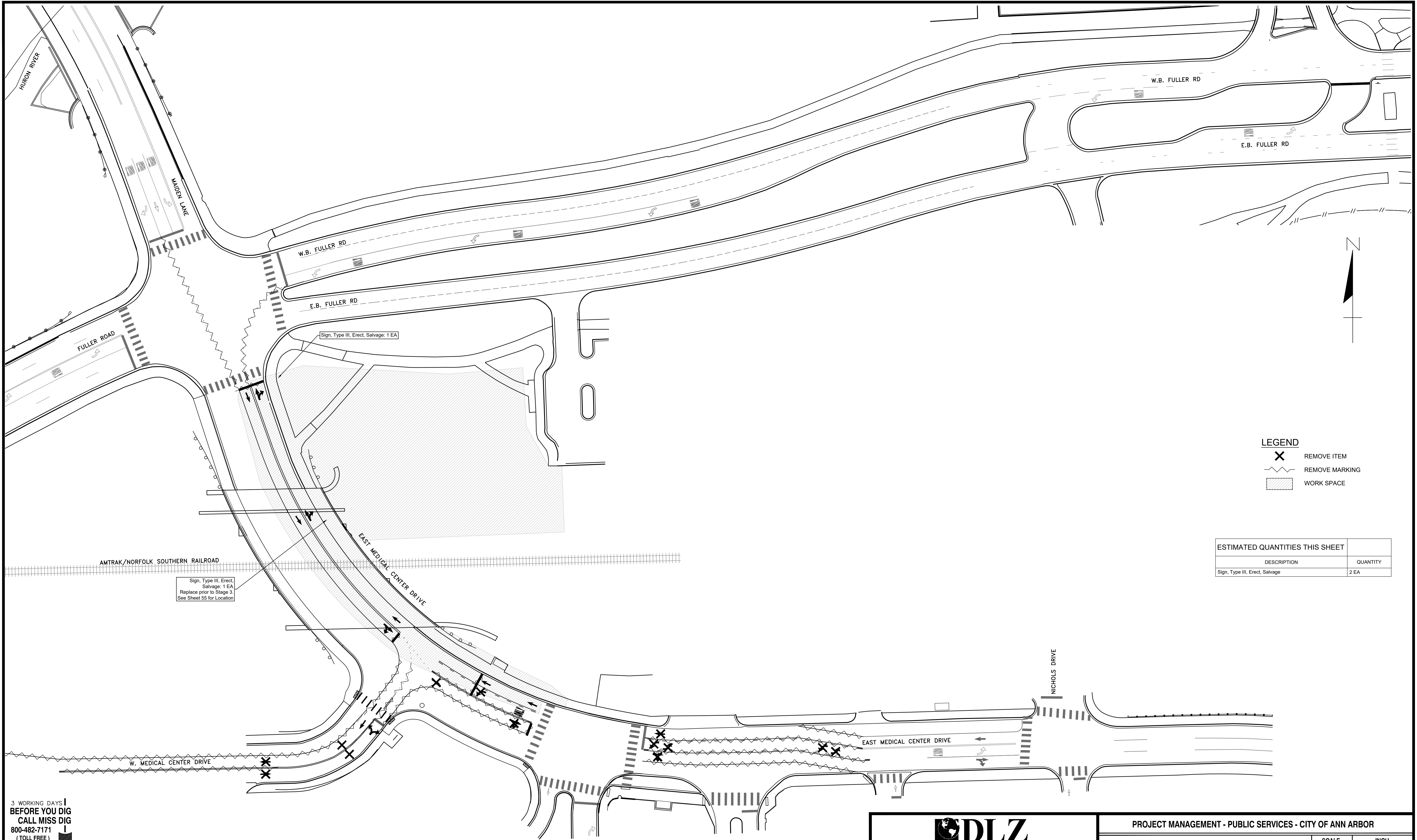
SCALE 1"=40'

DRAWING NO. 2021-008-MOT12

SHEET NO. 24 OF 155

APPROVED BY: _____

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
1	ORIGINAL ISSUE	10/6/23	INB	LCM



LEGEND

- REMOVE ITEM
- REMOVE MARKING
- WORK SPACE

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Sign, Type III, Erect, Salvage	2 EA

Sign, Type III, Erect, Salvage: 1 EA
Replace prior to Stage 3.
See Sheet 55 for Location

Sign, Type III, Erect, Salvage: 1 EA

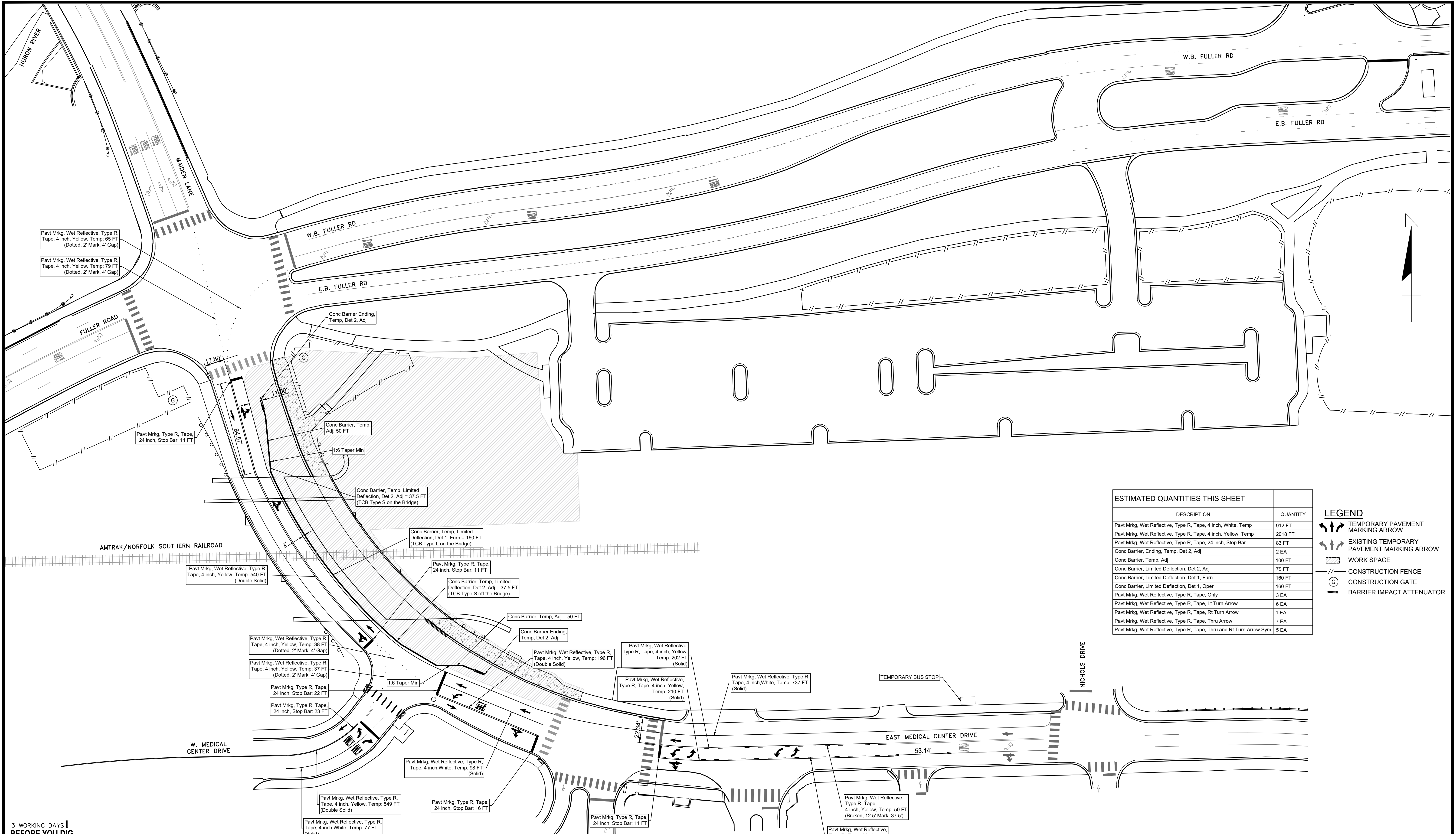
3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- S -	- t -	- - - - -	- S -	- - - - -
- - - - -	- U -	- g -	- - - - -	- R -	- - - - -
- - - - -	- F -	- c -	- - - - -	- W -	- - - - -
- - - - -	- L -	- e -	- - - - -	- 847 -	- - - - -
- - - - -	- E -	- s -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -

DLZ					
SEE ABOVE					
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY
			ORIGINAL ISSUE	10/6/23	INB
					LCM
					CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE MAINTENANCE OF TRAFFIC PLAN PAVEMENT MARKING REMOVAL PLAN STAGE III	
SCALE 1"=40'	INCH 0 1
DRAWING NO. 2021-008-MOT13	
SHEET NO. 25 OF 155	
APPROVED BY _____	



ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pav't Mrkg., Wet Reflective, Type R, Tape, 4 inch, White, Temp	912 FT
Pav't Mrkg., Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	2018 FT
Pav't Mrkg., Wet Reflective, Type R, Tape, 24 inch, Stop Bar	83 FT
Conc Barrier, Ending, Temp, Det 2, Adj	2 EA
Conc Barrier, Temp, Adj	100 FT
Conc Barrier, Limited Deflection, Det 2, Adj	75 FT
Conc Barrier, Limited Deflection, Det 1, Furn	160 FT
Conc Barrier, Limited Deflection, Det 1, Oper	160 FT
Pav't Mrkg., Wet Reflective, Type R, Tape, Only	3 EA
Pav't Mrkg., Wet Reflective, Type R, Tape, Lt Turn Arrow	6 EA
Pav't Mrkg., Wet Reflective, Type R, Tape, Rt Turn Arrow	1 EA
Pav't Mrkg., Wet Reflective, Type R, Tape, Thru Arrow	7 EA
Pav't Mrkg., Wet Reflective, Type R, Tape, Thru and Rt Turn Arrow Sym	5 EA

LEGEND	
	TEMPORARY PAVEMENT MARKING ARROW
	EXISTING TEMPORARY PAVEMENT MARKING ARROW
	WORK SPACE
	CONSTRUCTION FENCE
	CONSTRUCTION GATE
	BARRIER IMPACT ATTENUATOR

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND	
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE
CONTOUR	UTILITY POLE & GUY
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY
WATER MAIN & VALVE-IN-WELL	LIGHT POLE
WATER MAIN & VALVE-IN-BOX	END SECTION

EXISTING TELEPHONE	EXISTING RD. & GRADE
GAS LINE	LEFT EDGE/RD. GRADE
CABLE T.V.	RIGHT EDGE/RD. GRADE
ELECTRIC	CURB & GUTTER
SIGN	EDGE/GRAVEL

PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
STORM SEWER & CAT. BAS.	SEE ABOVE
WATER MAIN W/F.H. ASSEM.	BENCH MARK
CONTOUR	SURVEY BOOK
ROAD & GRADE	REV. NO.

SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
				ORIGINAL ISSUE	10/6/23	INB	LCM

DLZ

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE MAINTENANCE OF TRAFFIC PLAN PAVEMENT MARKINGS, BARRIER & FENCE STAGE III





















SCALE 1"=40'






















DRAWING NO. 2021-008-MOT14

SHEET NO. 26 OF 155










APPROVED BY: _____

SIGNALS

-  ANTENNA
-  CASE SIGN (1-WAY OR 2-WAY)
-  CASE SIGN (4-WAY)
-  DEDICATED SHORT RANGE COMMUNICATIONS
-  CONTROLLER CABINET - POLE MOUNTED
-  CONTROL EMERGENCY PREEMPTION OPTICOM
-  DILEMMA ZONE DETECTION
-  GLOBAL POSITIONING SYSTEM MODULE
-  GUY ANCHOR
-  PEDESTRIAN PEDESTAL
-  PEDESTRIAN PUSHBUTTON
-  POLE MAST ARM (LENGTH VARIES) - EXISTING
-  POLE MAST ARM (LENGTH VARIES)
-  POLE STRAIN
-  ROAD SIGN W/ FLASHING SIGN OPTICAL (1-WAY)
-  SIGNAL HANDHOLE - POLYMER CONCRETE
-  SIGNAL HANDHOLE - 2 FOOT ROUND
-  SIGNAL HANDHOLE - 3 FOOT ROUND
-  SIGNAL HANDHOLE - 2 FOOT SQUARE
-  SIGNAL HANDHOLE - 4 FOOT SQUARE

-  SIGNAL HEAD PEDESTRIAN - EXISTING
-  SIGNAL HEAD PEDESTRIAN 1-WAY
-  SIGNAL HEAD PEDESTRIAN 2-WAY
-  SIGNAL HEAD VEHICLE 1-WAY - EXISTING
-  SIGNAL HEAD VEHICLE 2-WAY - EXISTING
-  SIGNAL HEAD VEHICLE 3-WAY - EXISTING
-  SIGNAL HEAD VEHICLE 4-WAY - EXISTING
-  SIGNAL HEAD VEHICLE 1-WAY
-  SIGNAL HEAD VEHICLE 2-WAY
-  SIGNAL HEAD VEHICLE 3-WAY
-  SIGNAL HEAD VEHICLE 4-WAY
-  SIGNAL HEAD VEHICLE BAGGED
-  SIGNAL HEAD VEHICLE PROGRAMMABLE
-  VEHICLE DETECTION CAMERA
-  VEHICLE DETECTION CAMERA - HEMISPHERICAL
-  VEHICLE DETECTION LOOP
-  VEHICLE DETECTION - RADAR
-  WIRELESS VEHICLE DETECTION RADIO RECEIVER
-  WIRELESS VEHICLE DETECTION RADIO REPEATER
-  WIRELESS VEHICLE DETECTION SENSOR - EXISTING
-  WIRELESS VEHICLE DETECTION SENSOR

CABLING / WIRING DIAGRAM

-  CIRCUIT BREAKER
-  COILED WIRE
-  FUSE
-  FUSE SWITCH
-  GROUND
-  ILLUMINATED CASE SIGN
-  METER
-  SERVICE DISCONNECT
-  SIGNAL HEAD

NOTE:

EXISTING ITEMS ARE REPRESENTED BY THIN LINE WEIGHTS.
PROPOSED ITEMS ARE REPRESENTED BY HEAVIER LINE WEIGHTS.

LEGEND

- | | | | | | |
|------------------------------|-----------------------------------|--------------------|------------------------|-----------------------------------|------------------------|
| EXISTING FENCE | EXISTING SANITARY SEWER & MANHOLE | EXISTING TELEPHONE | EXISTING RD. & GRADE | PROPOSED SANITARY SEWER & MANHOLE | PROPOSED CURB & GUTTER |
| " CONTOUR | " UTILITY POLE & GUY | " GAS LINE | " LEFT EDGE/RD. GRADE | " STORM SEWER & CAT. BAS. | " SEE ABOVE |
| " STORM SEWER & CAT. BAS. | " FIRE HYDRANT ASSEMBLY | " CABLE T.V. | " RIGHT EDGE/RD. GRADE | " WATER MAIN & VALVE-IN-BOX | " BENCH MARK |
| " WATER MAIN & VALVE-IN-WELL | " LIGHT POLE | " ELECTRIC | " CURB & GUTTER | " CONTOUR | " SURVEY BOOK |
| " WATER MAIN & VALVE-IN-BOX | " END SECTION | " SIGN | " EDGE/GRAVEL | " ROAD & GRADE | " REV. NO. |

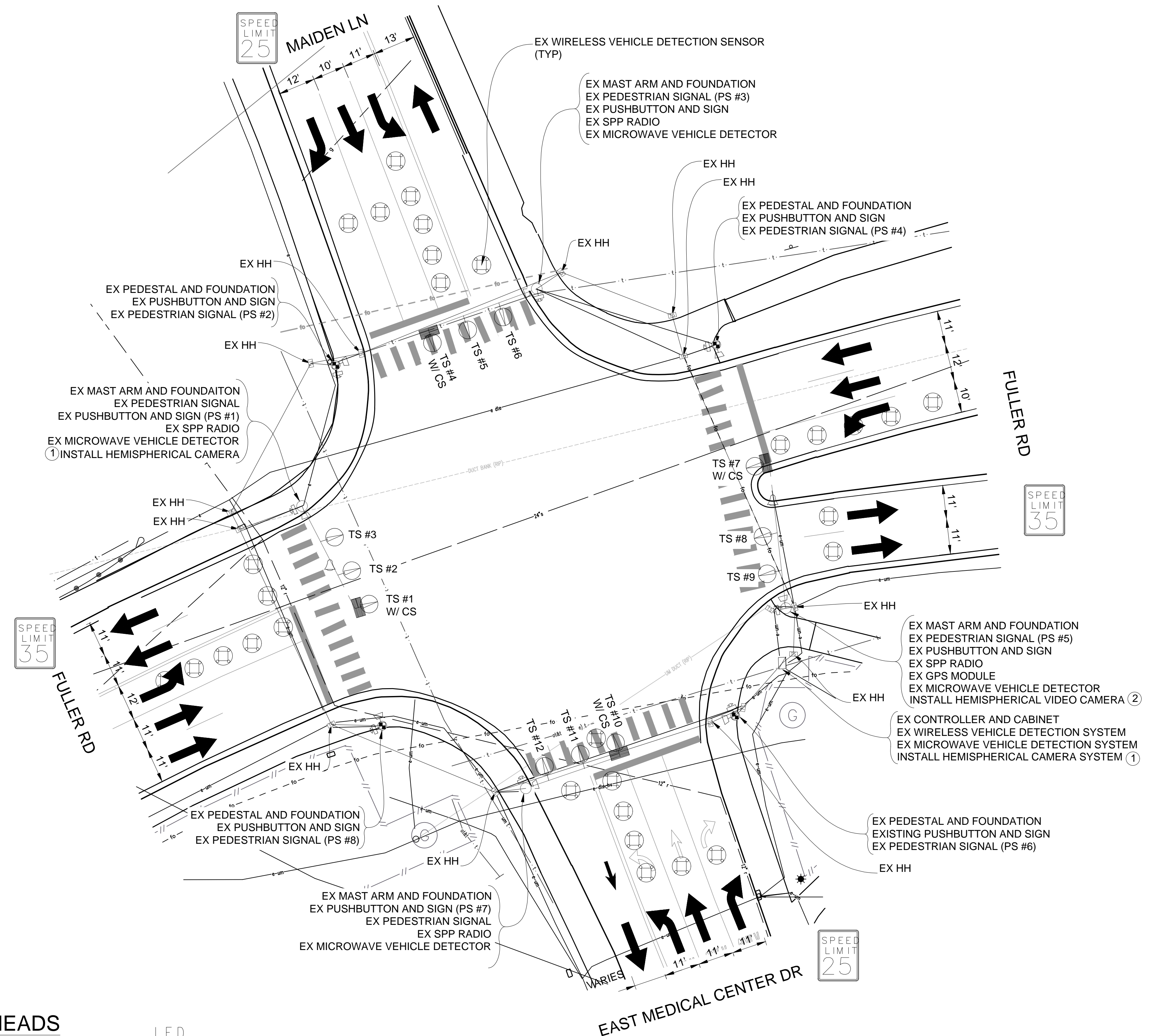
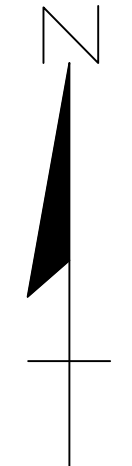


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE
TRAFFIC SIGNAL PLANS
LEGEND

SCALE	NO SCALE	INCH	1
DRAWING NO.	2021-008-MOT23		
SHEET NO.	27	OF	155

APPROVED BY _____

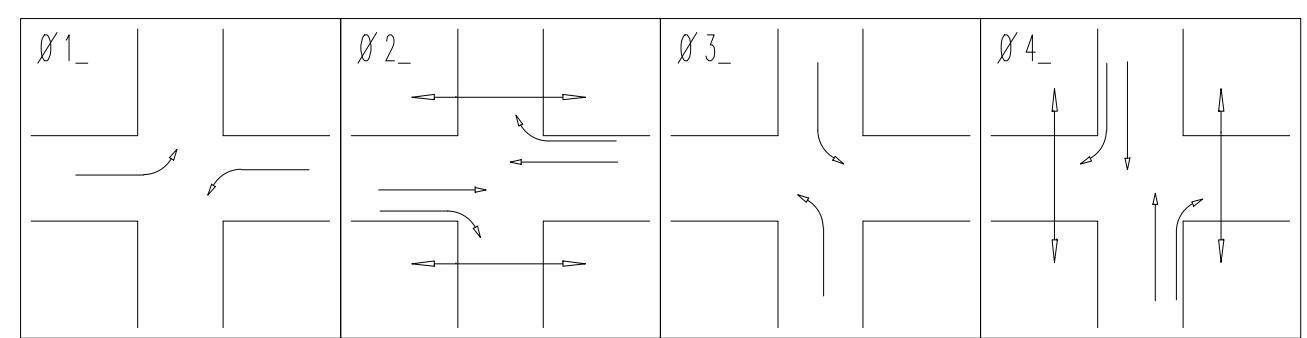


HEMISPHERICAL CAMERAS TO BE MOUNTED AT 25' OVER THE INTERSECTION

UTILIZE EXISTING CONDUIT & HANDHOLES WHERE POSSIBLE, OTHERWISE INSTALL NEW AS DIRECTED BY ENGINEER.

TIME OF BAGGING AND UNBAGGING OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

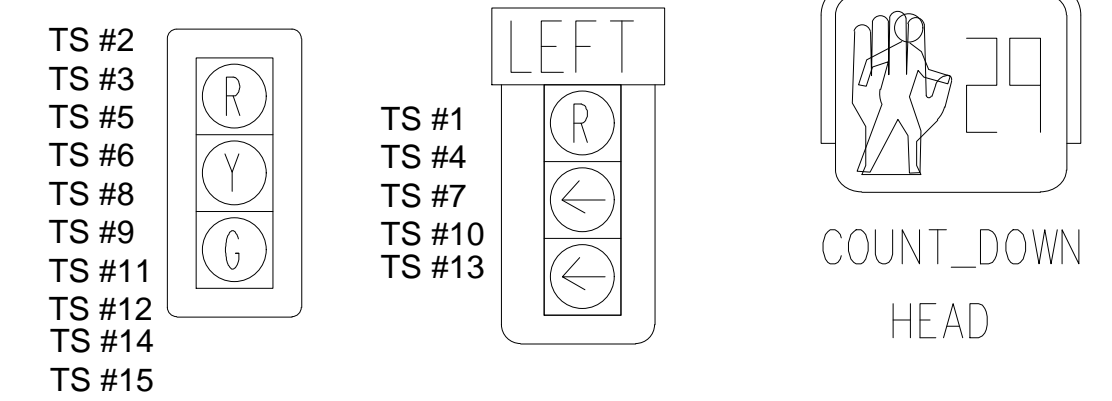
CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION



PHASE DIAGRAM

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Hemispherical Video Detection Camera	2 Ea.
②	Hemispherical Video Detection System	1 Ea.

SIGNAL HEADS



STAGE 1 PLAN

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

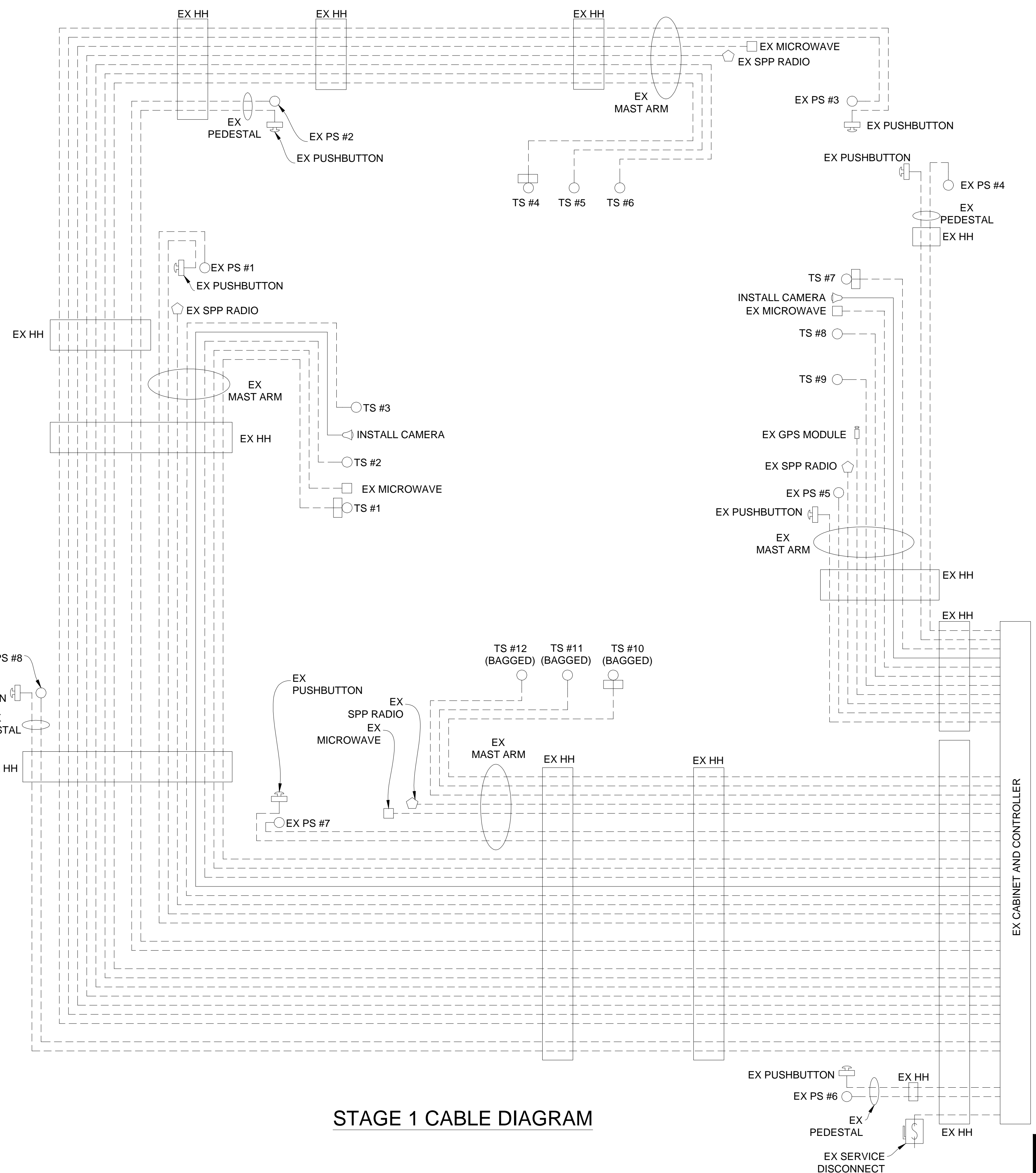
LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- S -	- t -	- - - - -	- S -	- - - - -
- - - - -	- U -	- g -	- - - - -	- R -	- - - - -
- - - - -	- F -	- c -	- - - - -	- W -	- - - - -
- - - - -	- L -	- e -	- - - - -	- W -	- - - - -
- - - - -	- E -	- s -	- - - - -	- W -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- W -	- - - - -

_ SIGNALS _	
OPENINGS:	49
CYCLIC WATTS:	540
STEADY WATTS:	60

DLZ				
SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION
			10/6/23	INB
			DR.BY	CH.BY
				LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 1	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2021-008-MOT24	
SHEET NO. 28 OF 155	



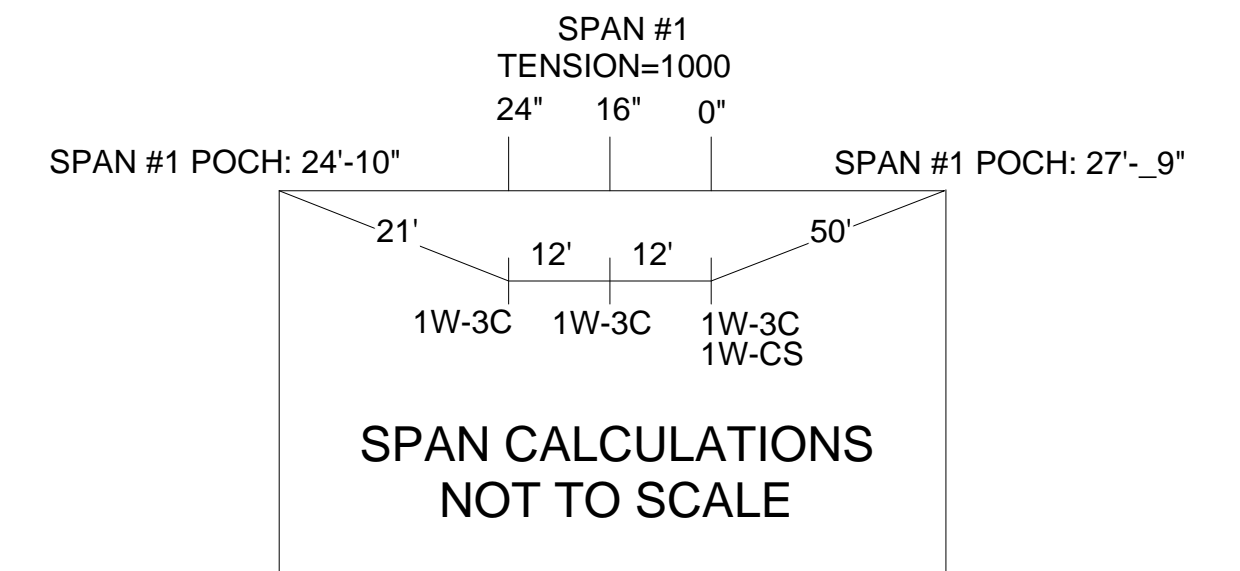
STAGE 1 CABLE DIAGRAM

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- _1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
- _2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
- _3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN



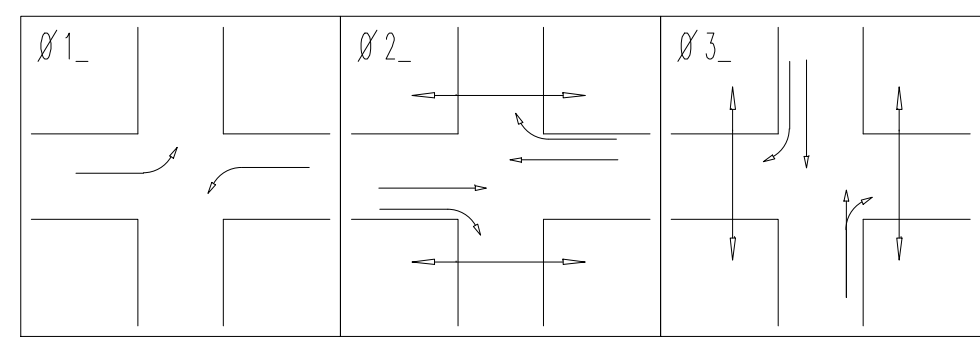
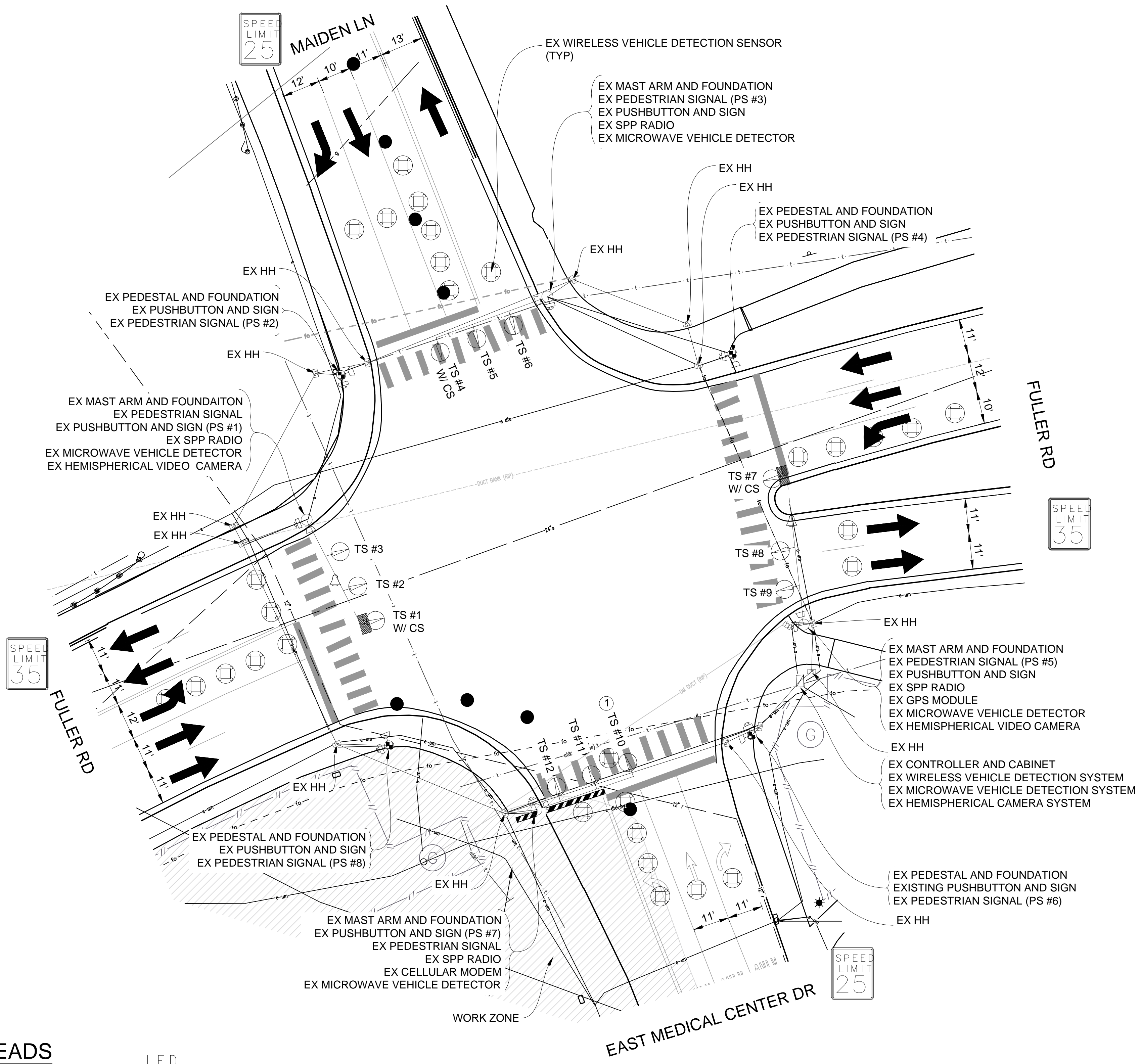
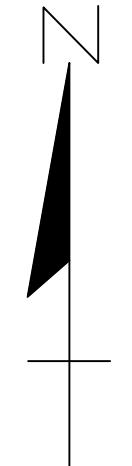
LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 1	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT25	
SHEET NO. 29 OF 155	

__ SIGNALS __
OPENINGS: 49
CYCLIC WATTS: 540
STEADY WATTS: 60



PHASE DIAGRAM

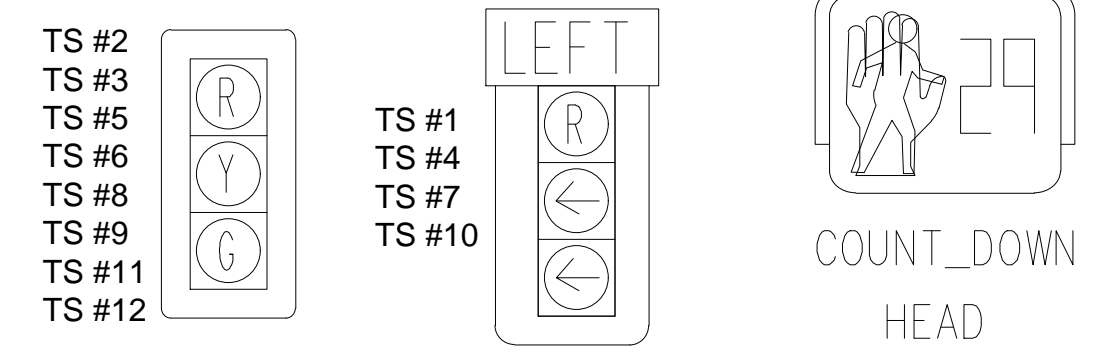
CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION

ROW WAS NOT SURVEYED AND IS NOT MARKED ON PLANS

TIME OF REMOVAL OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	TS Mast Arm Mtd, Rem	1 Ea.

SIGNAL HEADS



STAGE 2 REMOVAL PLAN

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

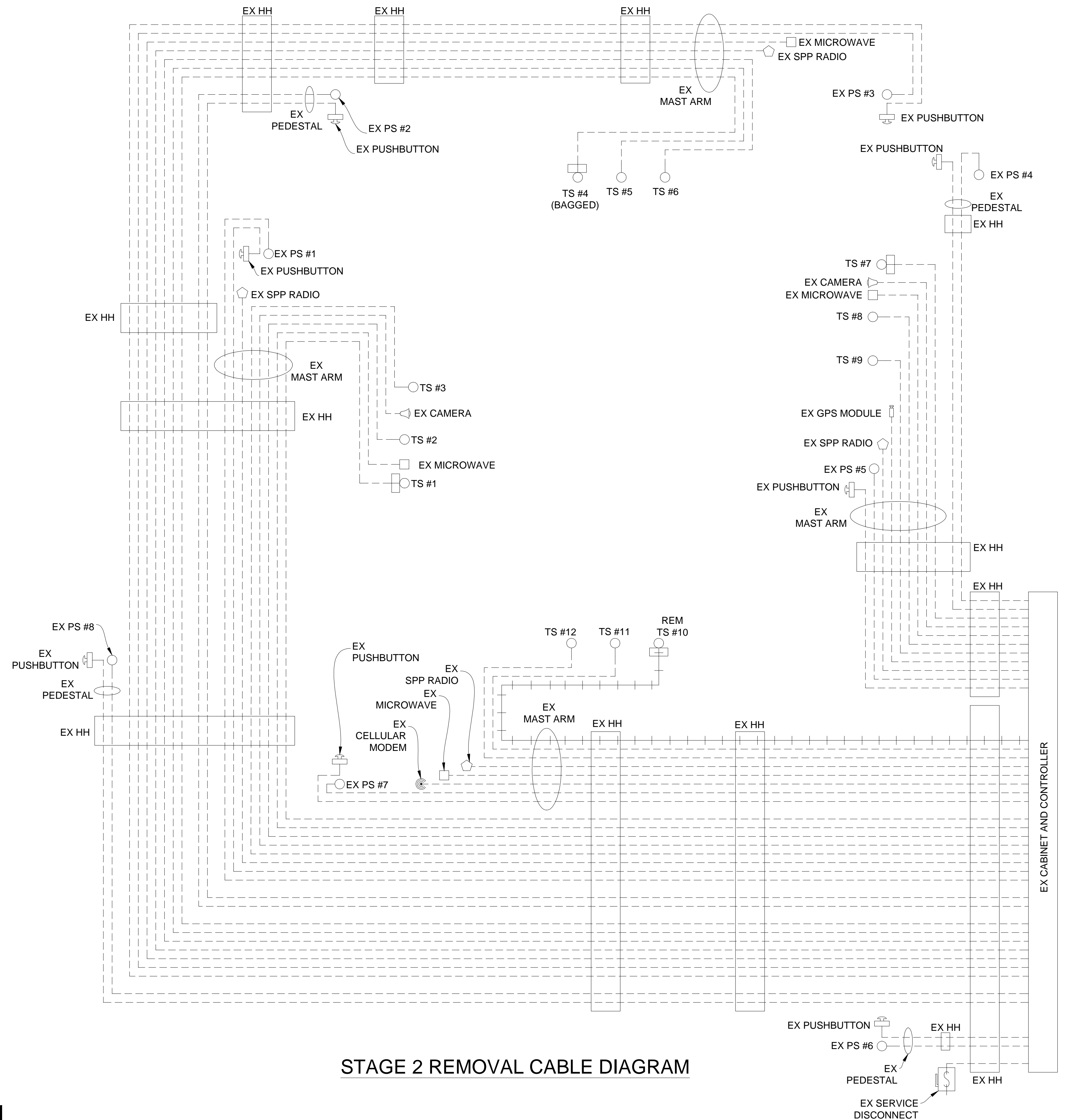
3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	S	t	---	S	---
- - - - -	U	g	---	W	---
- - - - -	F	c	---	R	---
- - - - -	L	e	---	W	---
- - - - -	E	s	---	W	---
- - - - -	END SECTION	---	---	---	---

DLZ	
SEE ABOVE	
BENCH MARK	
SURVEY BOOK	
REV. NO.	DESCRIPTION
DATE	DR. BY
CH. BY	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 2	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2021-008-MOT26	
SHEET NO. 30 OF 155	



STAGE 2 REMOVAL CABLE DIAGRAM

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
- 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
- HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN

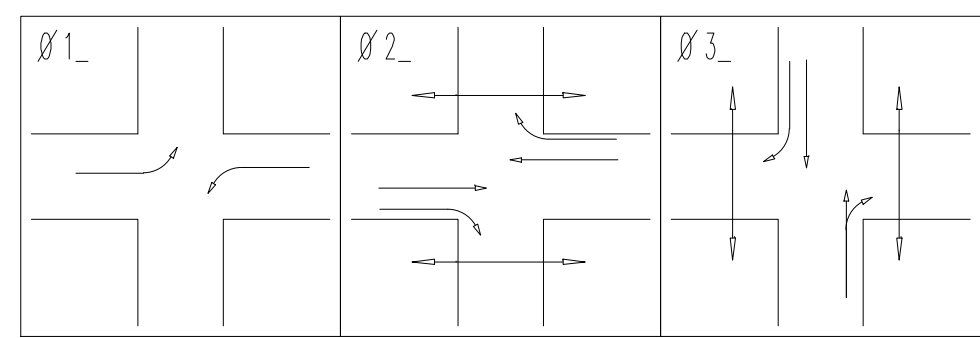
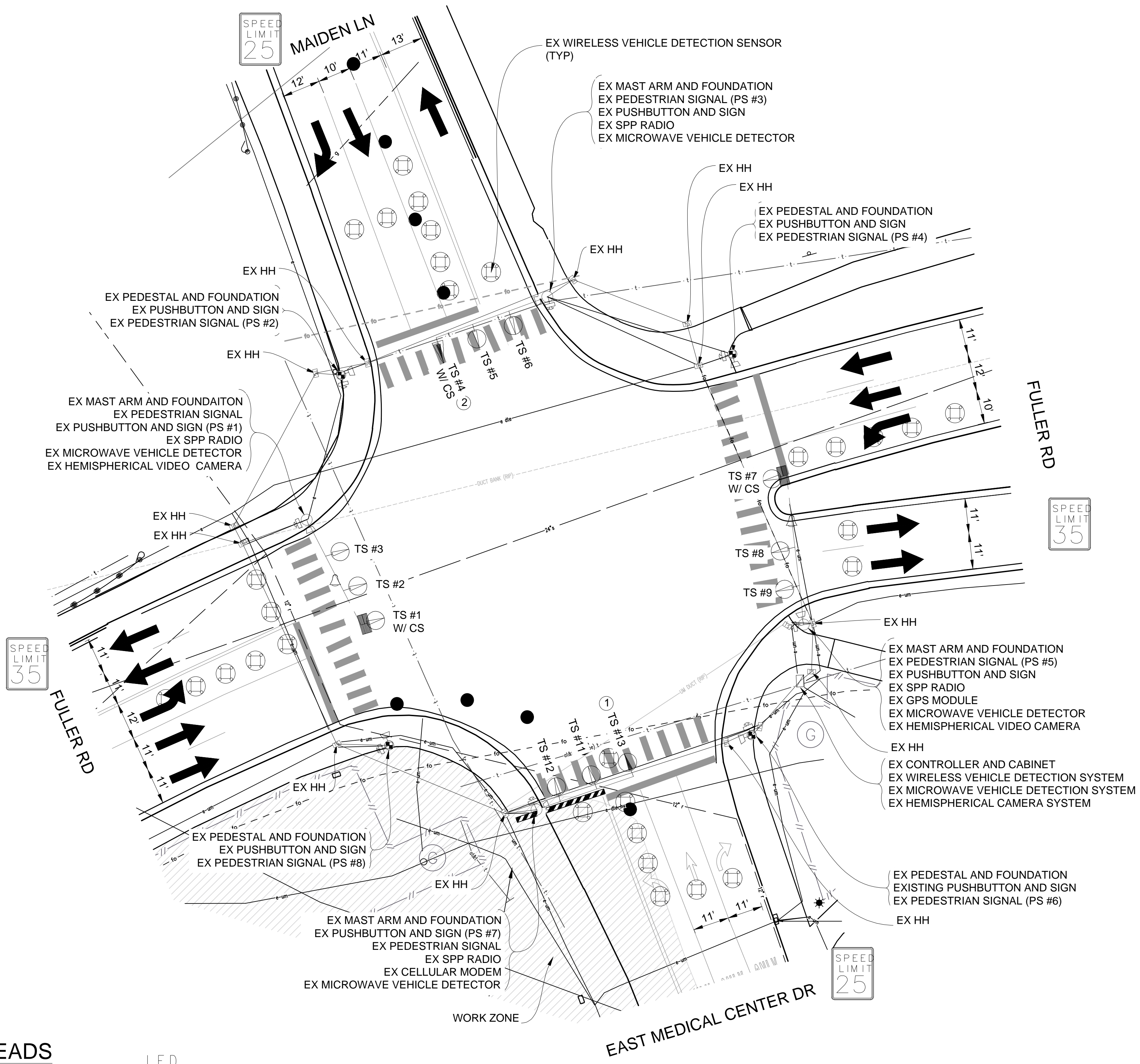
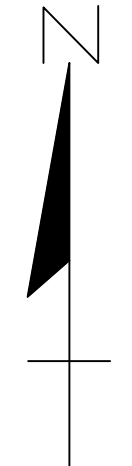
SIGNALS	
OPENINGS:	40
CYCLIC WATTS:	516
STEADY WATTS:	45

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 2	
SCALE NTS	0 INCH 1
DRAWING NO.	2021-008-MOT27
SHEET NO.	31 OF 155



PHASE DIAGRAM

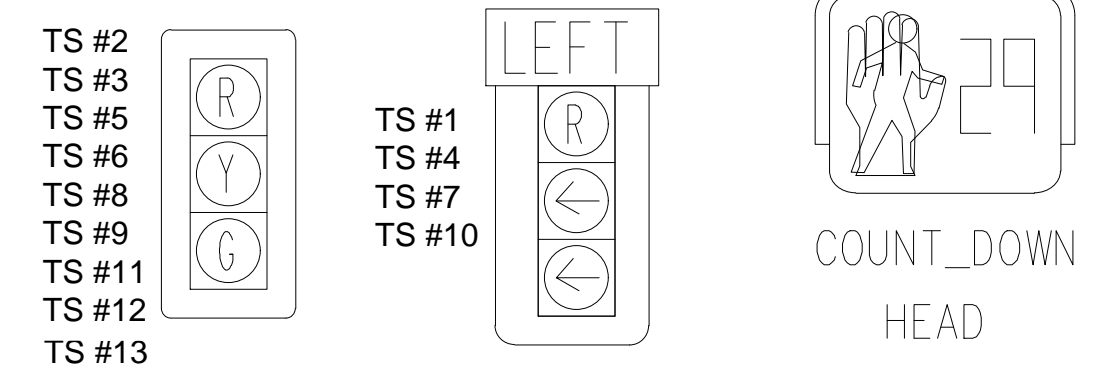
CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION

ROW WAS NOT SURVEYED AND IS NOT MARKED ON PLANS

TIME OF REMOVAL OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	TS Head, Temp	1 Ea.
②	TS Face, Bag	1 Ea.

SIGNAL HEADS



STAGE 2 INSTALLATION PLAN

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

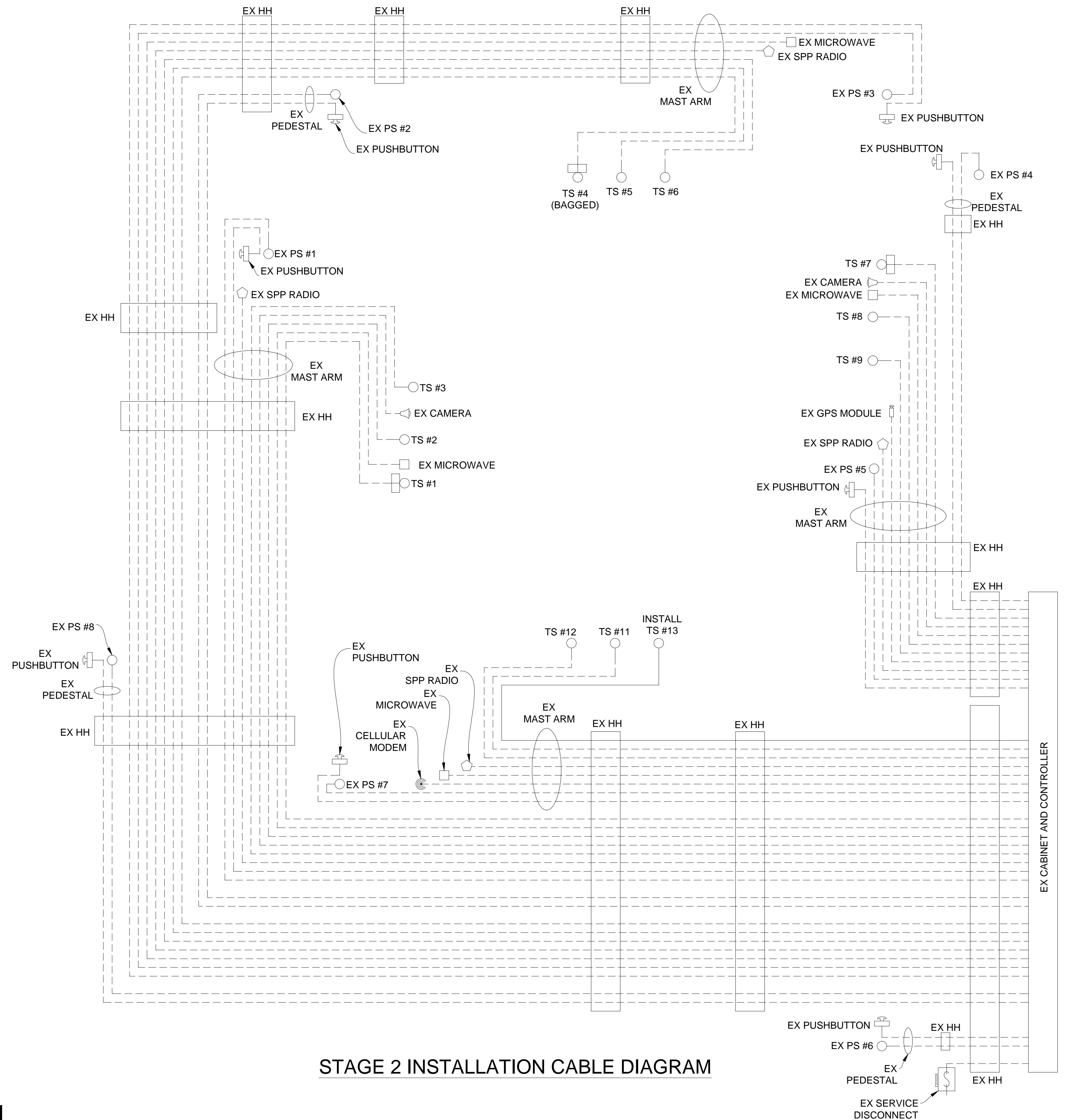
LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
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- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -

SIGNALS	
OPENINGS:	40
CYCLIC WATTS:	516
STEADY WATTS:	45

DLZ				
SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION
			10/6/23	INB
			DR.BY	CH.BY
				LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE FULLER RD AT E. MED. CENTER RD STAGE 2	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2021-008-MOT28	
SHEET NO. 32 OF 155	



STAGE 2 INSTALLATION CABLE DIAGRAM

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- _1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
- _2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
- _3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN

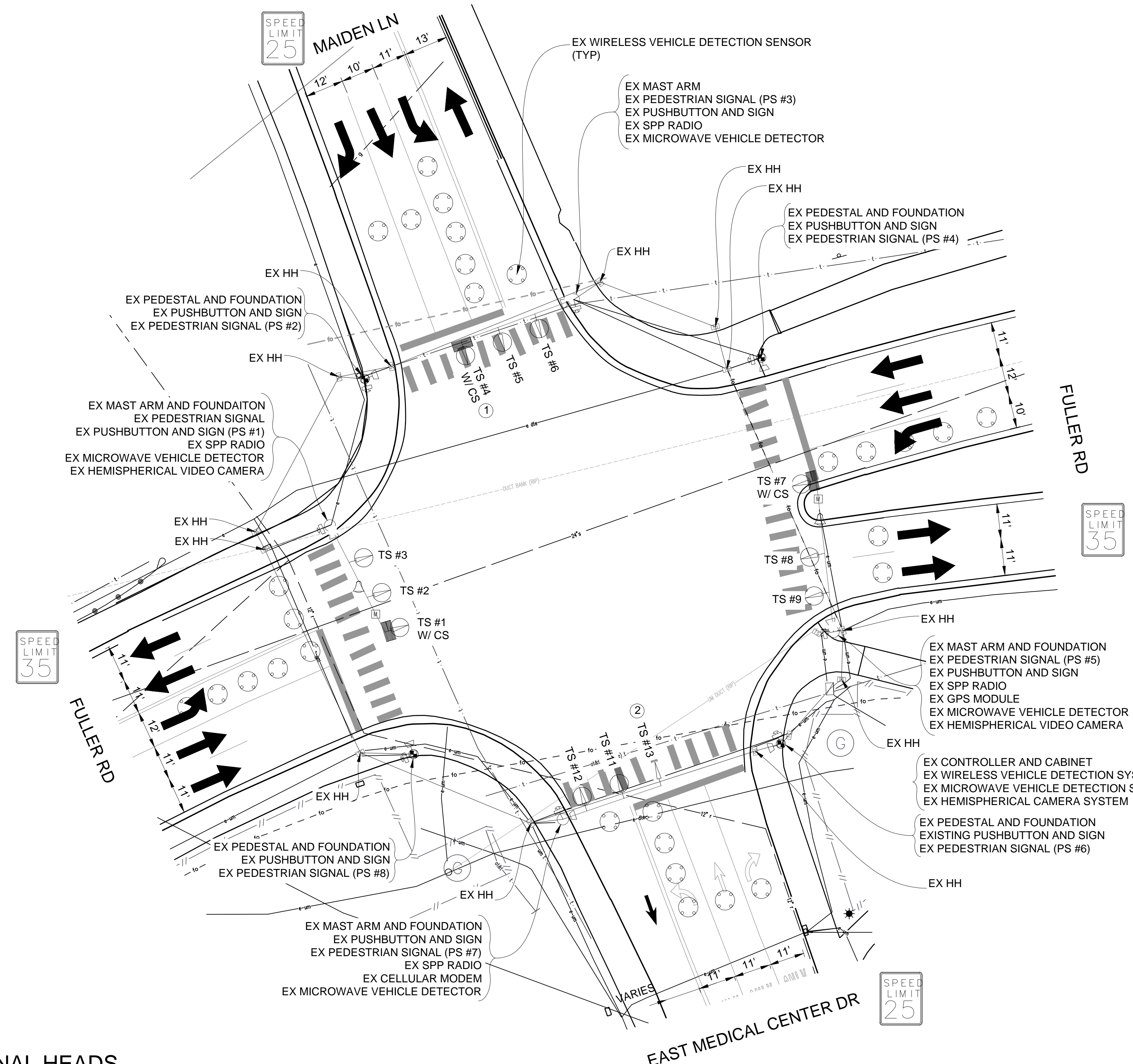
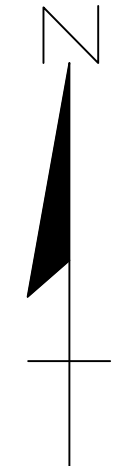
SIGNALS	
OPENINGS:	40
CYCLIC WATTS:	516
STEADY WATTS:	45

LEGEND

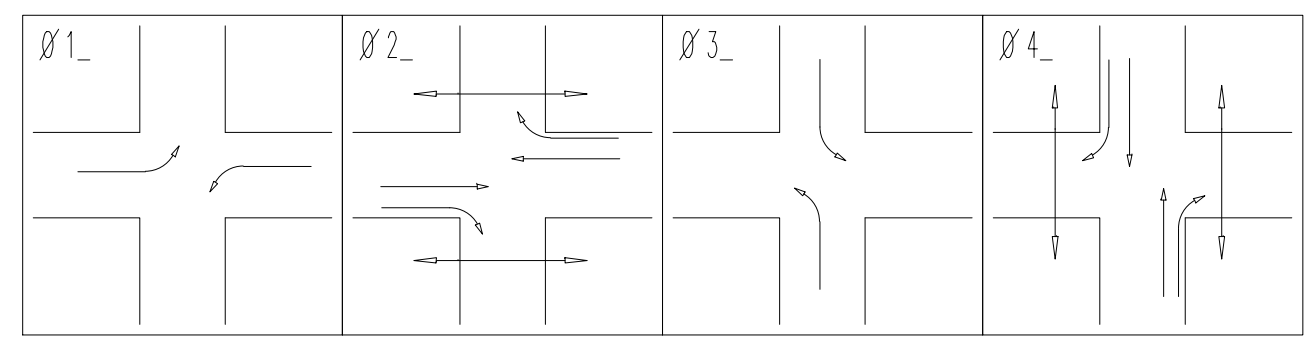
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
" CONTOUR	" UTILITY POLE & GUY	" GAS LINE	" LEFT EDGE/RD. GRADE	" STORM SEWER & CAT. BAS.	" SEE ABOVE
" STORM SEWER & CAT. BAS.	" FIRE HYDRANT ASSEMBLY	" CABLE T.V.	" RIGHT EDGE/RD. GRADE	" WATER MAIN W/F.H. ASSEM.	" BENCH MARK
" WATER MAIN & VALVE-IN-WELL	" LIGHT POLE	" ELECTRIC	" CURB & GUTTER	" CONTOUR	" SURVEY BOOK
" WATER MAIN & VALVE-IN-BOX	" END SECTION	" SIGN	" EDGE/GRAVEL	" ROAD & GRADE	" REV. NO.

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 2	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT29	
SHEET NO. 33 OF 155	



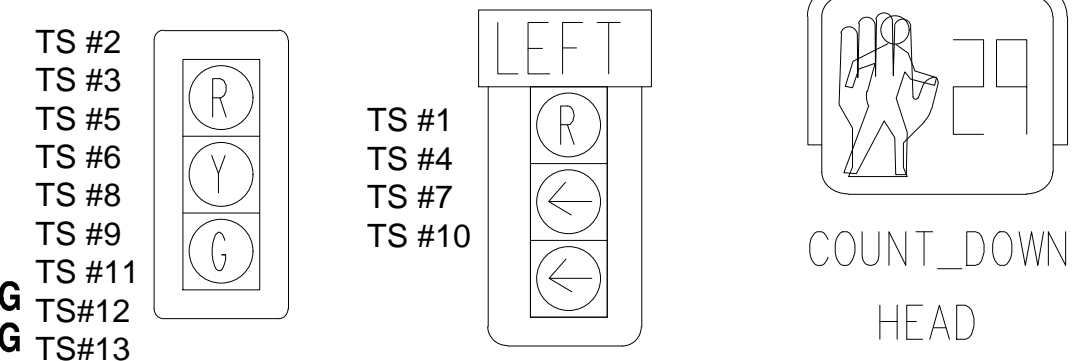
CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION



PHASE DIAGRAM

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	TS Face, Bag, Rem	1 Ea.
②	Remove Traffic Signal (Paid for Under "TS Head, Temp")	1 Ea.

SIGNAL HEADS



STAGE 4 REMOVAL PLAN

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNALS	
OPENINGS:	40
CYCLIC WATTS:	432
STEADY WATTS:	60

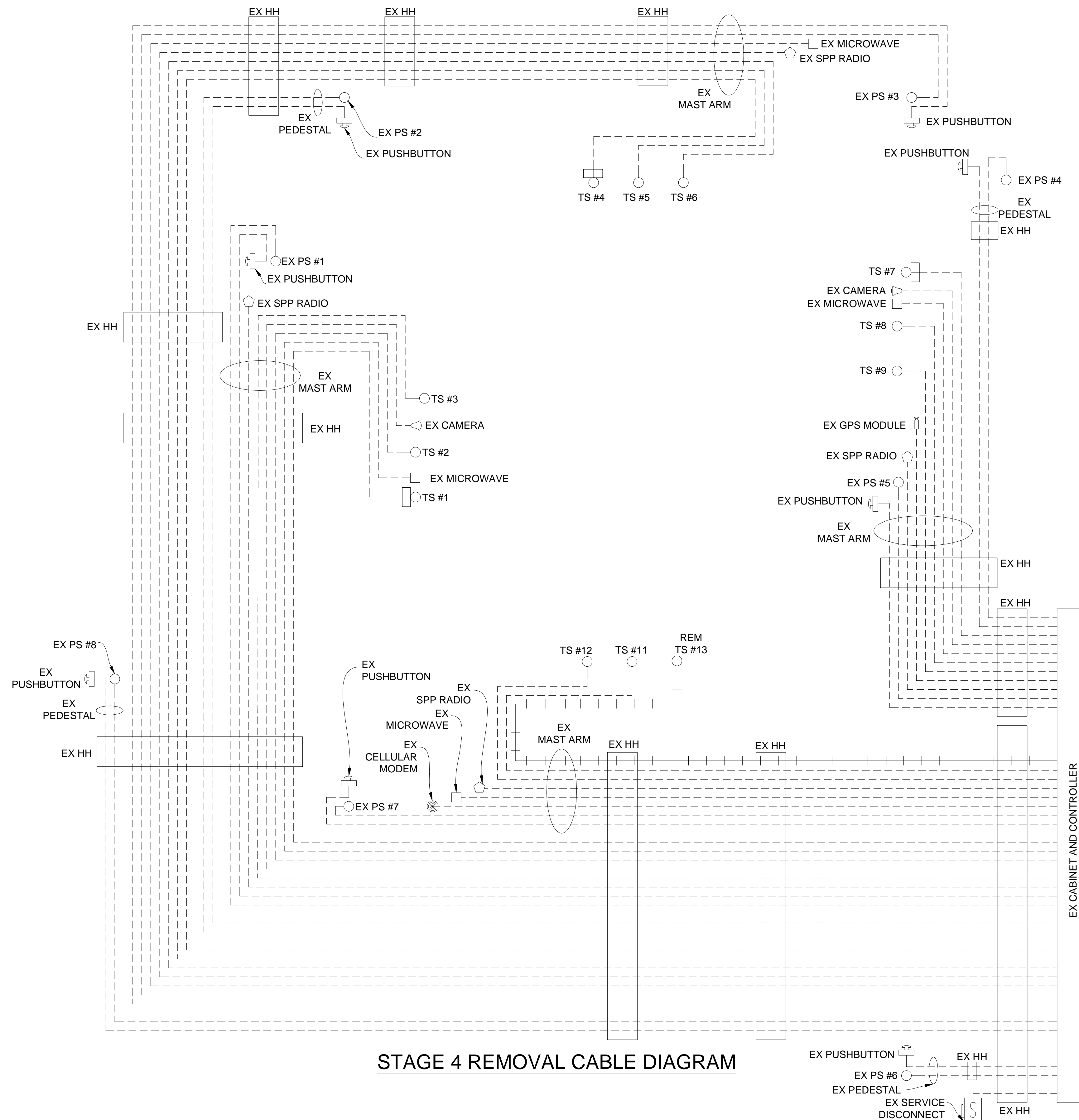
3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE FULLER RD AT E. MED. CENTER RD STAGE 4	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2021-008-MOT30	SHEET NO. 34 OF 155



STAGE 4 REMOVAL CABLE DIAGRAM

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- _1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 P.J.
- _2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 P.J.
- _3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

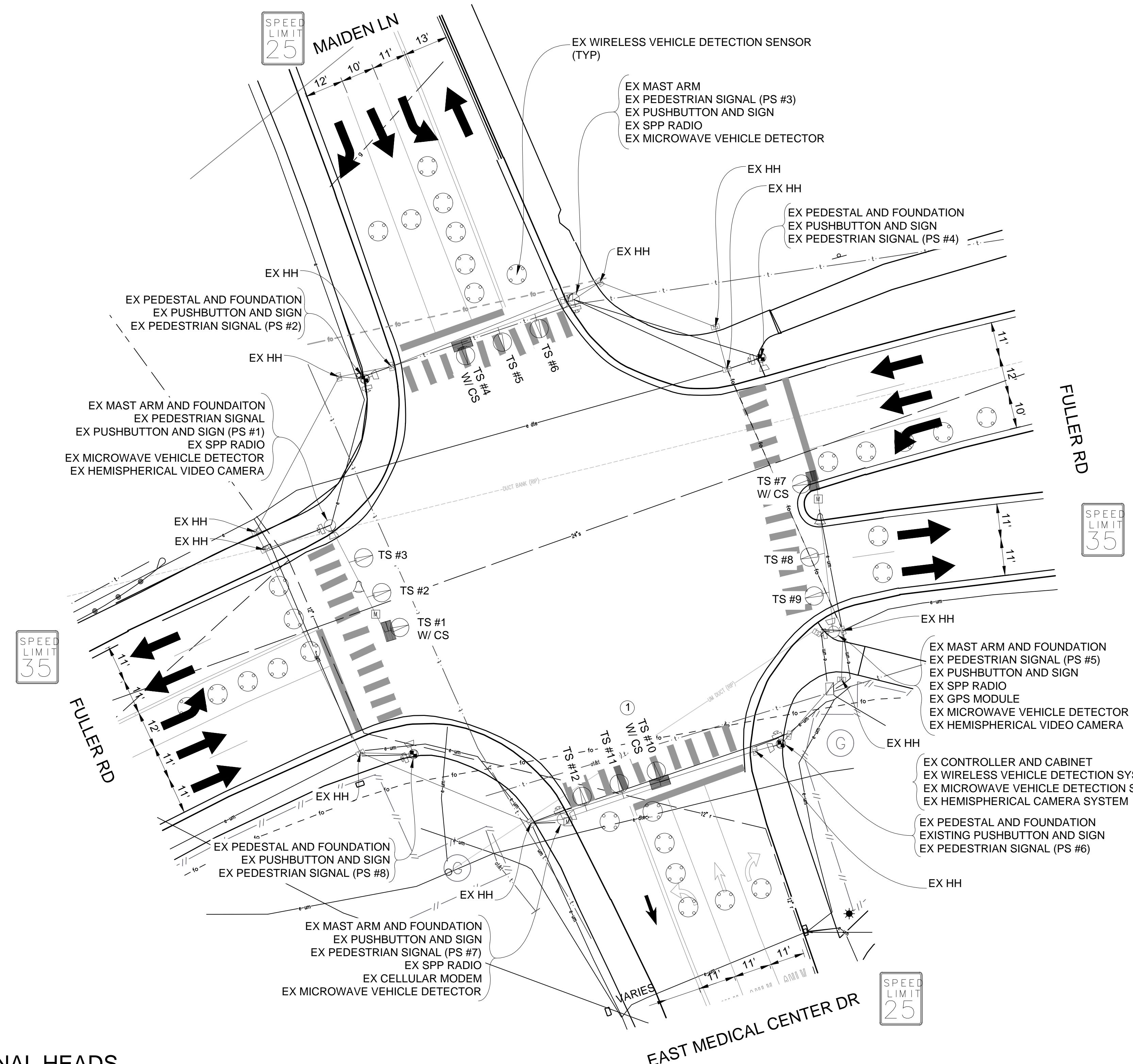
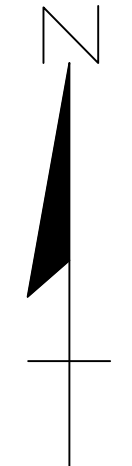
NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN

LEGEND

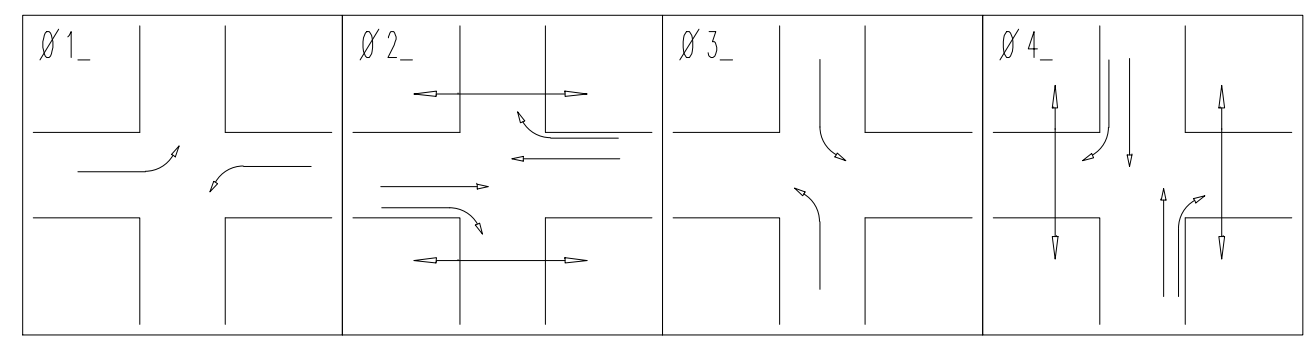
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 4	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT31	
SHEET NO. 35 OF 155	



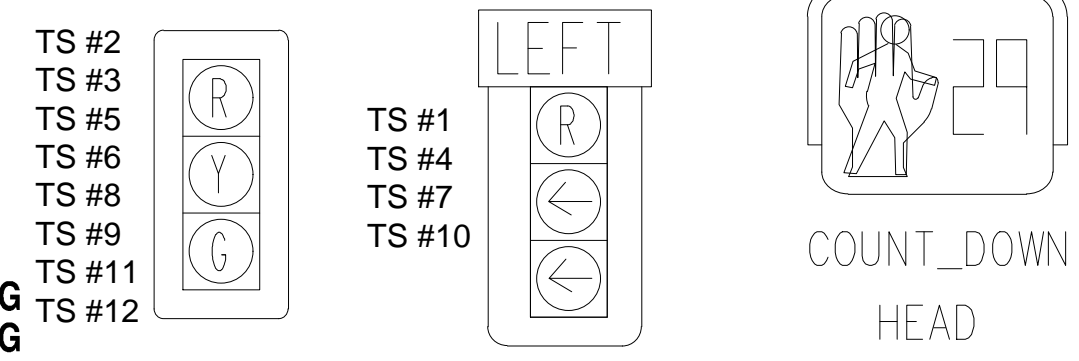
CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION



PHASE DIAGRAM

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	TS, One Way Mast Arm Mtd, Salv	1 Ea.

SIGNAL HEADS



STAGE 4 INSTALLATION PLAN

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNALS	
OPENINGS:	40
CYCLIC WATTS:	432
STEADY WATTS:	60

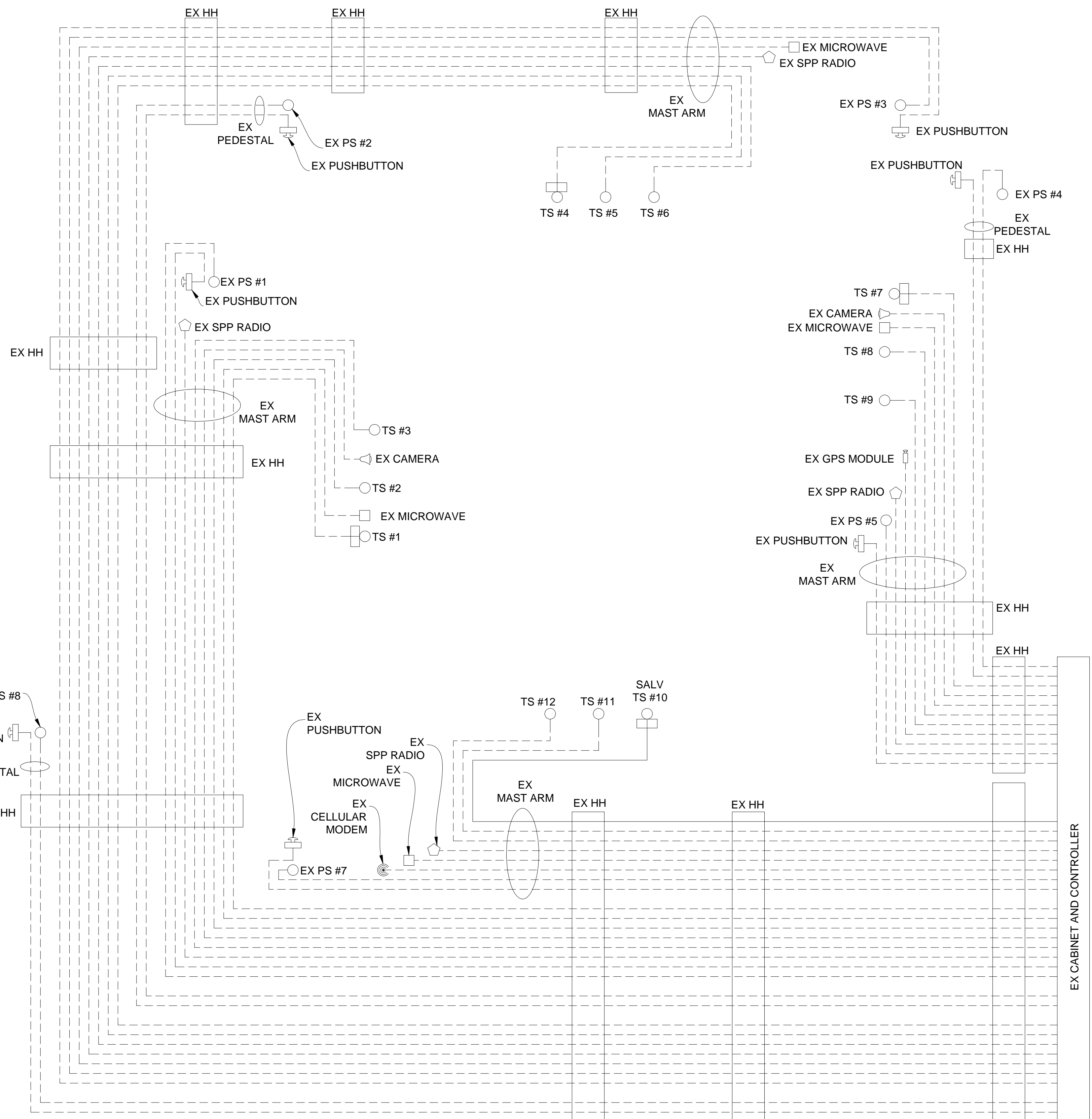
3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- S -	- t -	- - - - -	- S -	- - - - -
- - - - -	- UPG -	- g -	- - - - -	- R -	- - - - -
- - - - -	- FH -	- v -	- - - - -	- W -	- - - - -
- - - - -	- LP -	- e -	- - - - -	- 847 -	- - - - -
- - - - -	- ES -	- b -	- - - - -	- - - - -	- - - - -

DLZ					
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY
			ORIGINAL ISSUE	10/6/23	INB
					LCM
					CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE FULLER RD AT E. MED. CENTER RD STAGE 4	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2021-008-MOT32	
SHEET NO. 36 OF 155	



STAGE 4 INSTALLATION CABLE DIAGRAM

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- _1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 P.J.
- _2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 P.J.
- _3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

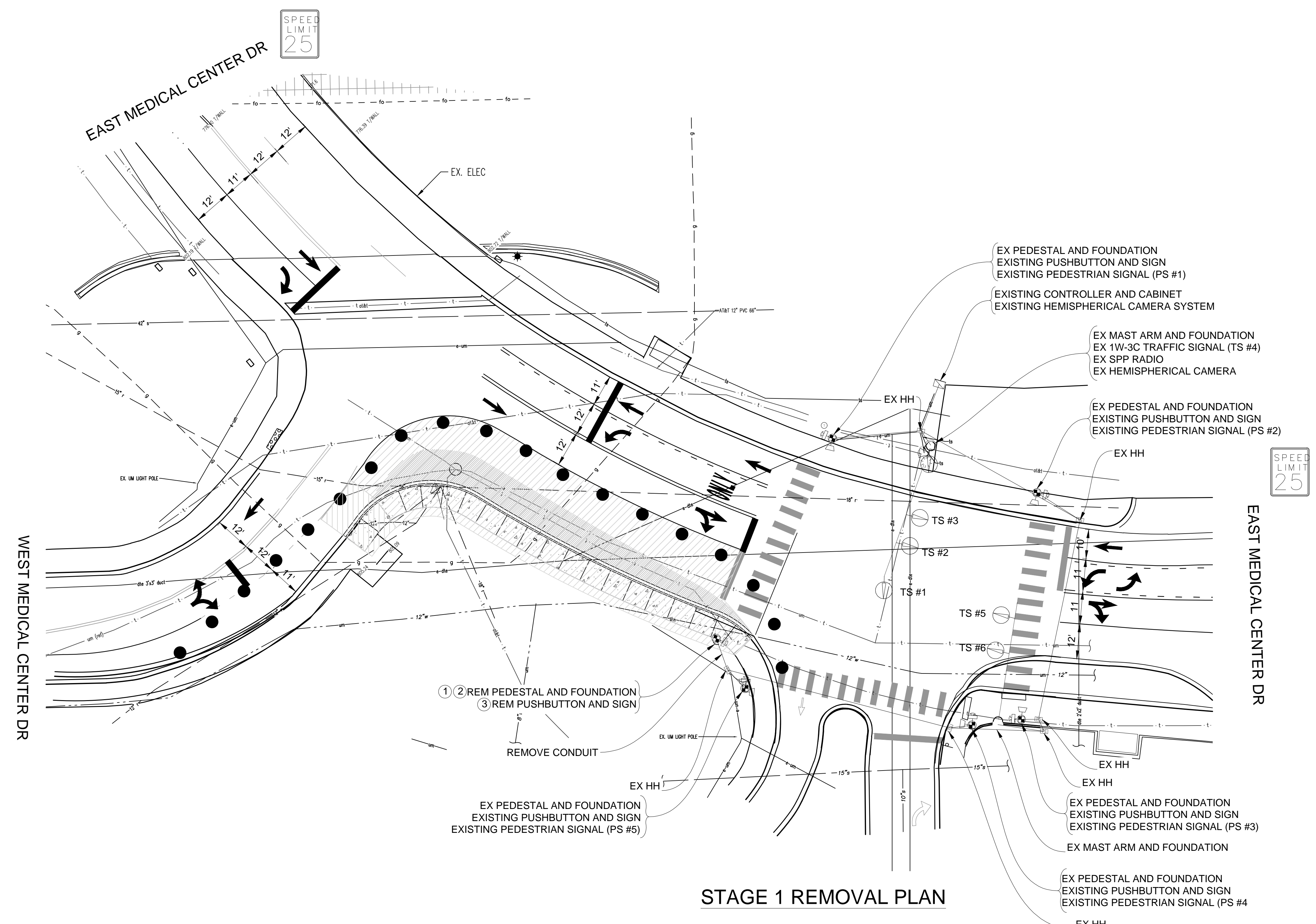
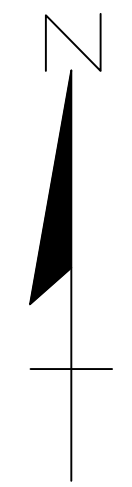
NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
" CONTOUR	" UTILITY POLE & GUY	" GAS LINE	" LEFT EDGE/RD. GRADE	" STORM SEWER & CAT. BAS.	SEE ABOVE
" STORM SEWER & CAT. BAS.	" FIRE HYDRANT ASSEMBLY	" CABLE T.V.	" RIGHT EDGE/RD. GRADE	" WATER MAIN W/F.H. ASSEM.	BENCH MARK
" WATER MAIN & VALVE-IN-WELL	" LIGHT POLE	" ELECTRIC	" CURB & GUTTER	" CONTOUR	SURVEY BOOK
" WATER MAIN & VALVE-IN-BOX	" END SECTION	" SIGN	" EDGE/GRAVEL	" ROAD & GRADE	REV. NO.

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 4	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT33	
SHEET NO. 37 OF 155	



STAGE 1 REMOVAL PLAN

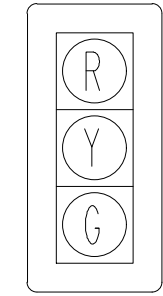
CONTRACTOR TO UTILIZE MOT TYPICAL A FOR INSTALLATION OF TEMPORARY SIGNALS PRIOR TO STAGE 1

TIME OF BAGGING AND UNBAGGING OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNAL HEADS

- TS #1
- TS #2
- TS #3
- TS #4
- TS #5
- TS #6



LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Pedestal Fdn, Rem	1 Ea
②	Pedestal, Rem	1 Ea
③	Pushbutton, Rem	1 Ea
	Conduit, Rem	12 Ft

SIGNALS	
OPENINGS:	55
CYCLIC WATTS:	733
STEADY WATTS:	45

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
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DLZ

SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
			ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

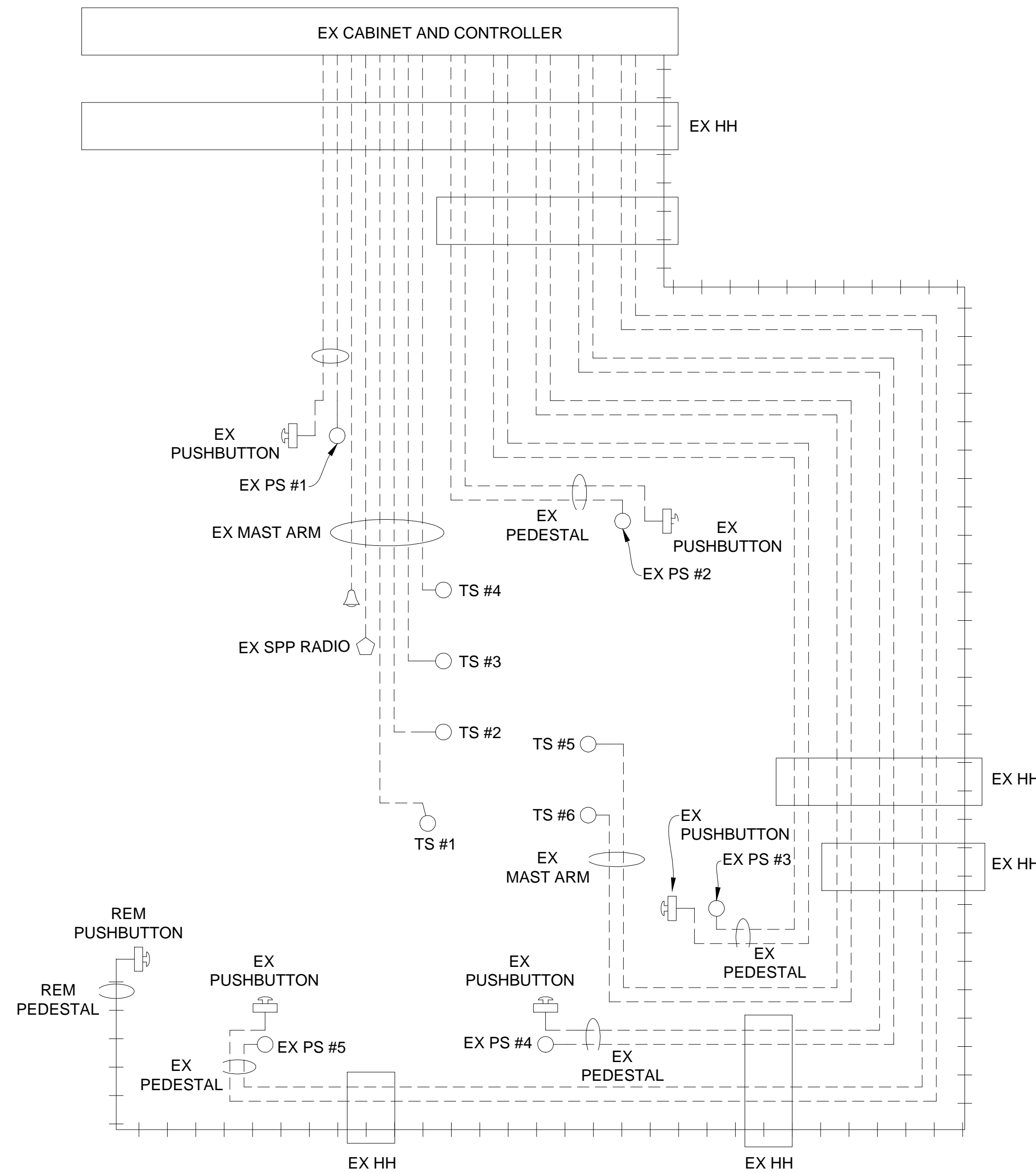
**E. MEDICAL CENTER DRIVE
TRAFFIC SIGNAL PLANS
FULLER RD AT E. MED. CENTER RD
STAGE 1**

SCALE: 1"=20'

DRAWING NO. 2021-008-MOT34

SHEET NO. 38 OF 155

APPROVED BY: _____



NOTE:
 PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
 AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
 CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
 ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNALS	
OPENINGS:	55
CYCLIC WATTS:	733
STEADY WATTS:	45

STAGE 1 REMOVAL CABLE DIAGRAM

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.



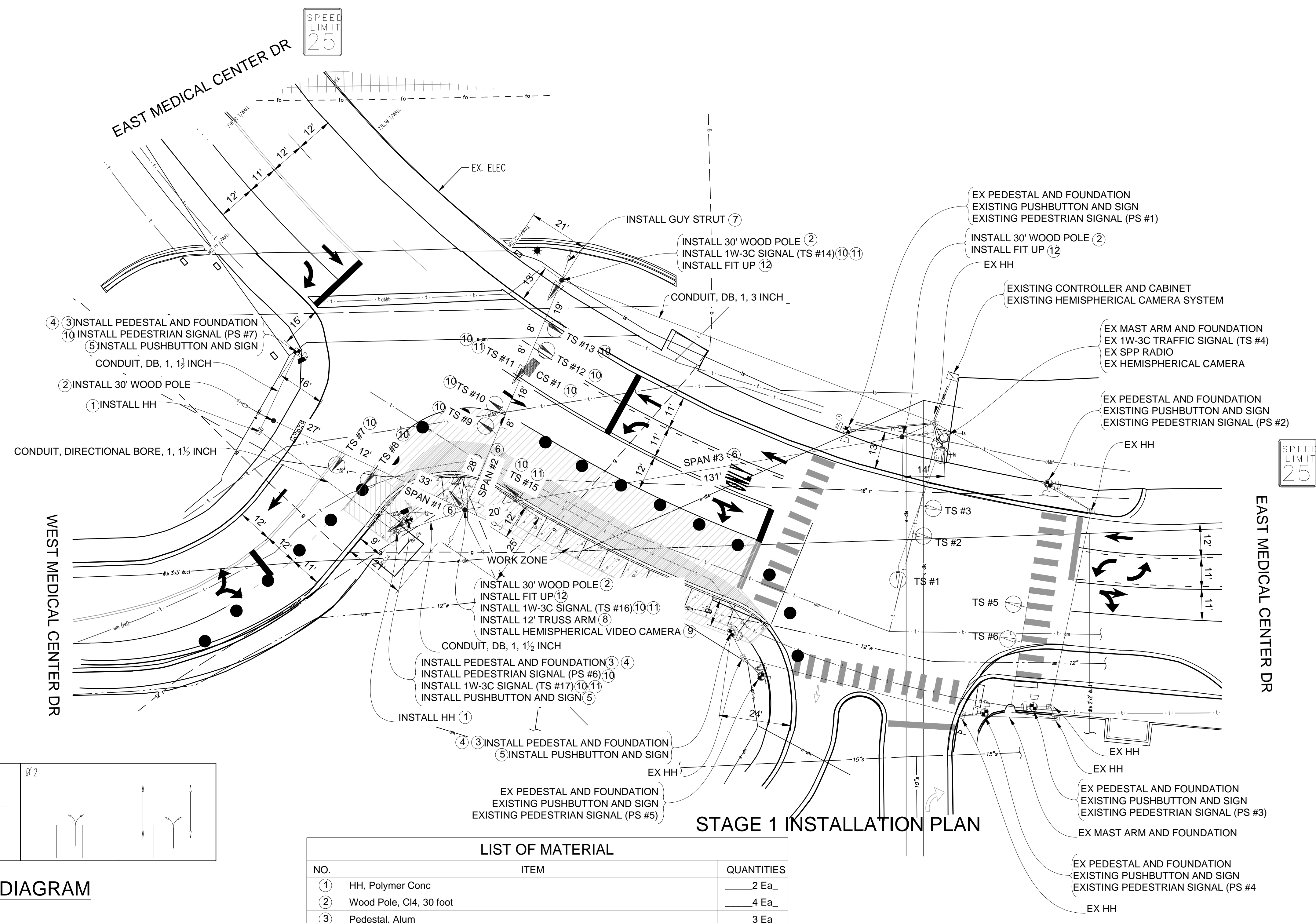
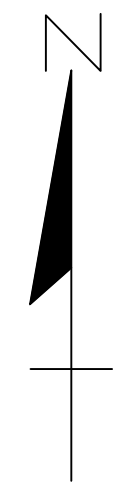
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE
 TRAFFIC SIGNAL PLANS
 FULLER RD AT E. MED. CENTER RD
 STAGE 1

SCALE	0	1
NTS	INCH	
DRAWING NO.	2021-008-MOT35	
SHEET NO.	39	OF 155

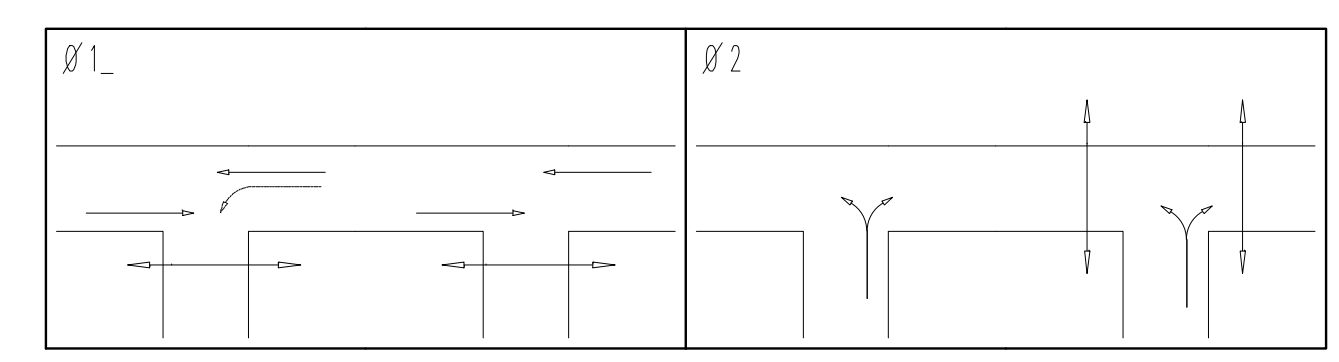
DATE	10/6/23	DR.BY	INB	CH.BY	LCM
DESCRIPTION	ORIGINAL ISSUE	DATE	DR.BY	CH.BY	APPROVED BY

APPROVED BY: _____

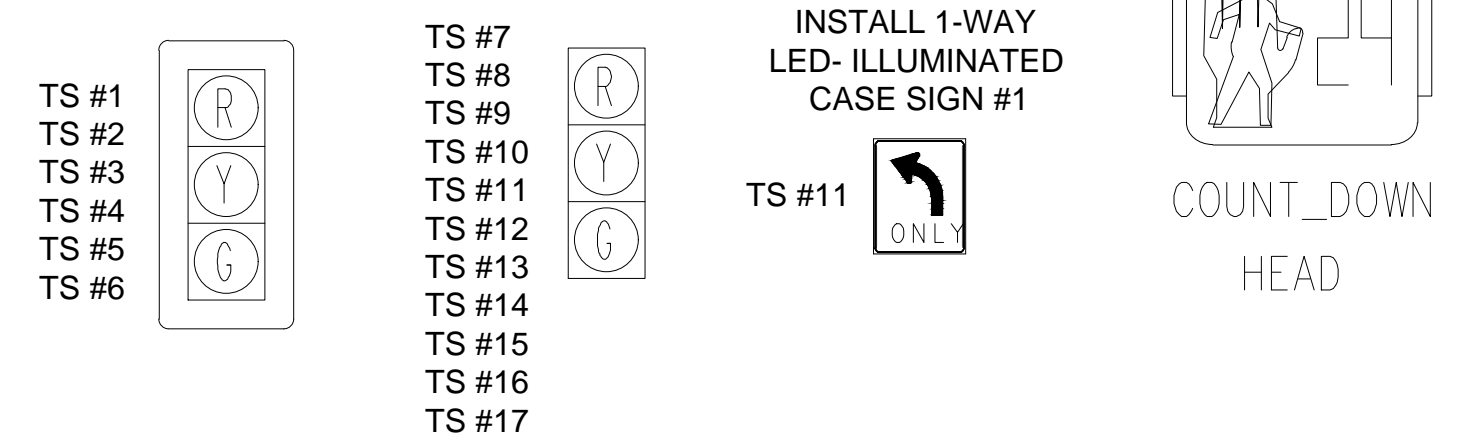


STAGE 1 INSTALLATION PLAN

PHASE DIAGRAM



SIGNAL HEADS



LIST OF MATERIAL

NO.	ITEM	QUANTITIES
1	HH, Polymer Conc	2 Ea
2	Wood Pole, C14, 30 foot	4 Ea
3	Pedestal, Alum	3 Ea
4	Pedestal, Fdn	3 Ea
5	Pushbutton and Sign	3 Ea
6	Span Wire	3 Ea
7	Strut Guy	1 Ea
8	Bracket, Truss, With 12 Foot Arm	1 Ea
9	Hemispherical Video Detection Camera	1 Ea
10	TS Head, Temp	13 Ea
11	TS Face, Bag	5 Ea
12	Wood Pole, Fit Up, TS Cable Pole	3 Ea
	Conduit, Directional Bore, 1, 1 1/2 inch	60 Ft
	Conduit, DB, 1, 1 1/2 inch	80 Ft
	Conduit, DB, 1, 3 inch	150 Ft

CONTRACTOR TO UTILIZE MOT TYPICAL A FOR INSTALLATION OF TEMPORARY SIGNALS PRIOR TO STAGE 1

TIME OF BAGGING AND UNBAGGING OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNALS	
OPENINGS:	55
CYCLIC WATTS:	733
STEADY WATTS:	45

3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	---
CONTOUR	---
STORM SEWER & CAT. BAS.	---
WATER MAIN & VALVE-IN-WELL	---
WATER MAIN & VALVE-IN-BOX	---

EXISTING SANITARY SEWER & MANHOLE	---
UTILITY POLE & GUY	---
FIRE HYDRANT ASSEMBLY	---
LIGHT POLE	---
END SECTION	---

EXISTING TELEPHONE	---
GAS LINE	---
CABLE T.V.	---
ELECTRIC	---
SIGN	---

EXISTING RD. & GRADE	---
LEFT EDGE/RD. GRADE	---
RIGHT EDGE/RD. GRADE	---
CURB & GUTTER	---
EDGE/GRAVEL	---

PROPOSED SANITARY SEWER & MANHOLE	---
STORM SEWER & CAT. BAS.	---
WATER MAIN W/F.H. ASSEM.	---
CONTOUR	---
ROAD & GRADE	---

PROPOSED CURB & GUTTER	---
------------------------	-----

SEE ABOVE	
BENCH MARK	
SURVEY BOOK	

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

DLZ

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

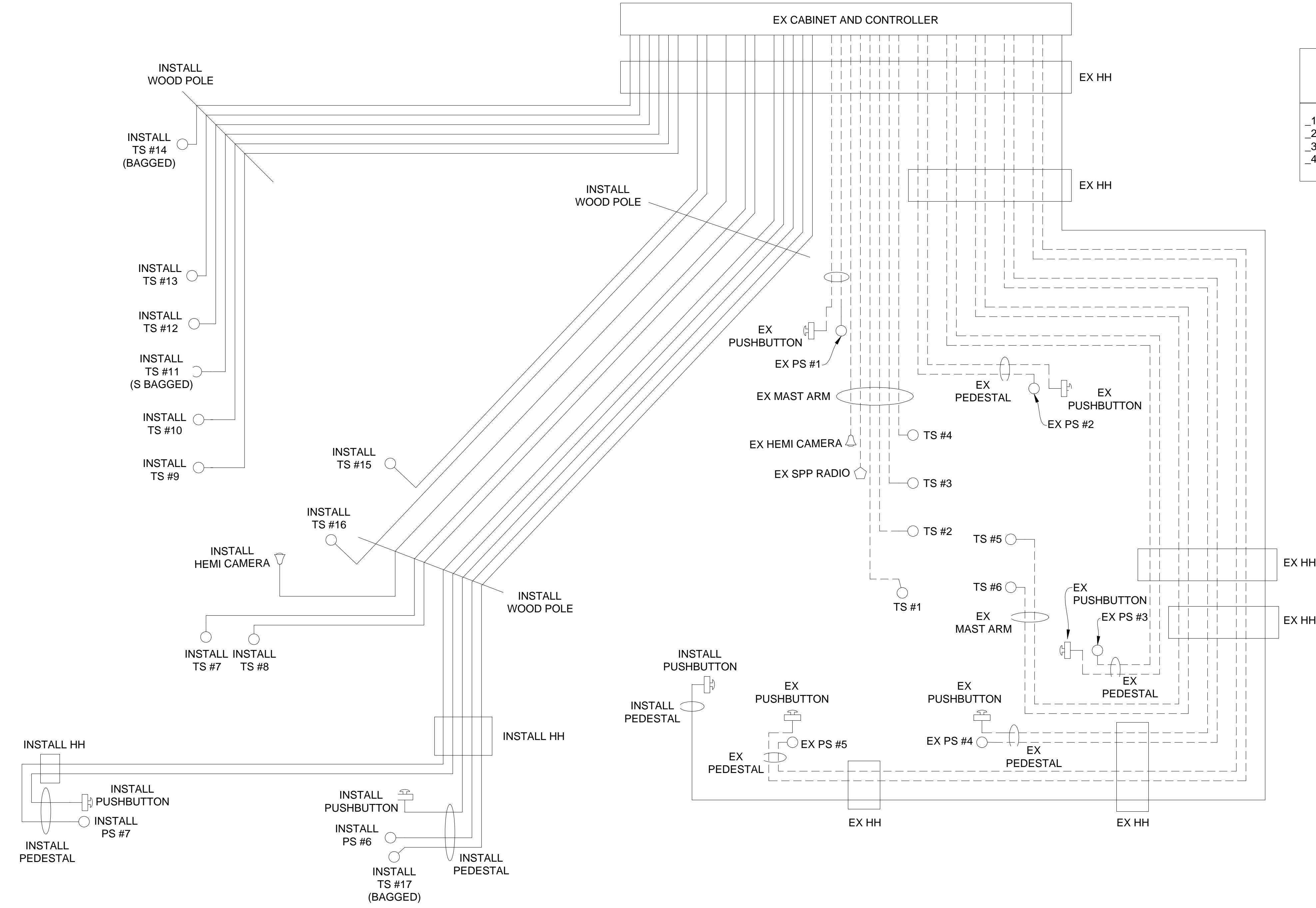
E. MEDICAL CENTER DRIVE
FULLER RD AT E. MED. CENTER RD
STAGE 1

SCALE: 1"=20'

DRAWING NO. 2021-008-MOT36

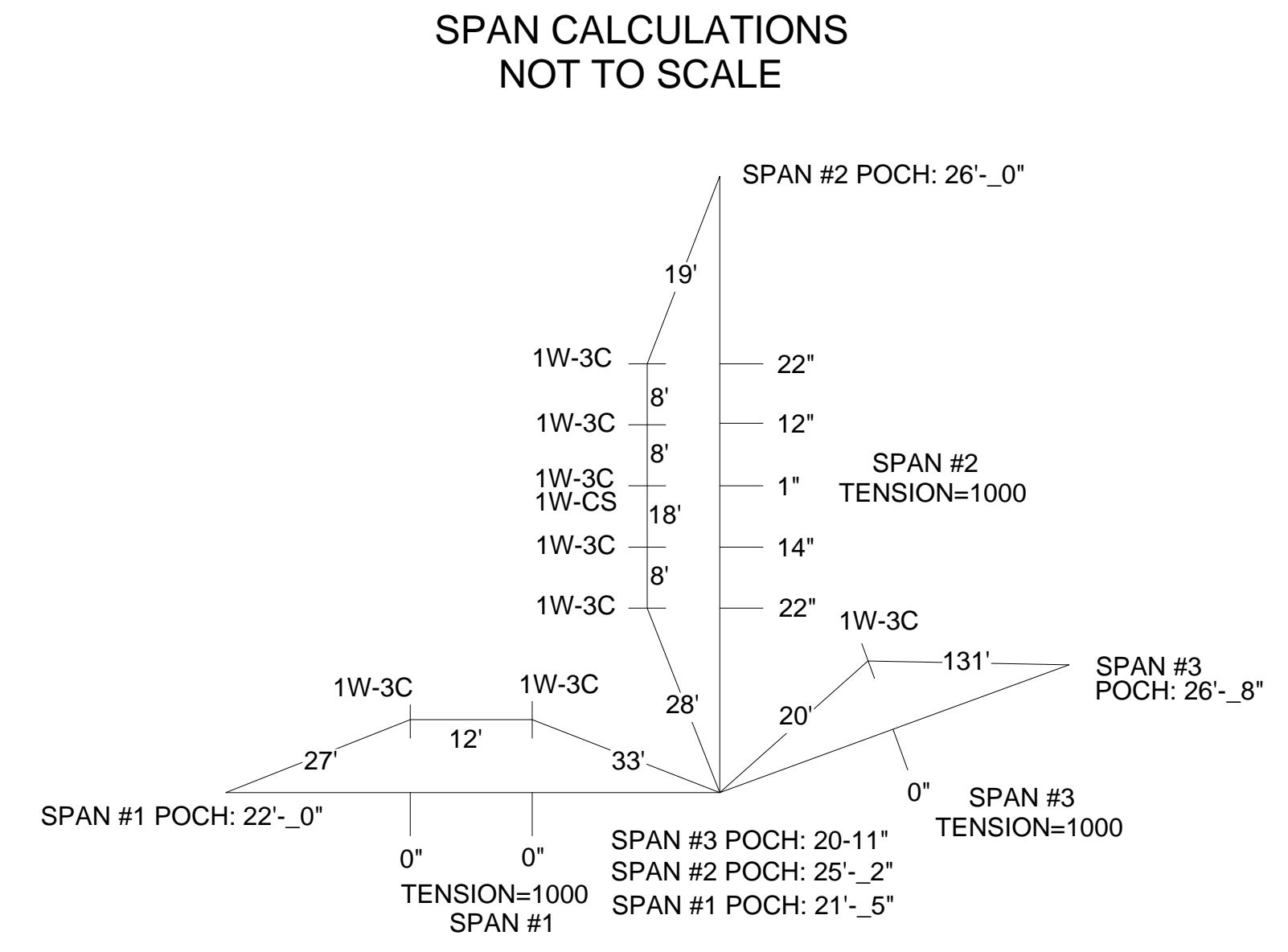
SHEET NO. 40 OF 155

APPROVED BY: _____

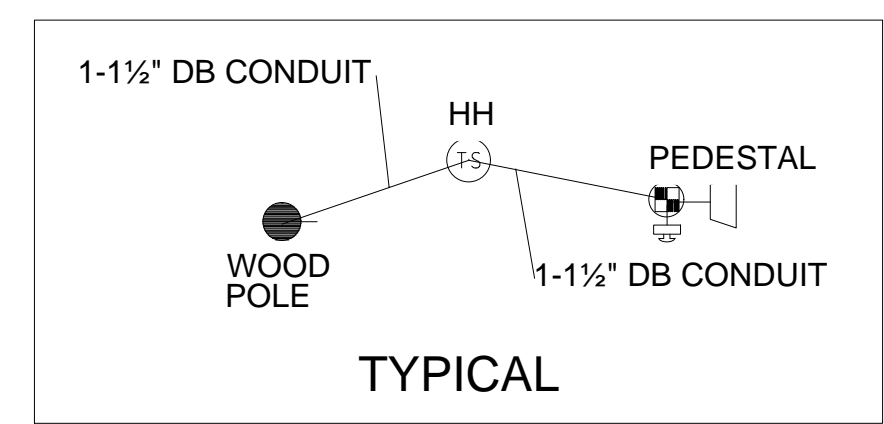


CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.



SHOWN STEMS LENGTH ARE SUGGESTED ONLY



STAGE 1 INSTALLATION CABLE DIAGRAM

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

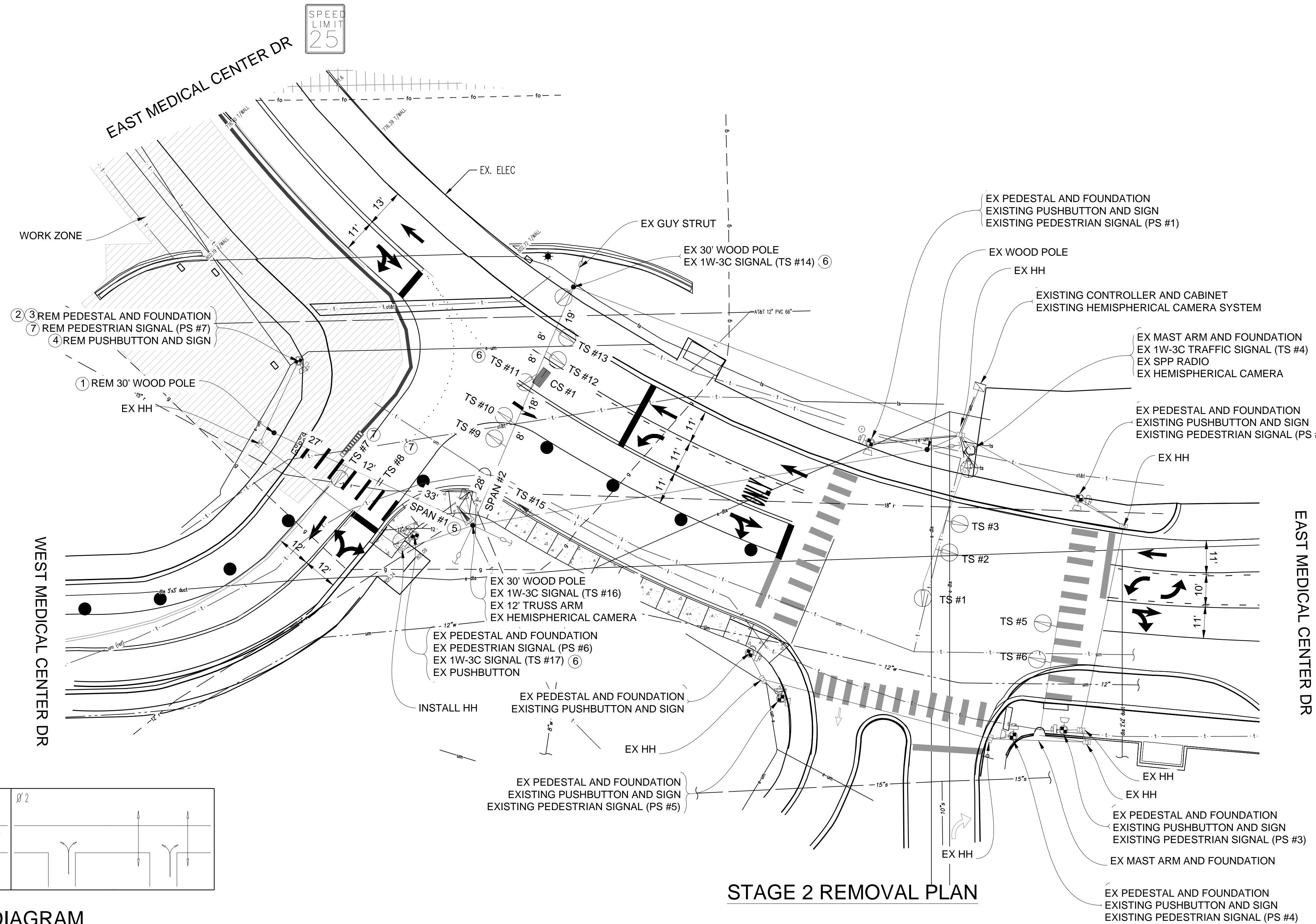
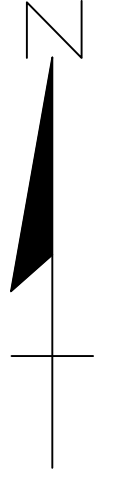
_ SIGNALS _	
OPENINGS:	55
CYCLIC WATTS:	733
STEADY WATTS:	45

LEGEND

EXISTING FENCE	--- --- ---	EXISTING SANITARY SEWER & MANHOLE	—S—	EXISTING TELEPHONE	—t—	EXISTING RD. & GRADE	— —	PROPOSED SANITARY SEWER & MANHOLE	—S—	PROPOSED CURB & GUTTER	— —
CONTOUR	---847---	UTILITY POLE & GUY	—o/h—	GAS LINE	—g—	LEFT EDGE/RD. GRADE	— —	STORM SEWER & CAT. BAS.	—S—	SEE ABOVE	
STORM SEWER & CAT. BAS.	—r—	FIRE HYDRANT ASSEMBLY	—f—	CABLE T.V.	—t—	RIGHT EDGE/RD. GRADE	— —	WATER MAIN W/F.H. ASSEM.	—W—	BENCH MARK	—B—
WATER MAIN & VALVE-IN-WELL	—W—	LIGHT POLE	—o—	ELECTRIC	—e—	CURB & GUTTER	— —	CONTOUR	---847---	SURVEY BOOK	—S—
WATER MAIN & VALVE-IN-BOX	—W—	END SECTION	—)---	SIGN	—b—	EDGE/GRAVEL	— —	ROAD & GRADE	— —	REV. NO.	—R—

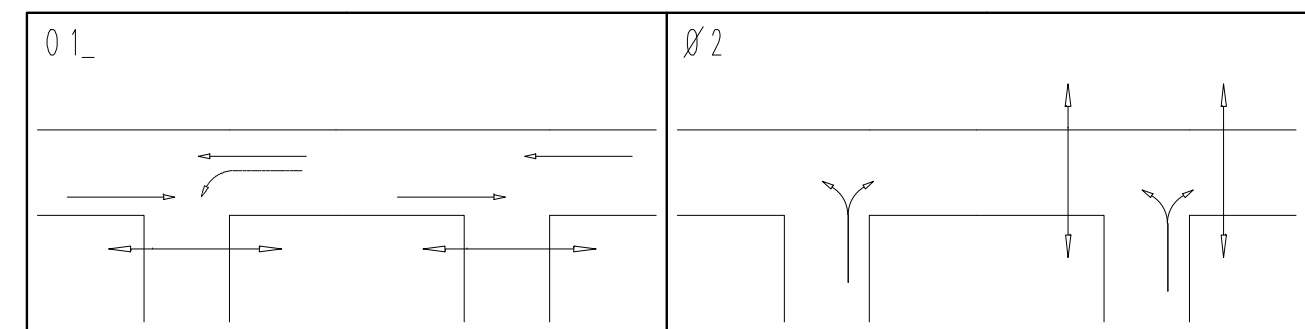
DLZ		PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
		E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 1			
SCALE	NTS	0	INCH	1	
DRAWING NO.	2021-008-MOT37				
SHEET NO.	41 OF 155				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
		10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 1	
SCALE	NTS 0 INCH 1
DRAWING NO.	2021-008-MOT37
SHEET NO.	41 OF 155
REV. NO.	DESCRIPTION DATE DR. BY CH. BY APPROVED BY



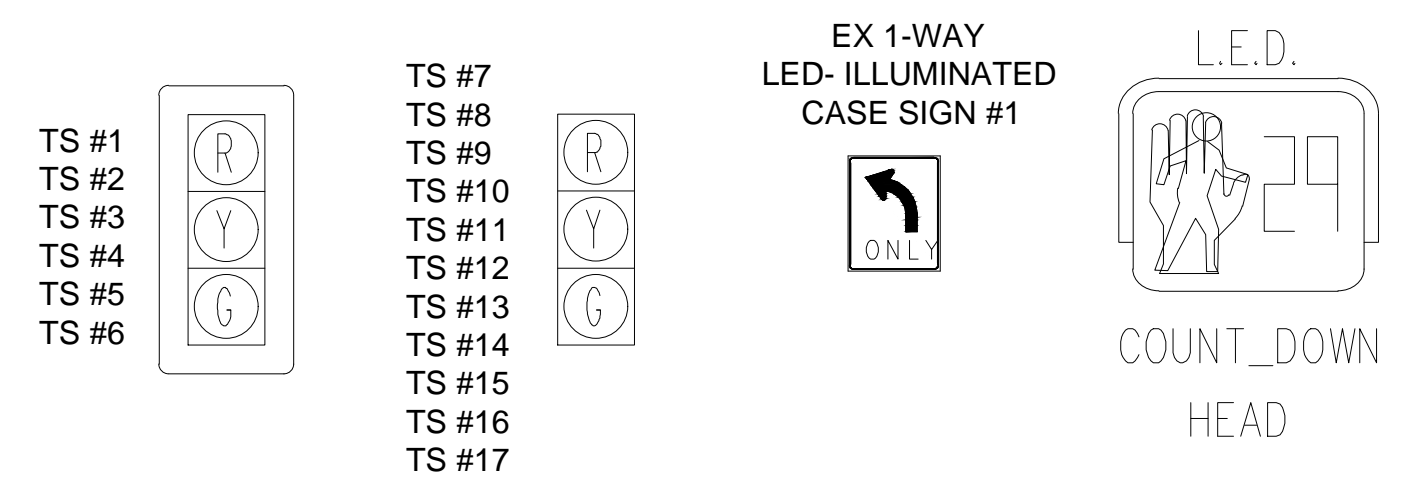
SPEED LIMIT 25

SPEED LIMIT 25



PHASE DIAGRAM

SIGNAL HEADS



STAGE 2 REMOVAL PLAN

CONTRACTOR TO UTILIZE WORK ZONES AND LANE CLOSURES FOR INSTALLATION OF TRAFFIC SIGNALS PRIOR TO STAGE 2
TIME OF REMOVAL OR ADJUSTMENT OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER
TIME OF BAGGING AND UNBAGGING OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

NO.	ITEM	QUANTITIES
1	Wood Pole, Rem	1 Ea.
2	Pedestal Fdn, Rem	1 Ea.
3	Pedestal, Rem	1 Ea.
4	Pushbutton, Rem	1 Ea.
5	Span Wire, Rem	1 Ea.
6	TS Face, Bag, Rem	3 Ea.
7	Remove Traffic Signal (Paid for Under "TS Head, Temp")	3 Ea.
	Conduit, Rem	30 Ft.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLELY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

_ SIGNALS _	
OPENINGS:	52
CYCLIC WATTS:	690
STEADY WATTS:	15

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

LEGEND

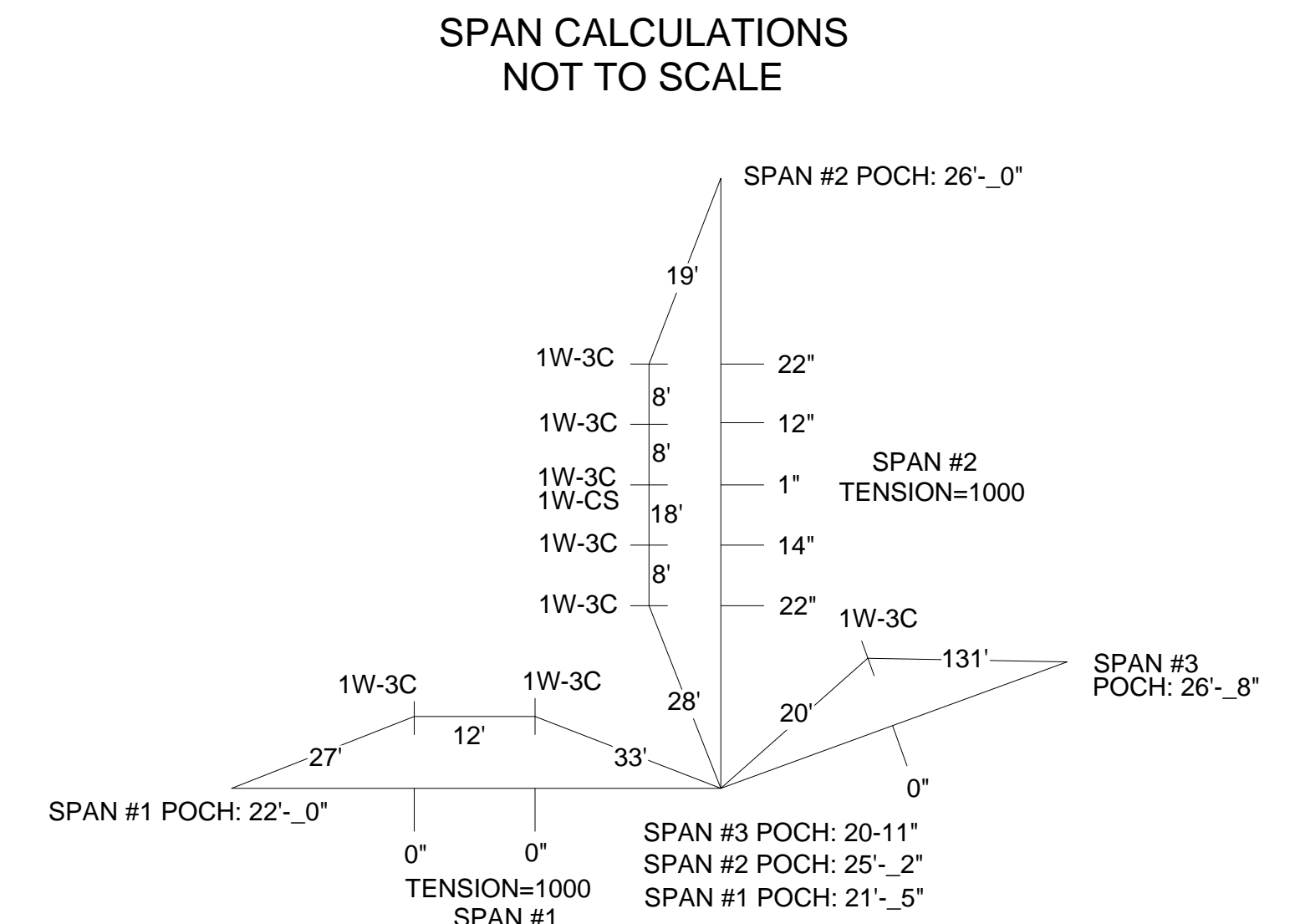
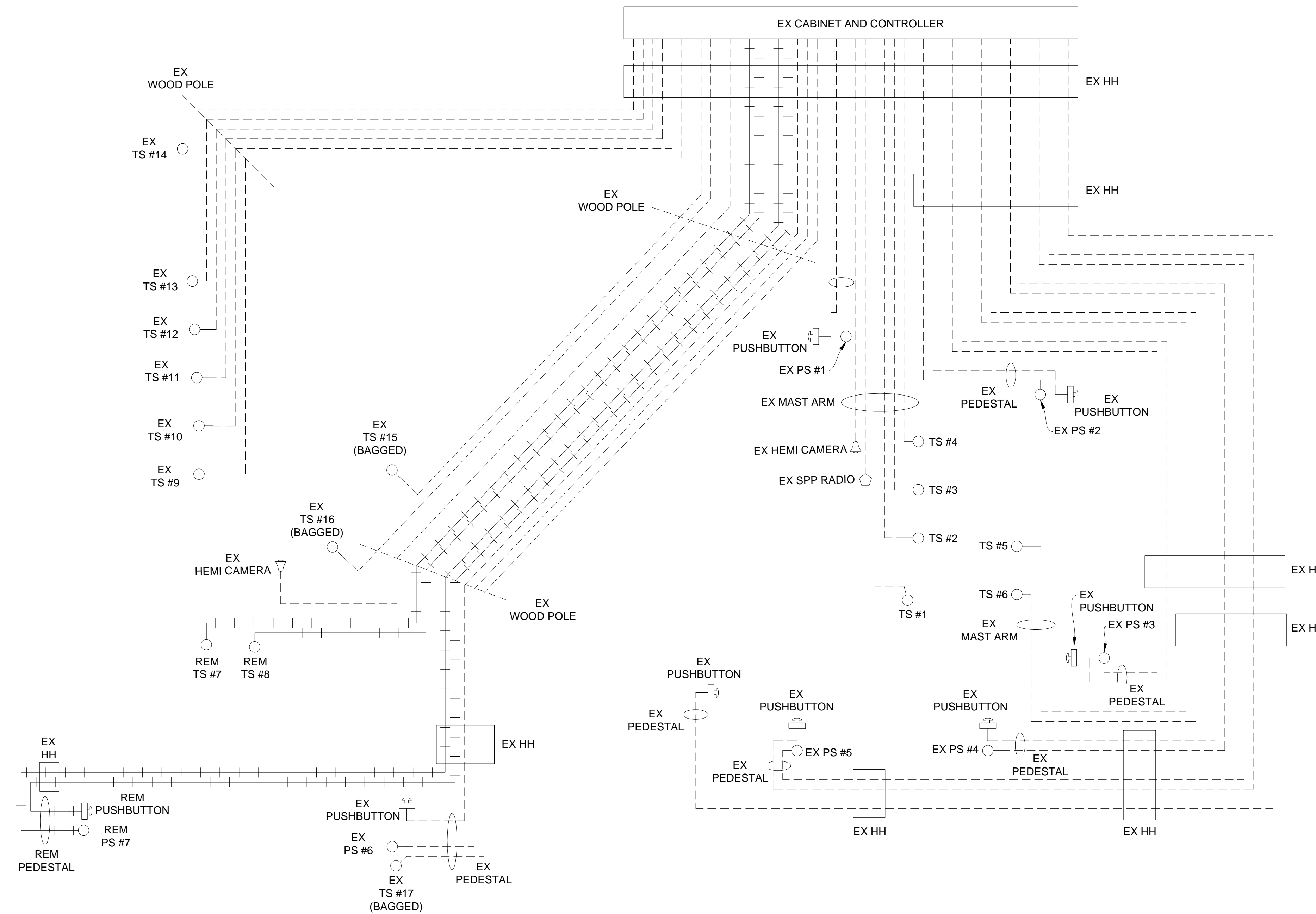
EXISTING	PROPOSED
EXISTING FENCE	PROPOSED SANITARY SEWER & MANHOLE
CONTOUR	STORM SEWER & CAT. BAS.
UTILITY POLE & GUY	WATER MAIN & VALVE-IN-WELL
FIRE HYDRANT ASSEMBLY	WATER MAIN & VALVE-IN-BOX
LIGHT POLE	EXISTING TELEPHONE
END SECTION	GAS LINE
	CABLE T.V.
	ELECTRIC
	SIGN
	EXISTING RD. & GRADE
	LEFT EDGE/RD. GRADE
	RIGHT EDGE/RD. GRADE
	CURB & GUTTER
	EDGE/GRAVEL

DLZ			
SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 2			
SCALE 1"=20'	INCH	DRAWING NO. 2022-008-MOT38	
		SHEET NO. 42 OF 155	

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.



SHOWN STEMS LENGTH ARE SUGGESTED ONLY

STAGE 2 REMOVAL CABLE DIAGRAM

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.



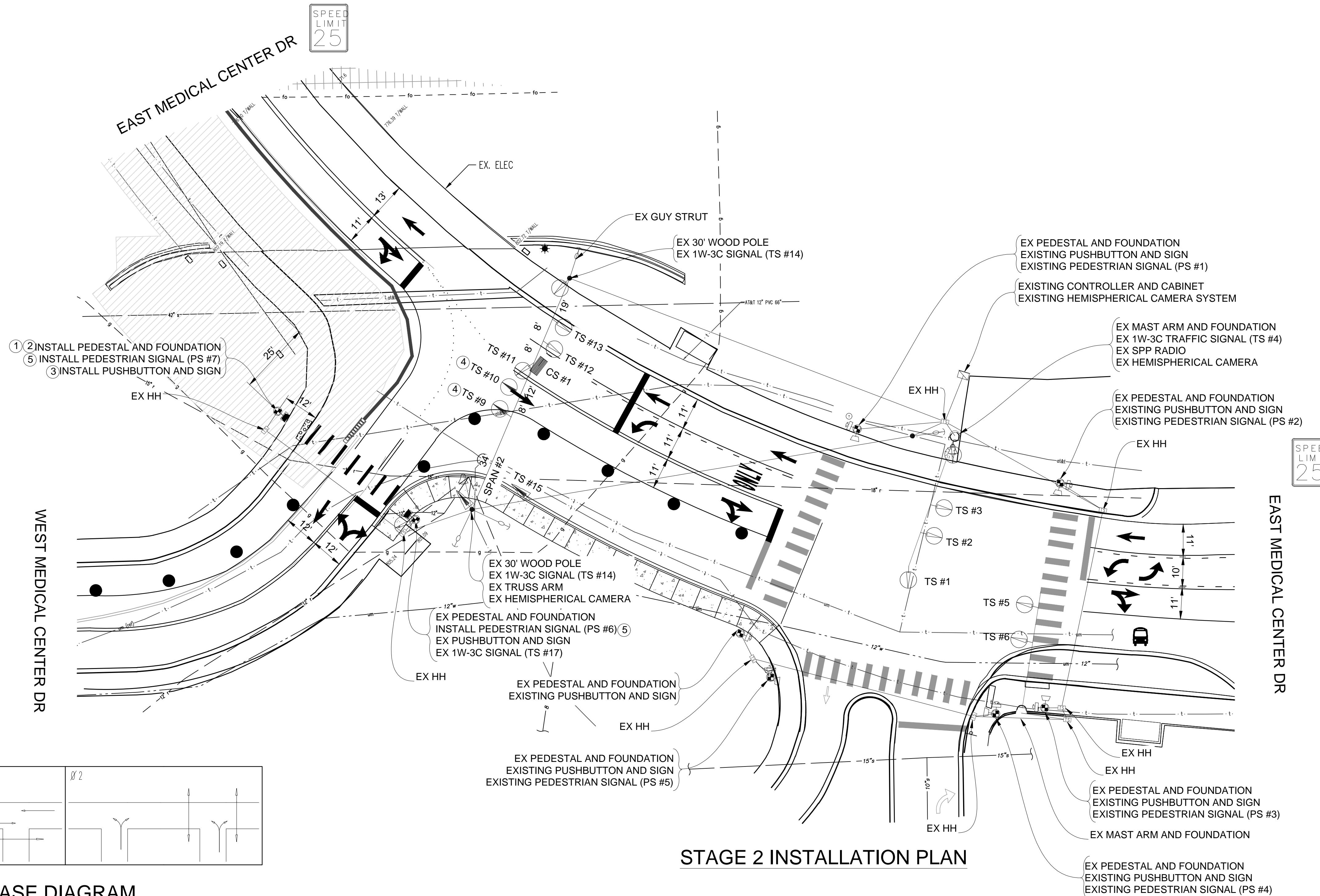
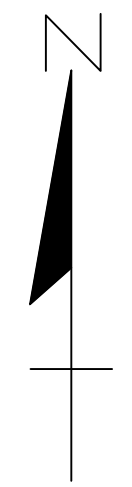
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
TRAFFIC SIGNAL PLANS
FULLER RD AT E. MED. CENTER RD
STAGE 2**

SIGNALS	
OPENINGS:	55
CYCLIC WATTS:	733
STEADY WATTS:	45

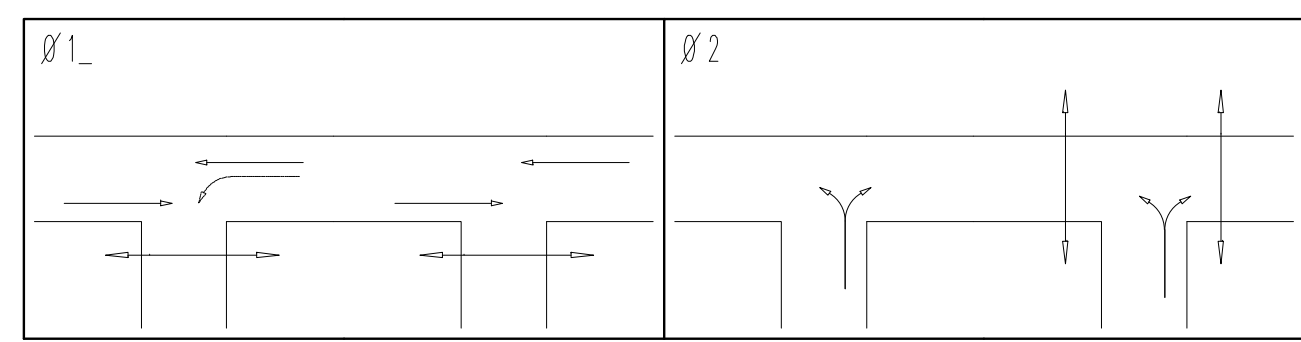
SCALE	0 INCH 1
DRAWING NO.	2021-008-MOT39
SHEET NO.	43 OF 155

DATE	10/6/23	DR.BY	INB	CH.BY	LCM
DESCRIPTION	ORIGINAL ISSUE	DATE	DR.BY	CH.BY	APPROVED BY



SPEED LIMIT 25

SPEED LIMIT 25



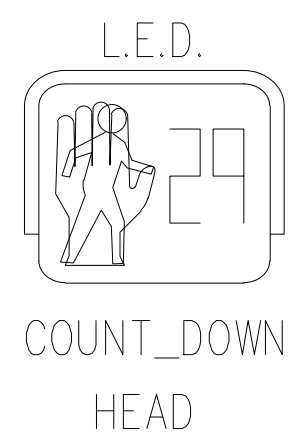
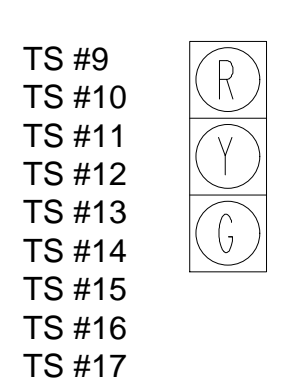
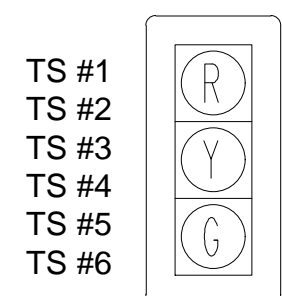
PHASE DIAGRAM

STAGE 2 INSTALLATION PLAN

CONTRACTOR TO UTILIZE WORK ZONES AND LANE CLOSURES FOR INSTALLATION OF TRAFFIC SIGNALS PRIOR TO STAGE 2
 TIME OF REMOVAL OR ADJUSTMENT OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNAL HEADS



NO.	ITEM	QUANTITIES
1	Pedestal, Alum, Salv	1 Ea.
2	Pedestal, Fdn	1 Ea.
3	Pushbutton and Sign, Salv	1 Ea.
4	TS Head, Adj	2 Ea.
5	TS Head, Temp	2 Ea.
	Conduit, DB, 1, 1 1/2 inch	10 Ft.

SIGNALS	
OPENINGS:	49
CYCLIC WATTS:	647
STEADY WATTS:	45

3 WORKING DAYS BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ			
REV. NO.	DESCRIPTION	DATE	DR. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
 FULLER RD AT E. MED. CENTER RD
 STAGE 2**

SCALE: 1"=20'

DRAWING NO. 2021-008-MOT40

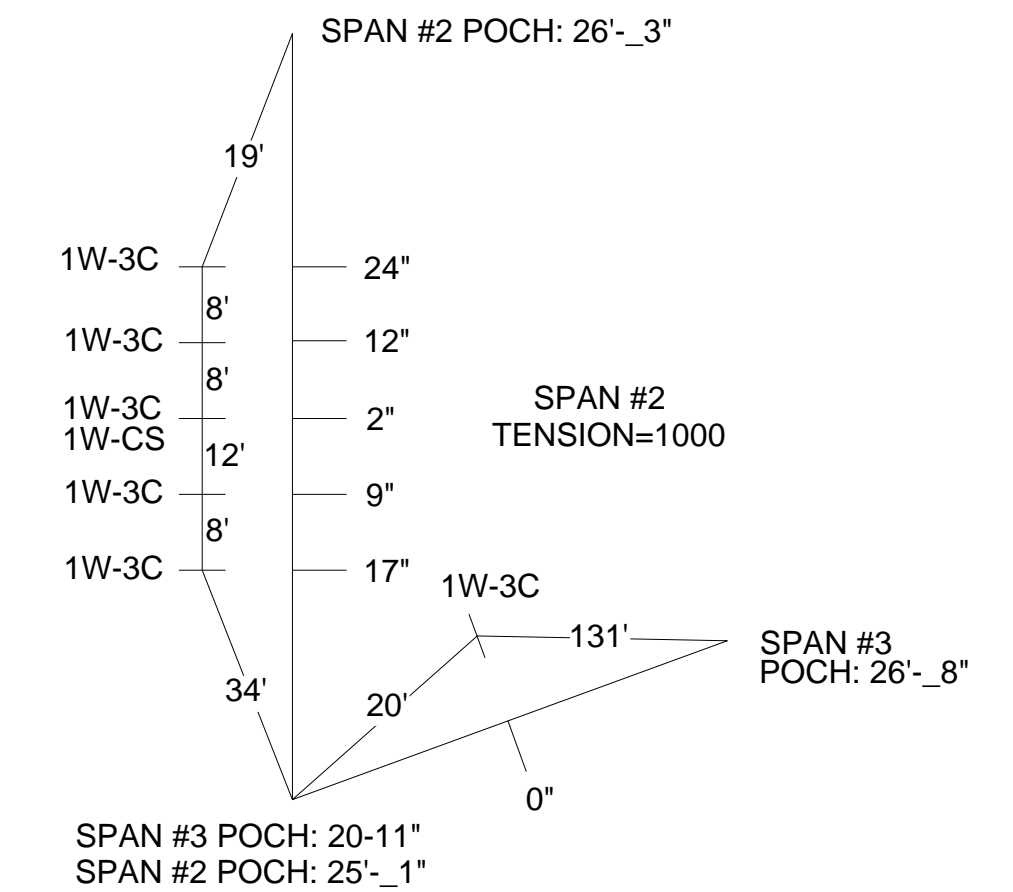
SHEET NO. 44 OF 155

APPROVED BY: _____

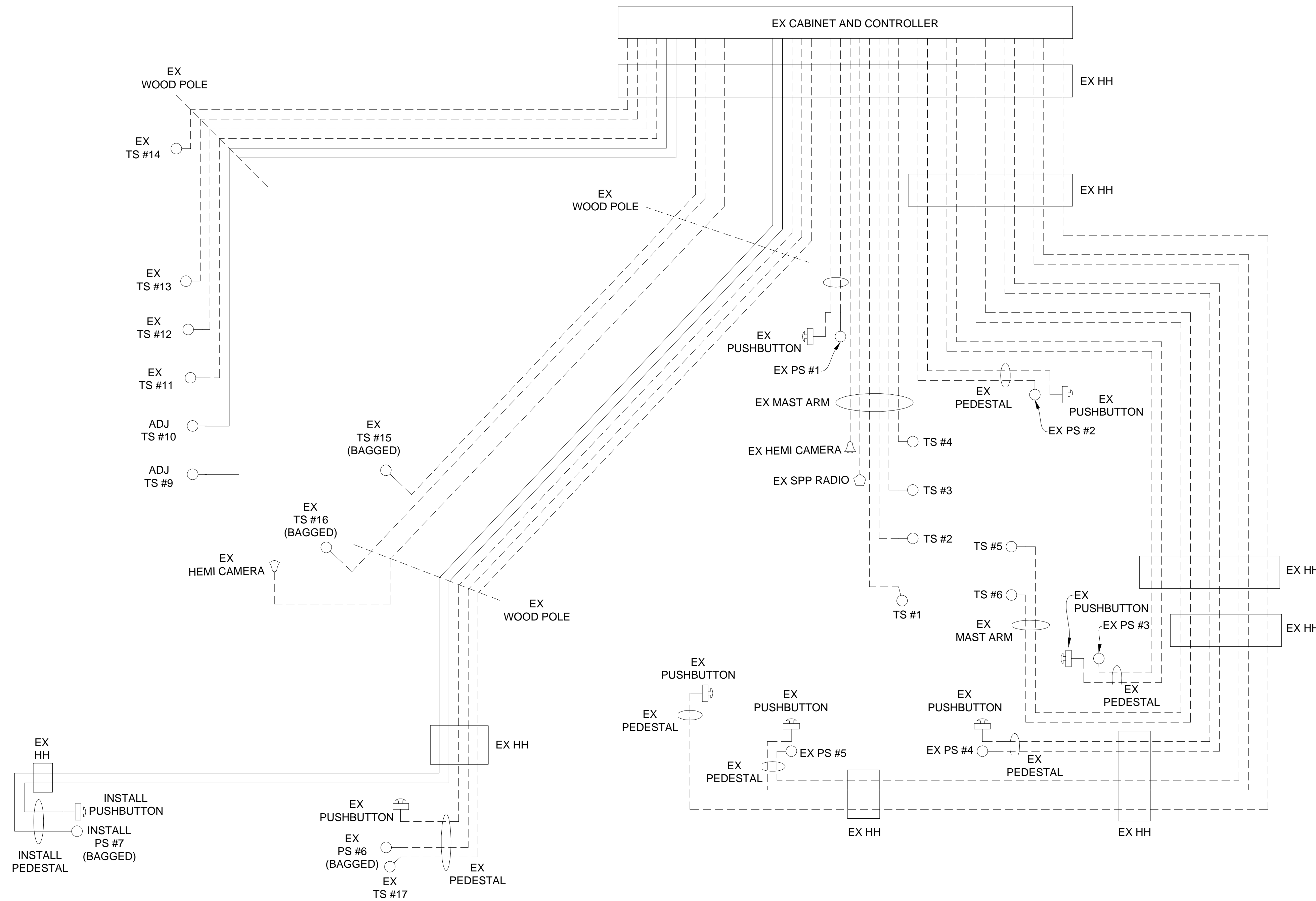
**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.

**SPAN CALCULATIONS
NOT TO SCALE**



SHOWN STEMS LENGTH ARE SUGGESTED ONLY



STAGE 3 CABLE DIAGRAM

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

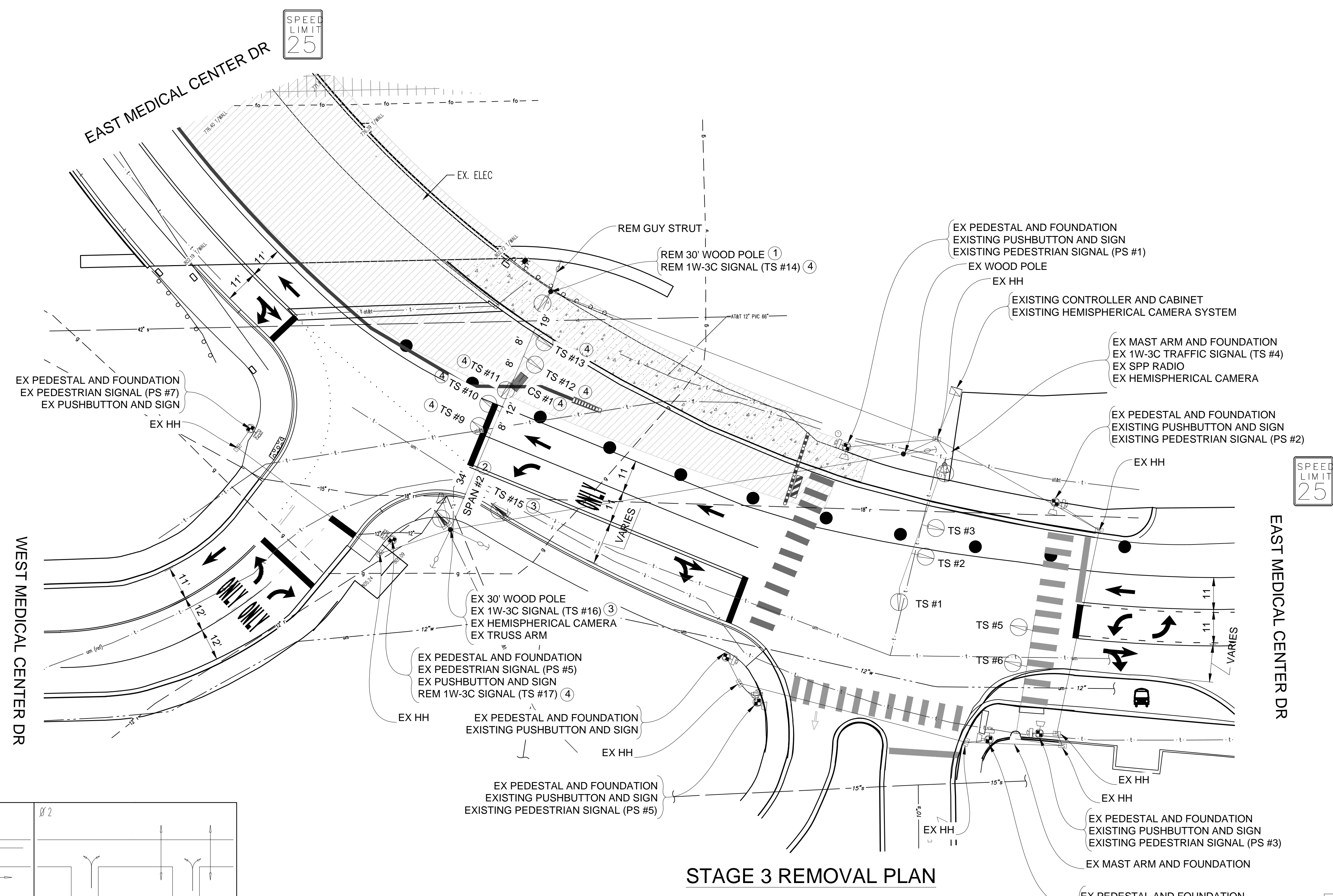
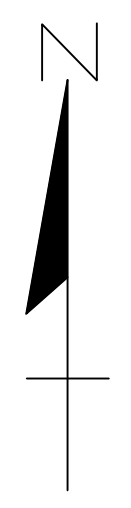
SIGNALS	
OPENINGS:	49
CYCLIC WATTS:	647
STEADY WATTS:	45

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

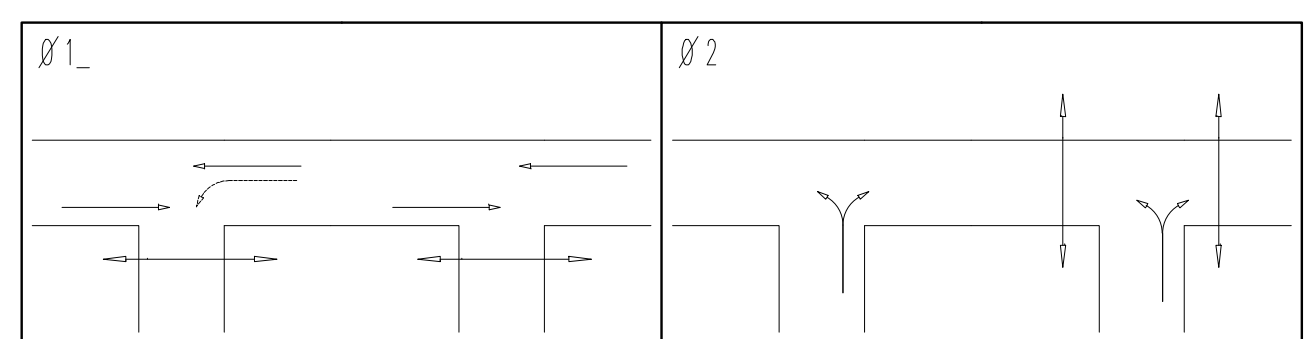
DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 3	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT41	
SHEET NO. 45 OF 155	



SPEED LIMIT 25

SPEED LIMIT 25



PHASE DIAGRAM

STAGE 3 REMOVAL PLAN

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Wood Pole, Rem	1 Ea.
②	Span Wire, Rem	1 Ea.
③	TS Face, Bag, Rem	2 Ea.
④	Remove Traffic Signal (Paid for Under "TS Head, Temp")	8 Ea.
	Conduit, Rem	160 Ft.

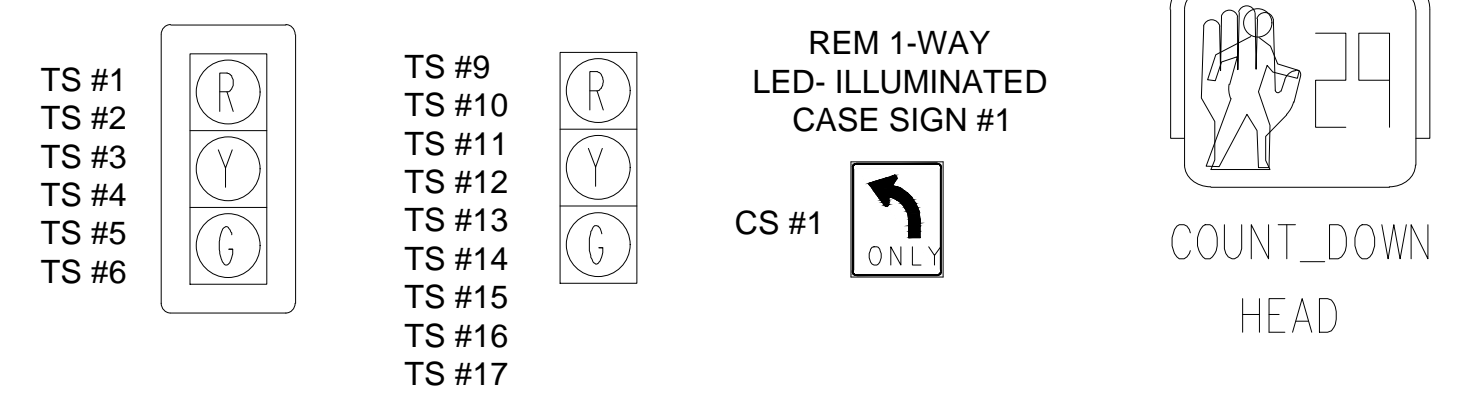
CONTRACTOR TO UTILIZE WORK ZONES AND MOT TYPICAL 163-INT-LD-OUT FOR INSTALLATION OF TRAFFIC SIGNALS PRIOR TO STAGE 3

TIME OF REMOVAL OR ADJUSTMENT OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SIGNALS	
OPENINGS:	46
CYCLIC WATTS:	604
STEADY WATTS:	15

SIGNAL HEADS



3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

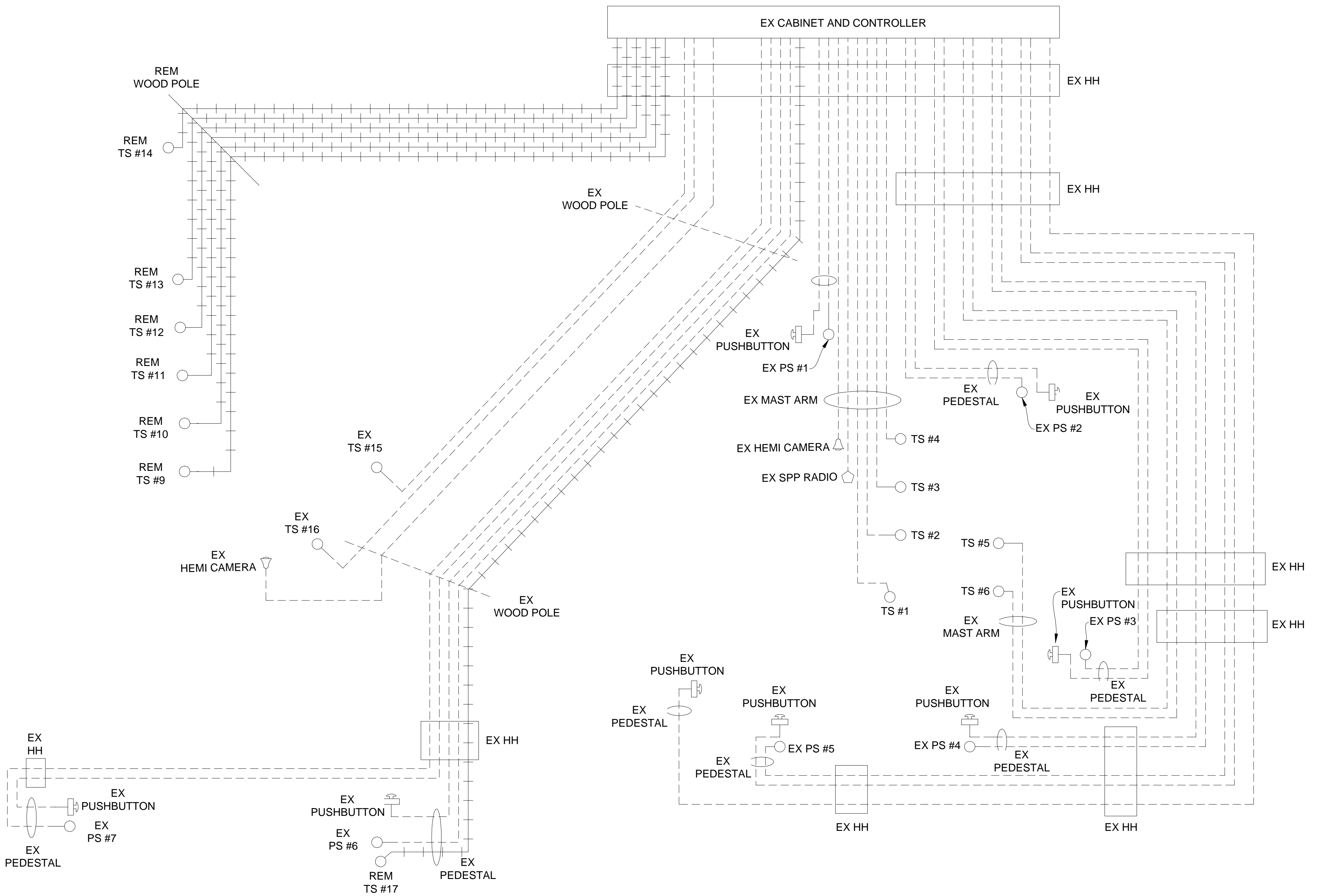
LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

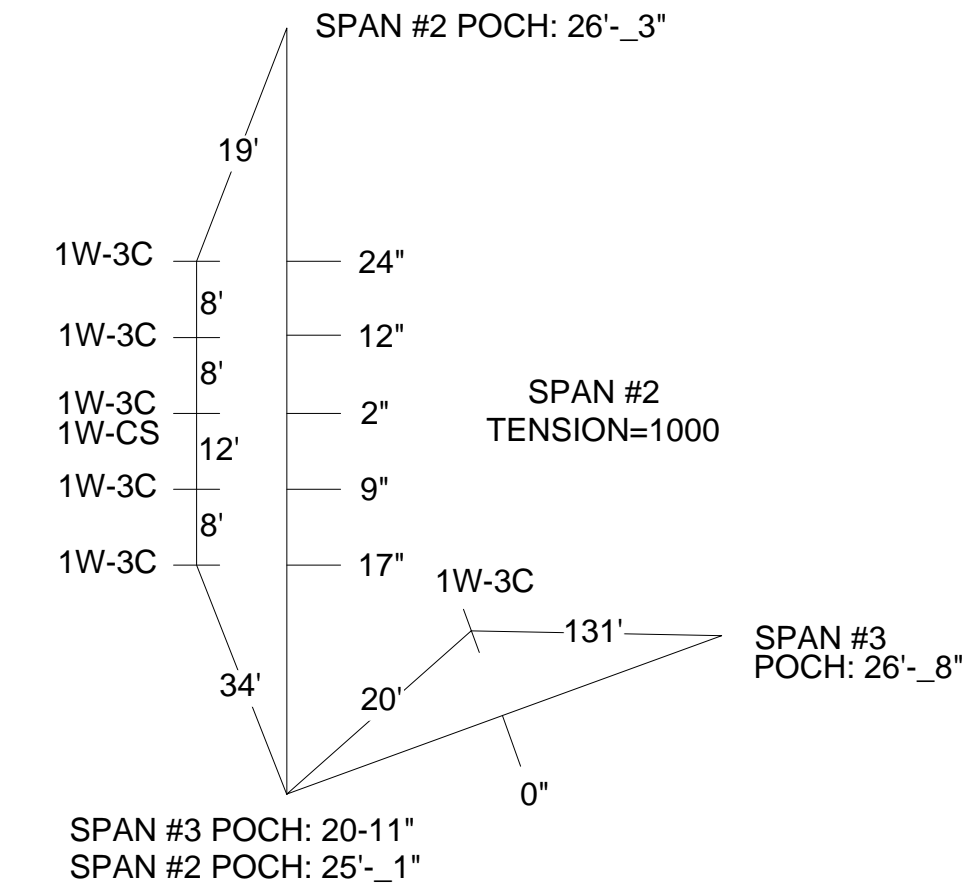
		ORIGINAL ISSUE	10/6/23	INB	LCM
		DATE	DR. BY	CH. BY	APPROVED BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 3	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2022-008-MOT42	SHEET NO. 46 OF 155

- CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**
1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
 2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
 3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
 4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.



SPAN CALCULATIONS
NOT TO SCALE



SHOWN STEMS LENGTH ARE
SUGGESTED ONLY

STAGE 3 REMOVAL CABLE DIAGRAM

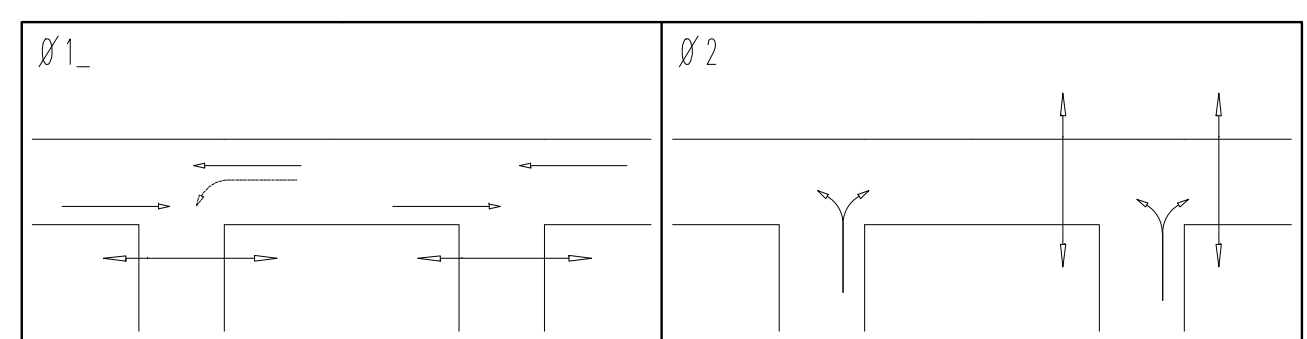
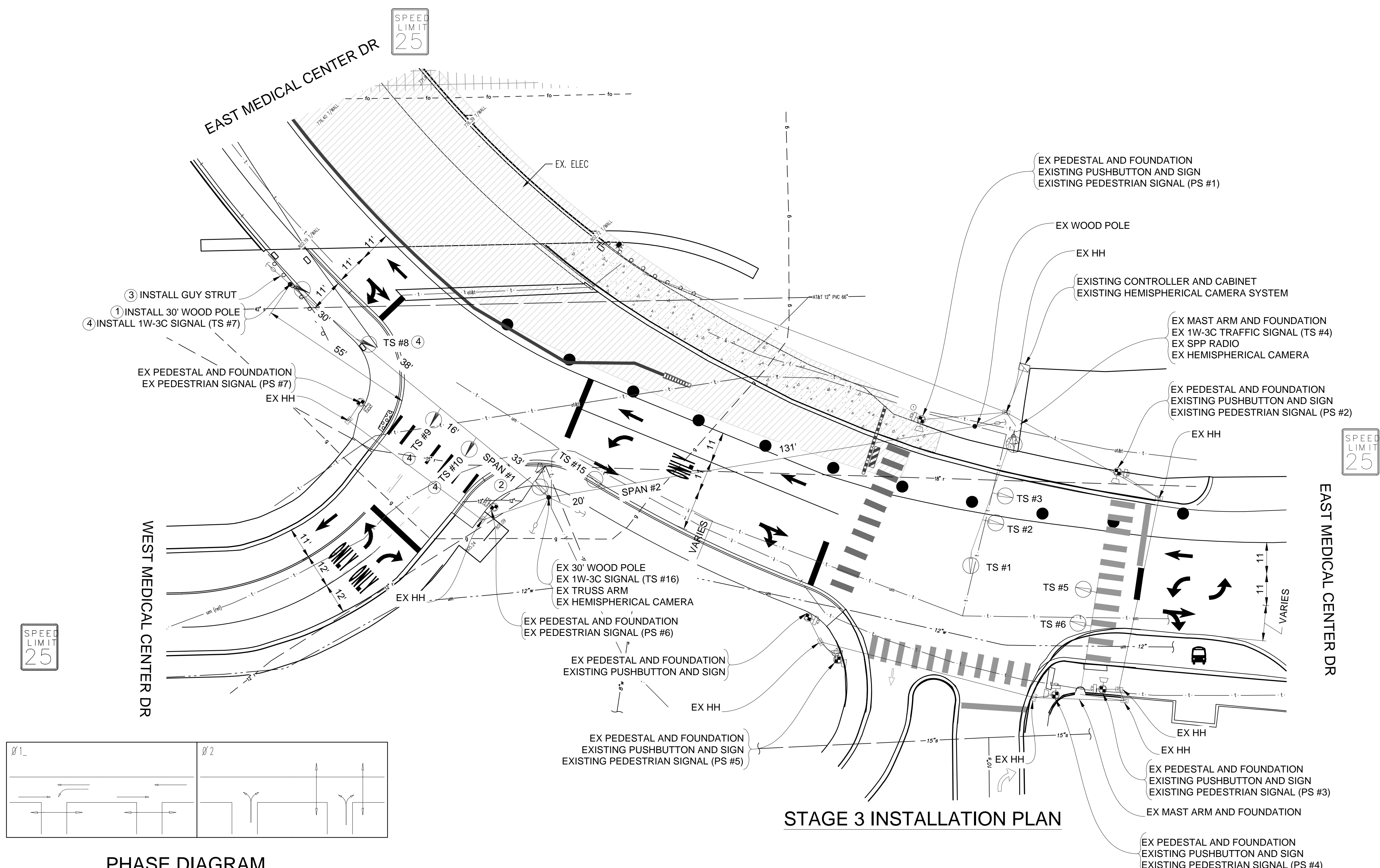
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

__ SIGNALS __
OPENINGS: 49
CYCLIC WATTS: 647
STEADY WATTS: 45

LEGEND	
EXISTING FENCE	EXISTING TELEPHONE
CONTOUR	GAS LINE
STORM SEWER & CAT. BAS.	CABLE T.V.
WATER MAIN & VALVE-IN-WELL	ELECTRIC
WATER MAIN & VALVE-IN-BOX	SIGN
EXISTING SANITARY SEWER & MANHOLE	EXISTING RD. & GRADE
UTILITY POLE & GUY	LEFT EDGE/RD. GRADE
FIRE HYDRANT ASSEMBLY	RIGHT EDGE/RD. GRADE
LIGHT POLE	CURB & GUTTER
END SECTION	EDGE/GRAVEL
PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
STORM SEWER & CAT. BAS.	SEE ABOVE
WATER MAIN W/F.H. ASSEM.	BENCH MARK
CONTOUR	SURVEY BOOK
ROAD & GRADE	REV. NO.
	DESCRIPTION
	DATE
	DR. BY
	CH. BY

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 3	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT43	
SHEET NO. 47 OF 155	



PHASE DIAGRAM

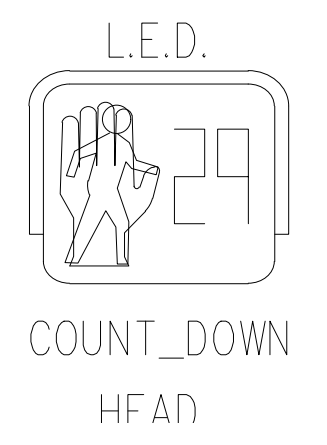
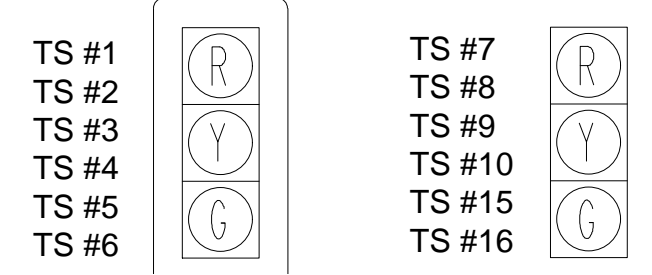
STAGE 3 INSTALLATION PLAN

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Wood Pole, C14, 30 foot	1 Ea.
②	Span Wire	1 Ea.
③	Strut Guy	1 Ea.
④	TS Head, Temp	4 Ea.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

_ SIGNALS _	
OPENINGS:	49
CYCLIC WATTS:	647
STEADY WATTS:	45

SIGNAL HEADS



3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
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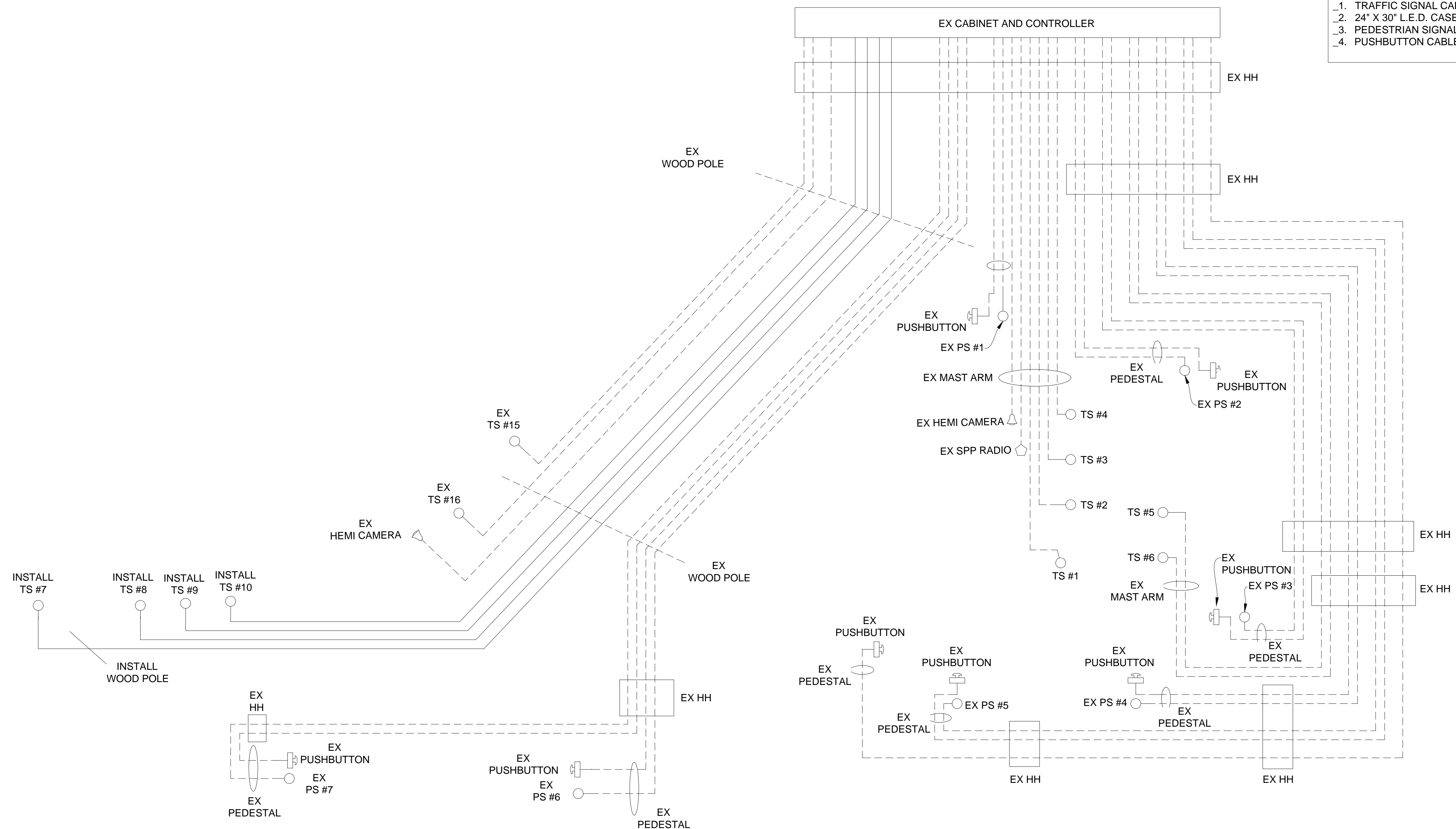
CONTRACTOR TO UTILIZE WORK ZONES
AND MOT TYPICAL 163-INT-LD-OUT
FOR INSTALLATION OF TRAFFIC
SIGNALS PRIOR TO STAGE 3

DLZ	
REV. NO.	DESCRIPTION
DATE	DR. BY
CH. BY	

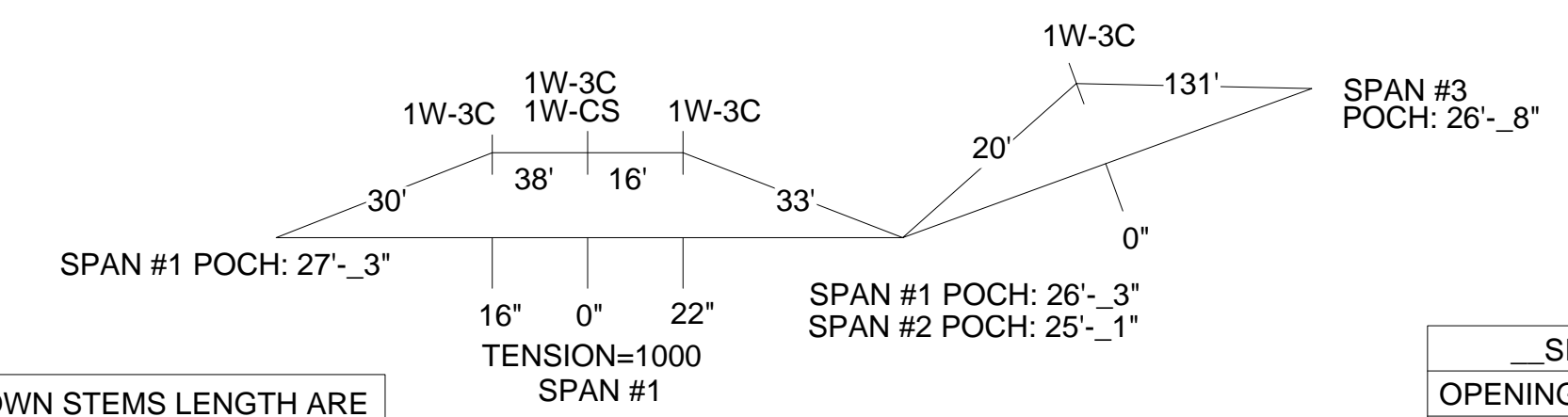
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 3			
SCALE	1"=20'	INCH	1
DRAWING NO.	2022-008-MOT44		
SHEET NO.	48 OF 155		

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- _1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
- _2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
- _3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
- _4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.



SPAN CALCULATIONS
NOT TO SCALE



STAGE 3 INSTALLATION CABLE DIAGRAM

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

SHOWN STEMS LENGTH ARE
SUGGESTED ONLY

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

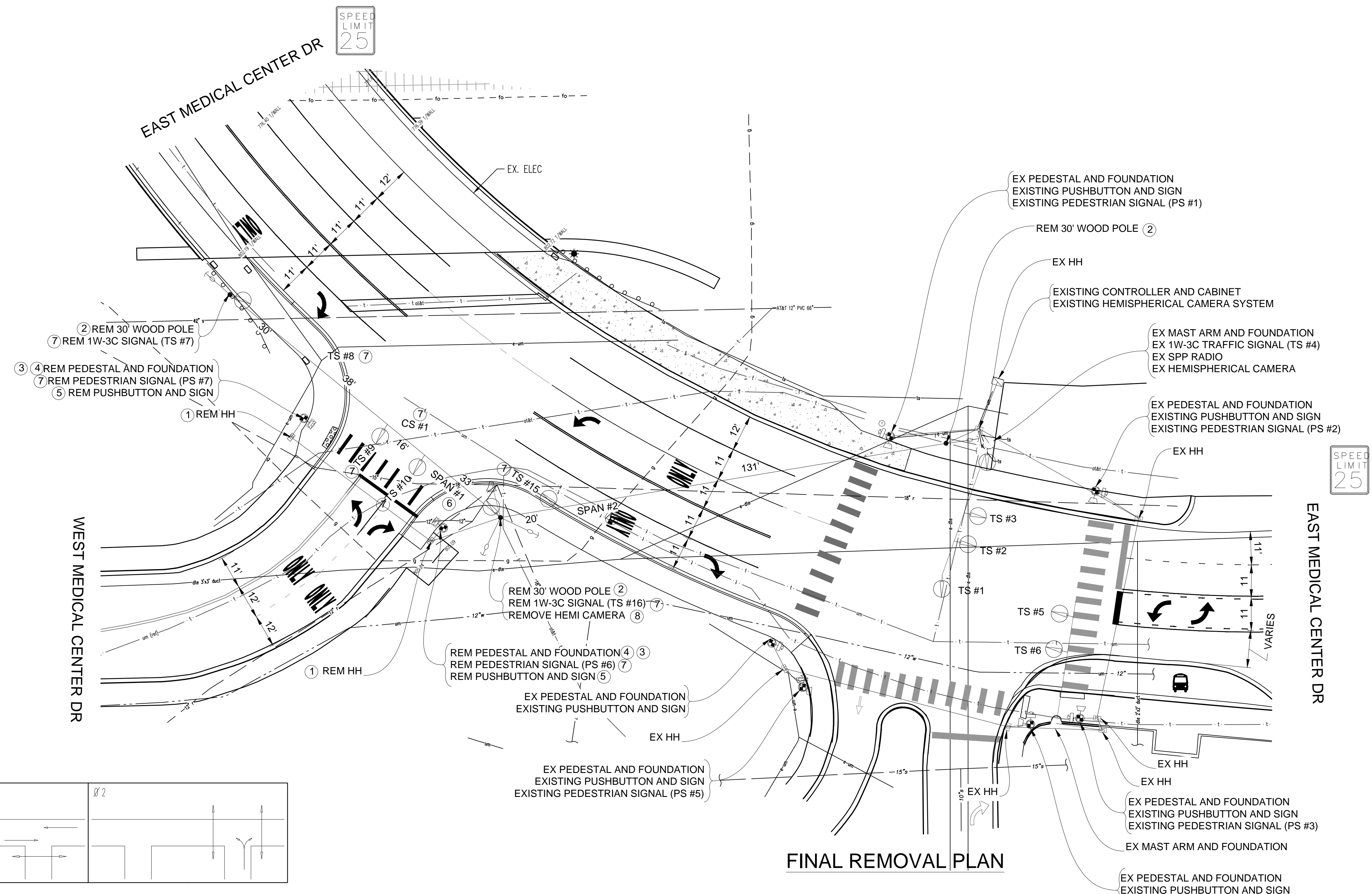
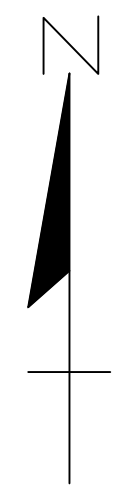


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
TRAFFIC SIGNAL PLANS
FULLER RD AT E. MED. CENTER RD
STAGE 3**

SCALE	0 INCH 1
DRAWING NO.	2021-008-MOT45
SHEET NO.	49 OF 155

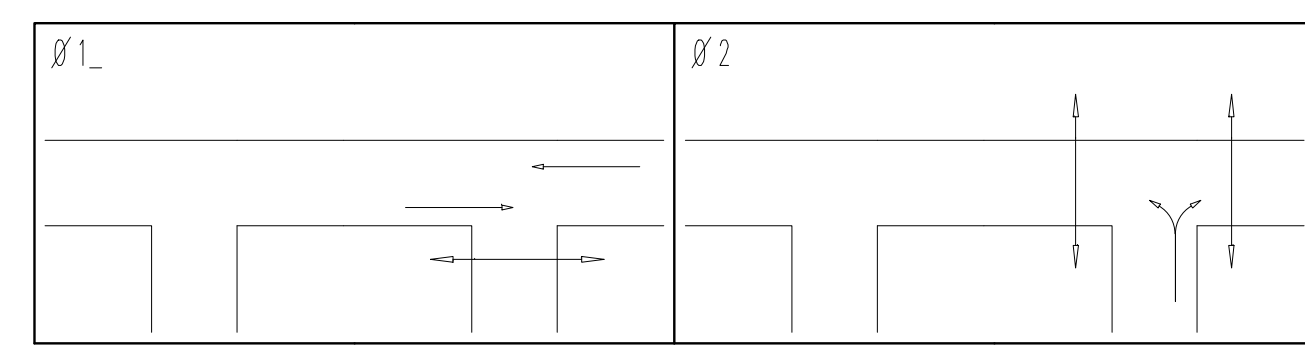
DATE	10/6/23	DR.BY	INB	CH.BY	LCM
DESCRIPTION	ORIGINAL ISSUE	DATE	10/6/23	DR.BY	INB



FINAL REMOVAL PLAN

CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR REMOVAL OF TRAFFIC SIGNALS AFTER COMPLETION OF STAGE 3
 TIME OF REMOVAL OR ADJUSTMENT OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER

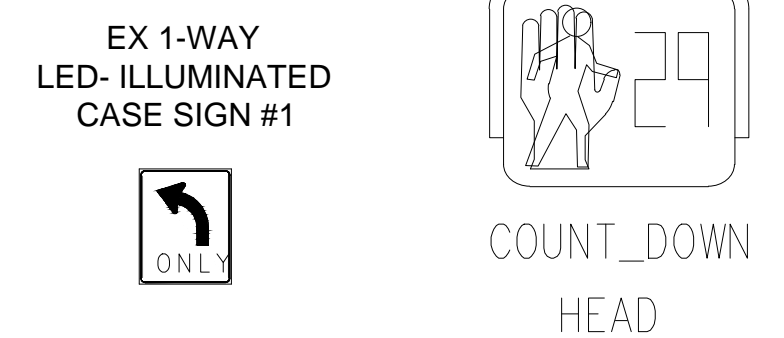
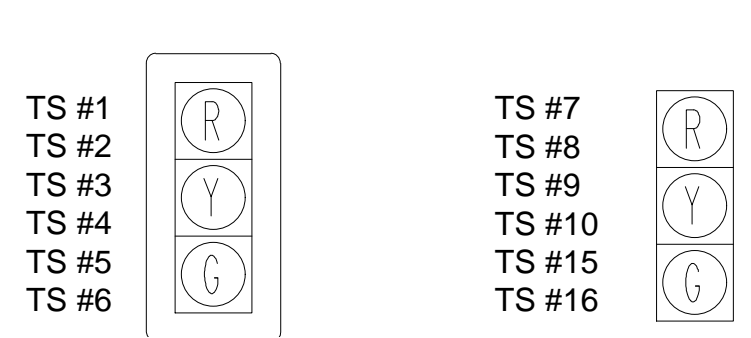
NOTE:
 PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES



PHASE DIAGRAM

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	HH, Rem	2 Ea.
②	Wood Pole, Rem	3 Ea.
③	Pedestal Fdn, Rem	2 Ea.
④	Pedestal, Rem	2 Ea.
⑤	Pushbutton, Rem	2 Ea.
⑥	Span Wire, Rem	2 Ea.
⑦	Rem Traffic Signal (Included in "TS Head, Temp")	9 Ea.
⑧	Hemispherical Video Detection Camera, Rem	1 Ea.
	Conduit, Rem	80 FL.

SIGNAL HEADS



3 WORKING DAYS!
BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

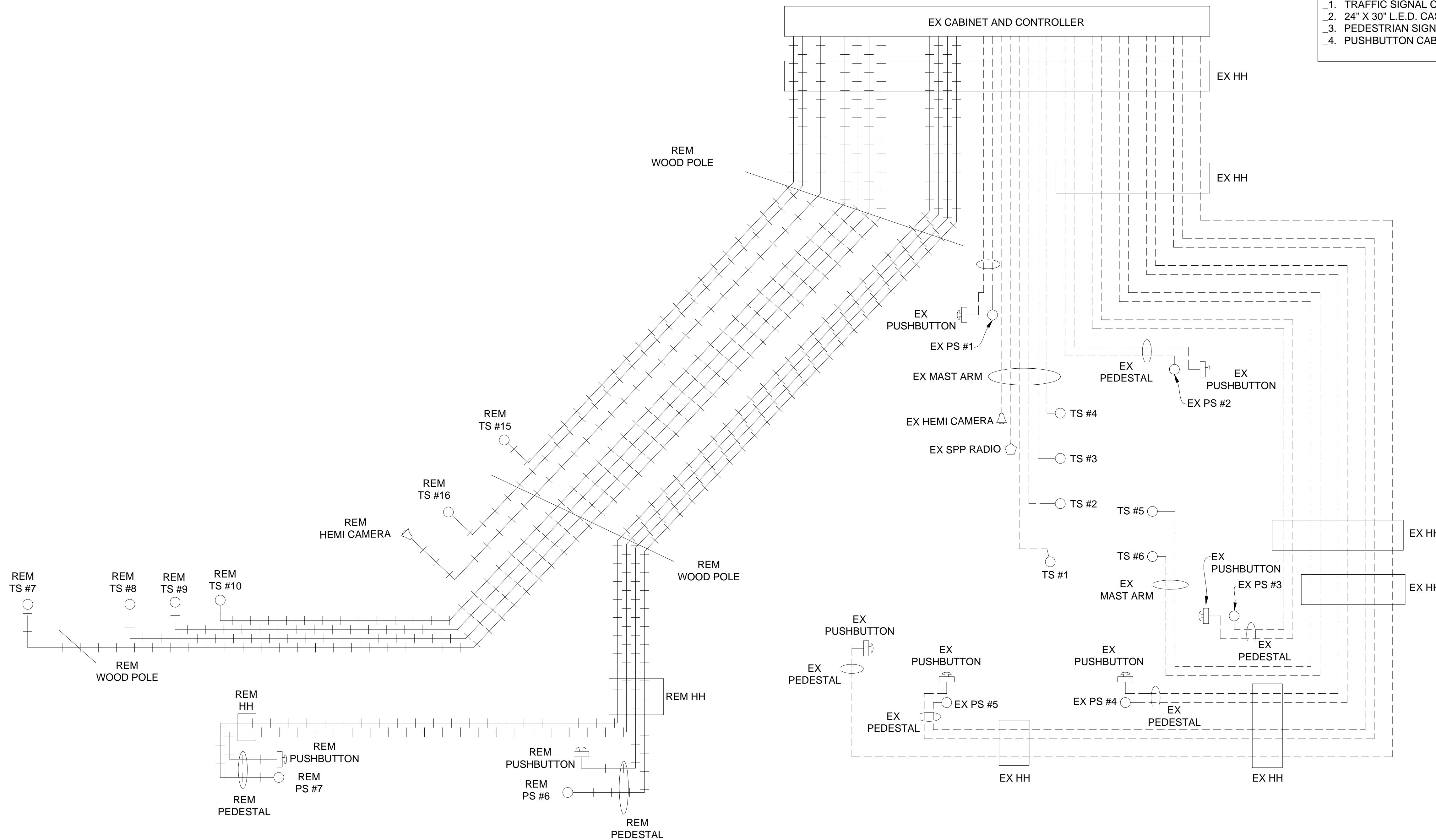
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	- S - - - -	- t - - - -	- - - - -	- S - - - -	- - - - -
- - - - -	- - - - -	- g - - - -	- - - - -	- R - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- W - - - -	- - - - -
- - - - -	- - - - -	- e - - - -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -

DLZ				
SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION
			10/6/23	INB
			DR.BY	CH.BY
				LCM

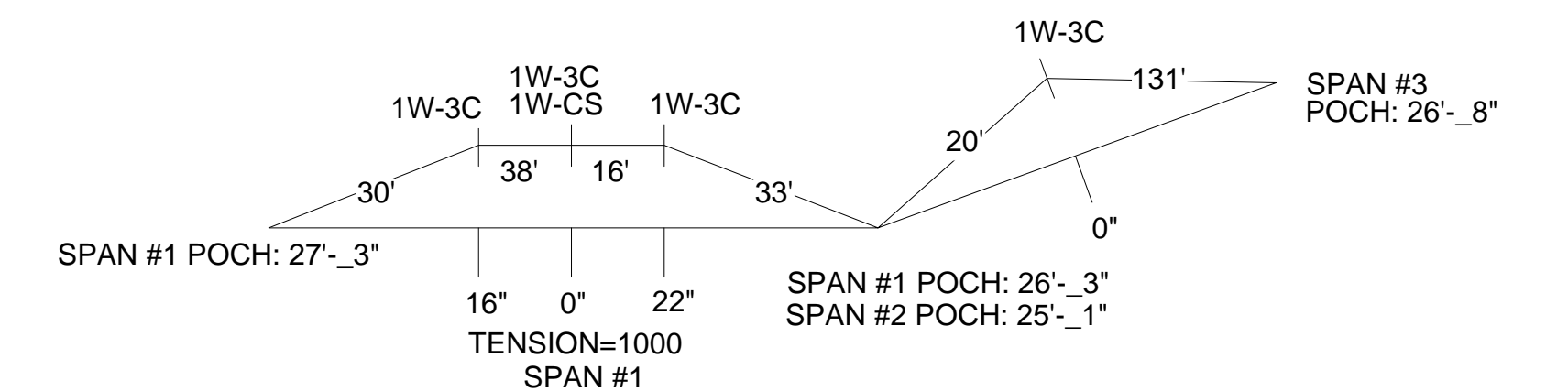
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MED CENTER TRAFFIC SIGNAL PLANS	
FULLER RD AT E. MED. CENTER RD FINAL REMOVAL	
SCALE 1"=20'	INCH 0 1
DRAWING NO. 2022-008-MOT46	SHEET NO. 50 OF 155
APPROVED BY: _____	

CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE

1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.



SPAN CALCULATIONS
NOT TO SCALE



SHOWN STEMS LENGTH ARE
SUGGESTED ONLY

FINAL REMOVAL CABLE DIAGRAM

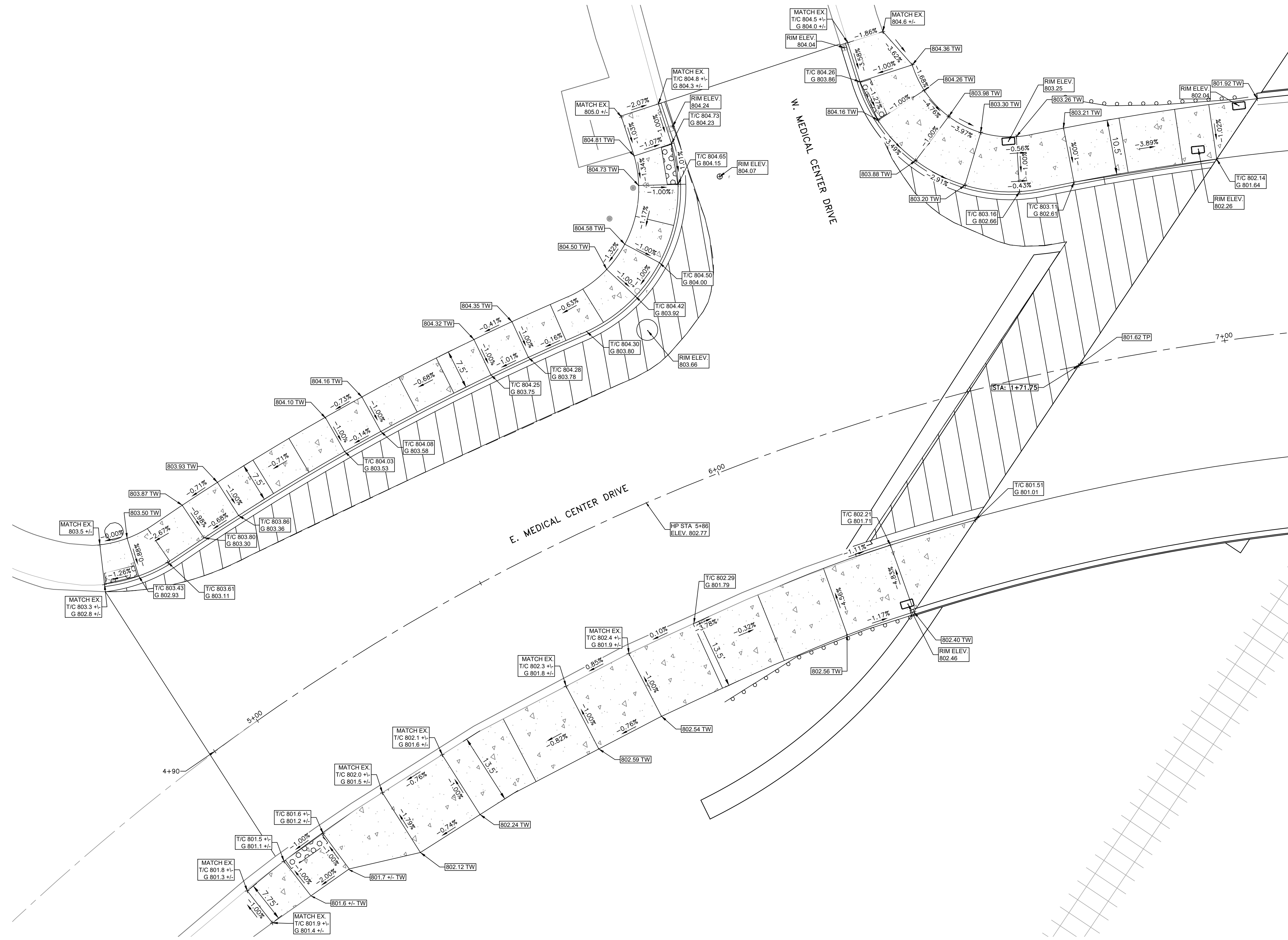
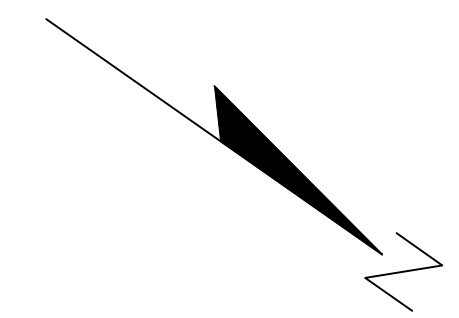
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MED CENTER TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD FINAL REMOVAL	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-MOT47	
SHEET NO. 51 OF 155	



3 WORKING DAYS
BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

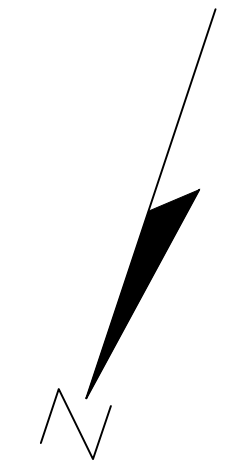
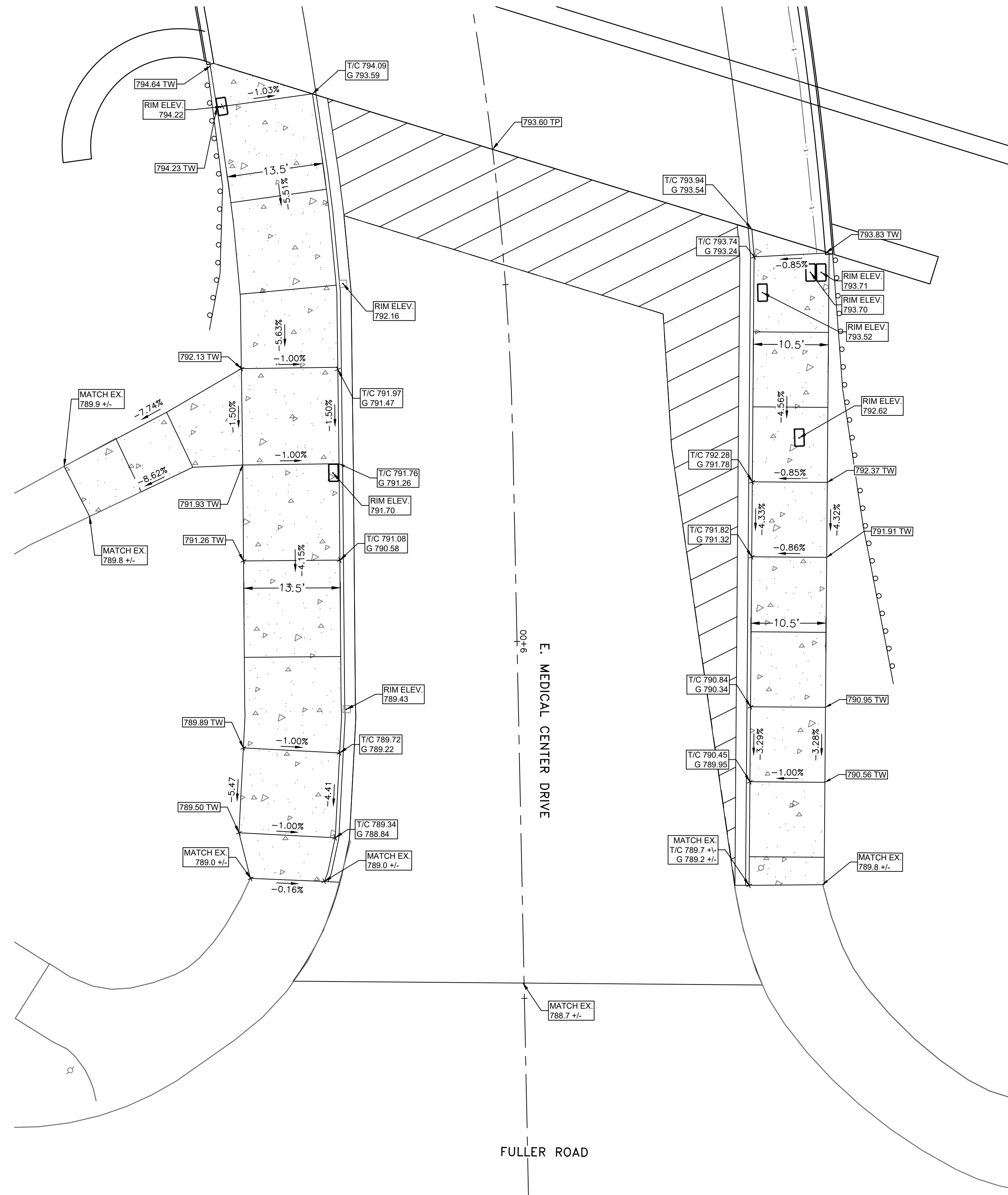
LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. @ GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- END SECTION	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX		- SIGN	- EDGE/GRAVEL	- ROAD @ GRADE	- REV. NO.

**E. MEDICAL CENTER DRIVE
 W. MEDICAL CENTER DRIVE**
 SCALE: 1"=10'

DLZ				
SEE ABOVE	REVISIONS	DATE	DR. BY	CH. BY
BENCH MARK	SURVEY BOOK	ORIGINAL ISSUE	10/6/23	INB
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
				LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR				
E. MEDICAL CENTER DRIVE DETAIL GRADES				
SCALE	1"=10'	INCH	0	1
DRAWING NO.	2021-008-GD1			
SHEET NO.	52	OF	155	
APPROVED BY	LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025			



FULLER ROAD & E. MEDICAL CENTER DRIVE

SCALE: 1"=10'

3 WORKING DAYS
BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. @ GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD @ GRADE	- REV. NO.



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

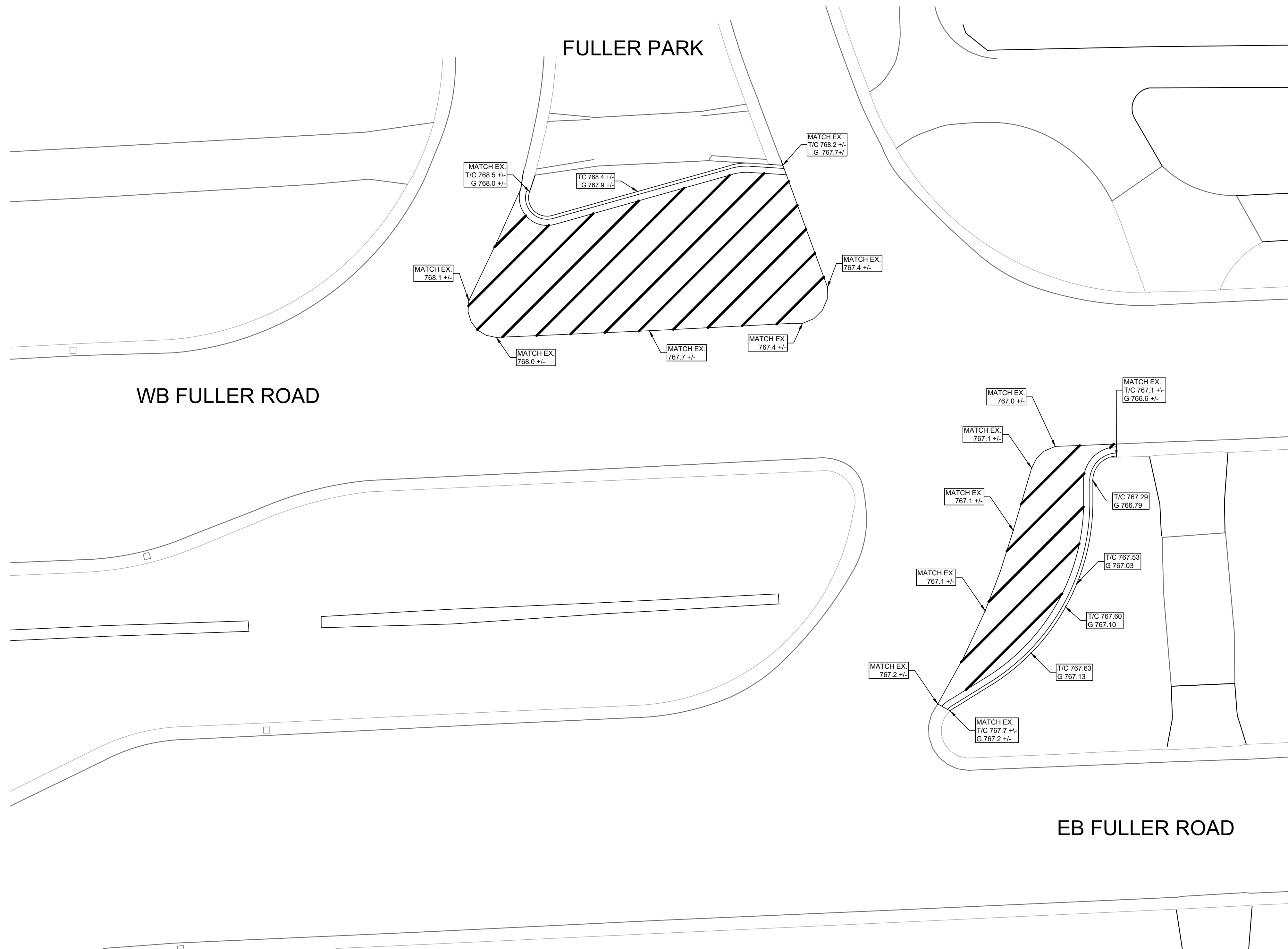
**E. MEDICAL CENTER DRIVE
 DETAIL GRADES**

SCALE	0	INCH	1
1"=10'			

DRAWING NO.	2021-008-GD2
SHEET NO.	53 OF 155

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

APPROVED BY _____
 LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



FULLER ROAD CROSS OVER

SCALE: 1"=10'

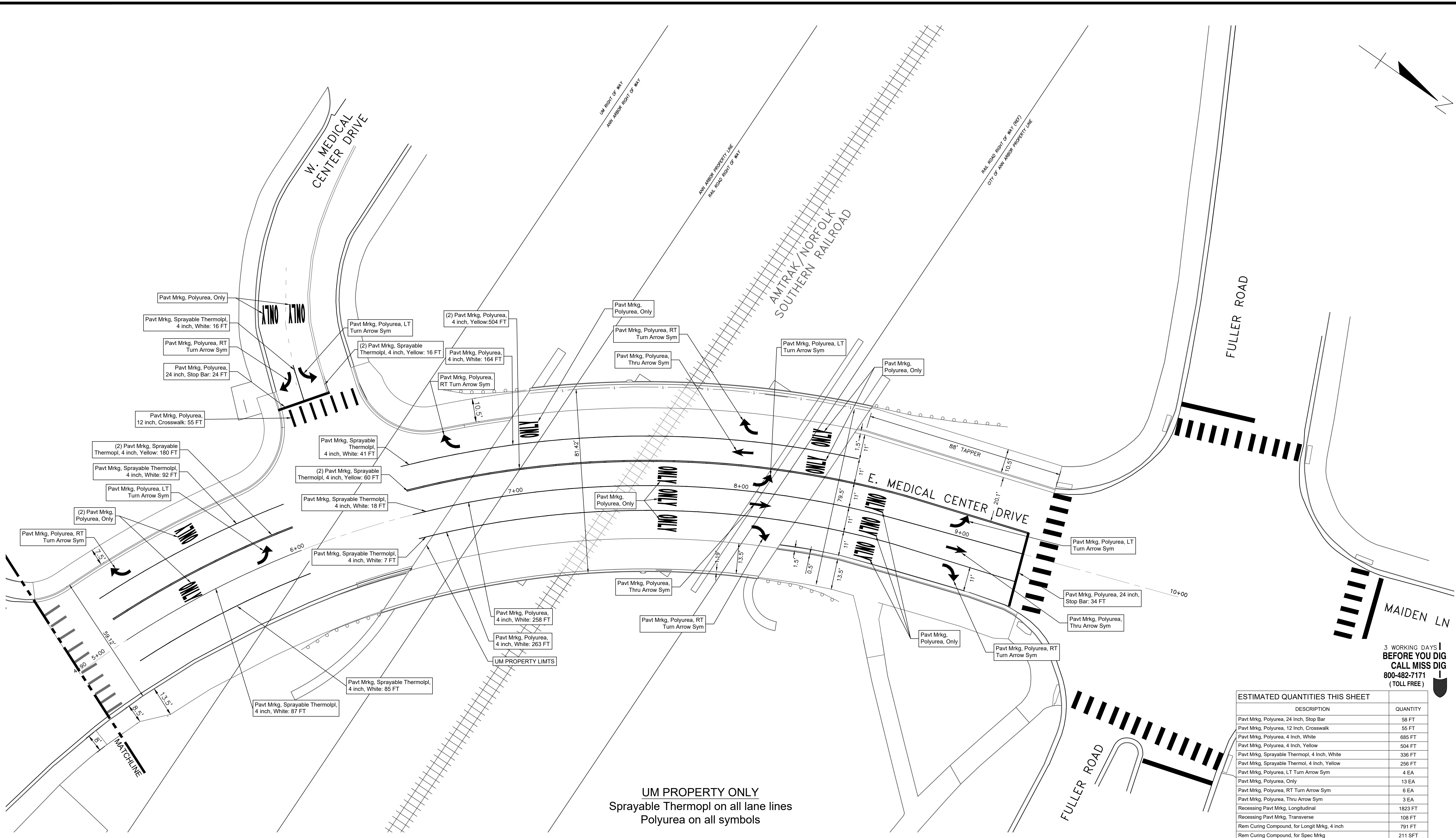
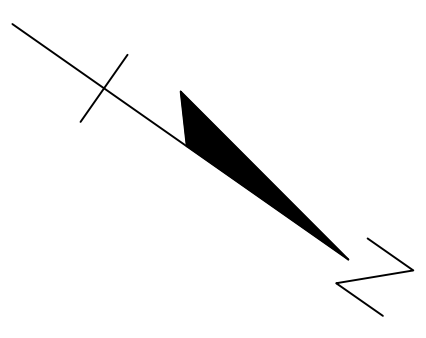
3 WORKING DAYS!
BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. @ GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD @ GRADE	- REV. NO.

DLZ				

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR				
E. MEDICAL CENTER DRIVE DETAIL GRADES				
SCALE	0	INCH	1	
1"=10'				
DRAWING NO.				
2021-008-GD3				
SHEET NO.	54	OF	155	
APPROVED BY				



UM PROPERTY ONLY
 Sprayable Thermopl on all lane lines
 Polyurea on all symbols

3 WORKING DAYS
 BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pavt Mrkg, Polyurea, 24 Inch, Stop Bar	58 FT
Pavt Mrkg, Polyurea, 12 Inch, Crosswalk	55 FT
Pavt Mrkg, Polyurea, 4 Inch, White	685 FT
Pavt Mrkg, Polyurea, 4 Inch, Yellow	504 FT
Pavt Mrkg, Sprayable Thermopl, 4 Inch, White	336 FT
Pavt Mrkg, Sprayable Thermopl, 4 Inch, Yellow	256 FT
Pavt Mrkg, Polyurea, LT Turn Arrow Sym	4 EA
Pavt Mrkg, Polyurea, Only	13 EA
Pavt Mrkg, Polyurea, RT Turn Arrow Sym	6 EA
Pavt Mrkg, Polyurea, Thru Arrow Sym	3 EA
Recessing Pavt Mrkg, Longitudinal	1823 FT
Recessing Pavt Mrkg, Transverse	108 FT
Rem Curing Compound, for Longit Mrkg, 4 inch	791 FT
Rem Curing Compound, for Spec Mrkg	211 SFT

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. C. GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- END SECTION	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX		- SIGN	- EDGE/GRAVEL	- ROAD C. GRADE	- REV. NO.

847	S	t	S	S	SEE ABOVE
W	SM	g	g	R	BENCH MARK
W	o	v	g	R	SURVEY BOOK
W	o	e	g	W	REV. NO.
)	β	g	847	DESCRIPTION

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
		10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

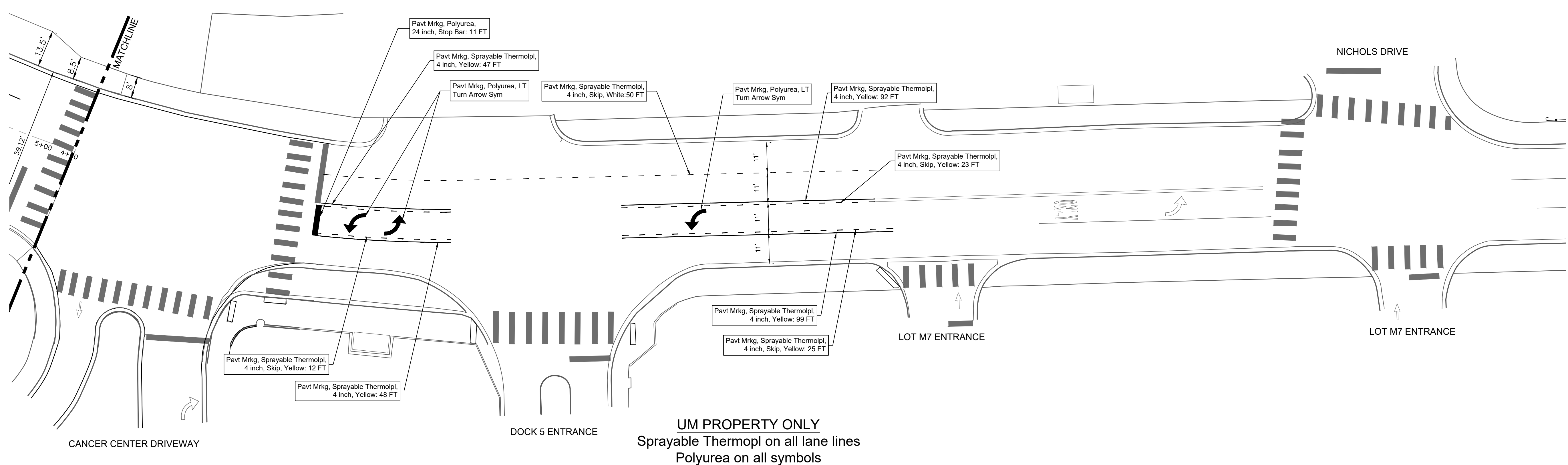
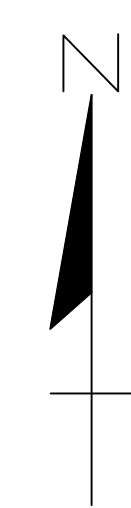
**E. MEDICAL CENTER DRIVE
 PERMANENT PAVEMENT
 PAVEMENT MARKING PLAN**

SCALE 1"=20'

DRAWING NO. **2021-008-PM1**

SHEET NO. **55** OF **155**

APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Pavt Mrkg, Polyurea, 24 Inch, Stop Bar	11 FT
Pavt Mrkg, Sprayable Thermopl, 4 Inch, White	50 FT
Pavt Mrkg, Sprayable Thermopl, 4 Inch, Yellow	346 FT
Pavt Mrkg, Polyurea, LT Turn Arrow Sym	3 EA
Recessing Pavt Mrkg, Longitudinal	396 FT
Recessing Pavt Mrkg, Transverse	11 FT

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. @ GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD @ GRADE	

DLZ					
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	
	ORIGINAL ISSUE	10/6/23	INB	LCM	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

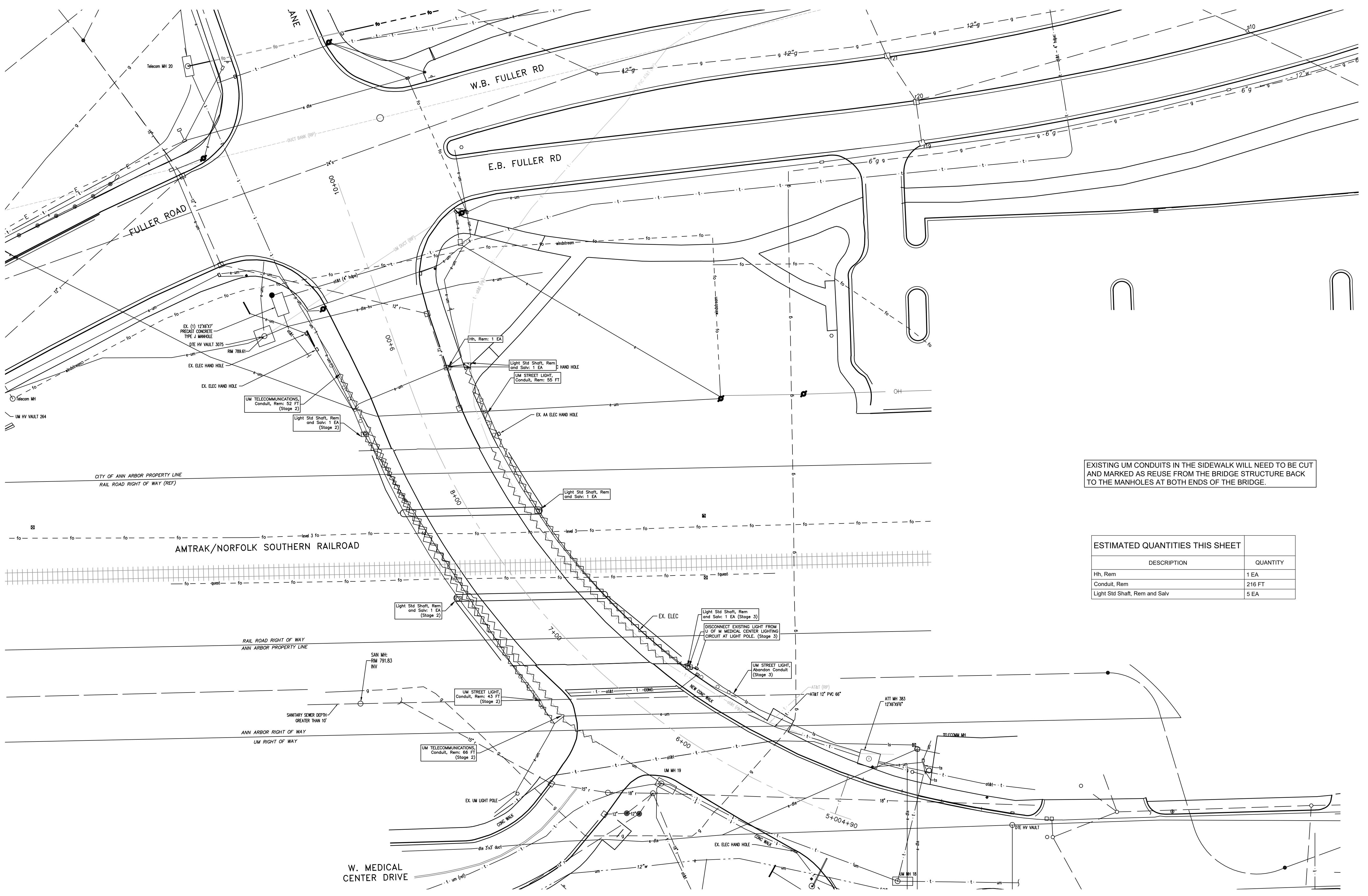
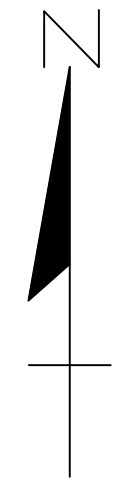
**E. MEDICAL CENTER DRIVE
PERMANENT PAVEMENT
PAVEMENT MARKING PLAN**

SCALE: 1"=20' 0 INCH 1

DRAWING NO. **2021-008-PM2**

SHEET NO. 56 OF 155

APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



EXISTING UM CONDUITS IN THE SIDEWALK WILL NEED TO BE CUT AND MARKED AS REUSE FROM THE BRIDGE STRUCTURE BACK TO THE MANHOLES AT BOTH ENDS OF THE BRIDGE.

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Hh, Rem	1 EA
Conduit, Rem	216 FT
Light Std Shaft, Rem and Salv	5 EA

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	S	t	—	S	—
CONTOUR	UTILITY POLE & GUY	G	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	REMOVE ITEM
847	U/G	v	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	W
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	e	CURB & GUTTER	CONTOUR	W
—	—	—	EDGE/GRAVEL	ROAD & GRADE	W
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	—			W
W	—				W
WATER MAIN & VALVE-IN-BOX	END SECTION				W
W)				W



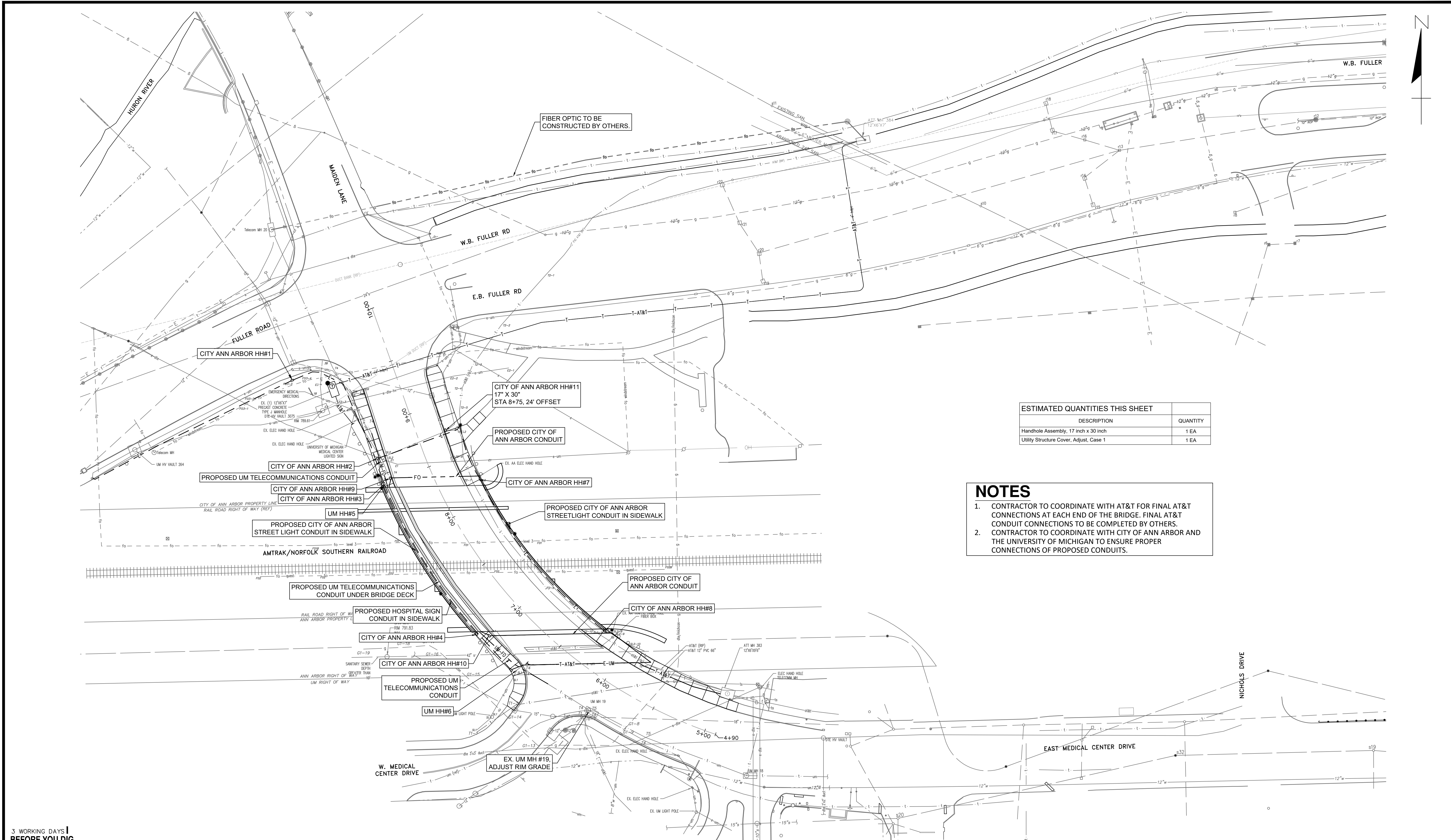
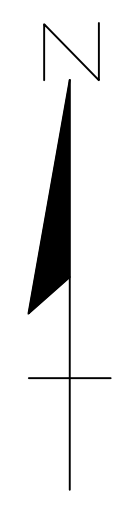
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
UTILITY REMOVAL PLAN**

SCALE	1"=30'
DRAWING NO.	2021-008-UT1
SHEET NO.	57 OF 155

SEE ABOVE				
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE
			ORIGINAL ISSUE	10/6/23
			DR. BY	DL
			CH. BY	LCM

APPROVED BY: _____
LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



FIBER OPTIC TO BE CONSTRUCTED BY OTHERS.

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Handhole Assembly, 17 inch x 30 inch	1 EA
Utility Structure Cover, Adjust, Case 1	1 EA

- NOTES**
- CONTRACTOR TO COORDINATE WITH AT&T FOR FINAL AT&T CONNECTIONS AT EACH END OF THE BRIDGE. FINAL AT&T CONDUIT CONNECTIONS TO BE COMPLETED BY OTHERS.
 - CONTRACTOR TO COORDINATE WITH CITY OF ANN ARBOR AND THE UNIVERSITY OF MICHIGAN TO ENSURE PROPER CONNECTIONS OF PROPOSED CONDUITS.

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- - - - -	S	t	---	S	---
CONTOUR	UTILITY POLE & GUY	G	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	STREET LIGHT CONDUIT
---	U	g	---	W	---
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	C	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	TELECOM. CONDUIT
---	F	t	---	W	---
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	e	CURB & GUTTER	CONTOUR	LIGHT POLE
W	O	e	---	---	---
W	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	HANDHOLE
W)	h	---	---	---



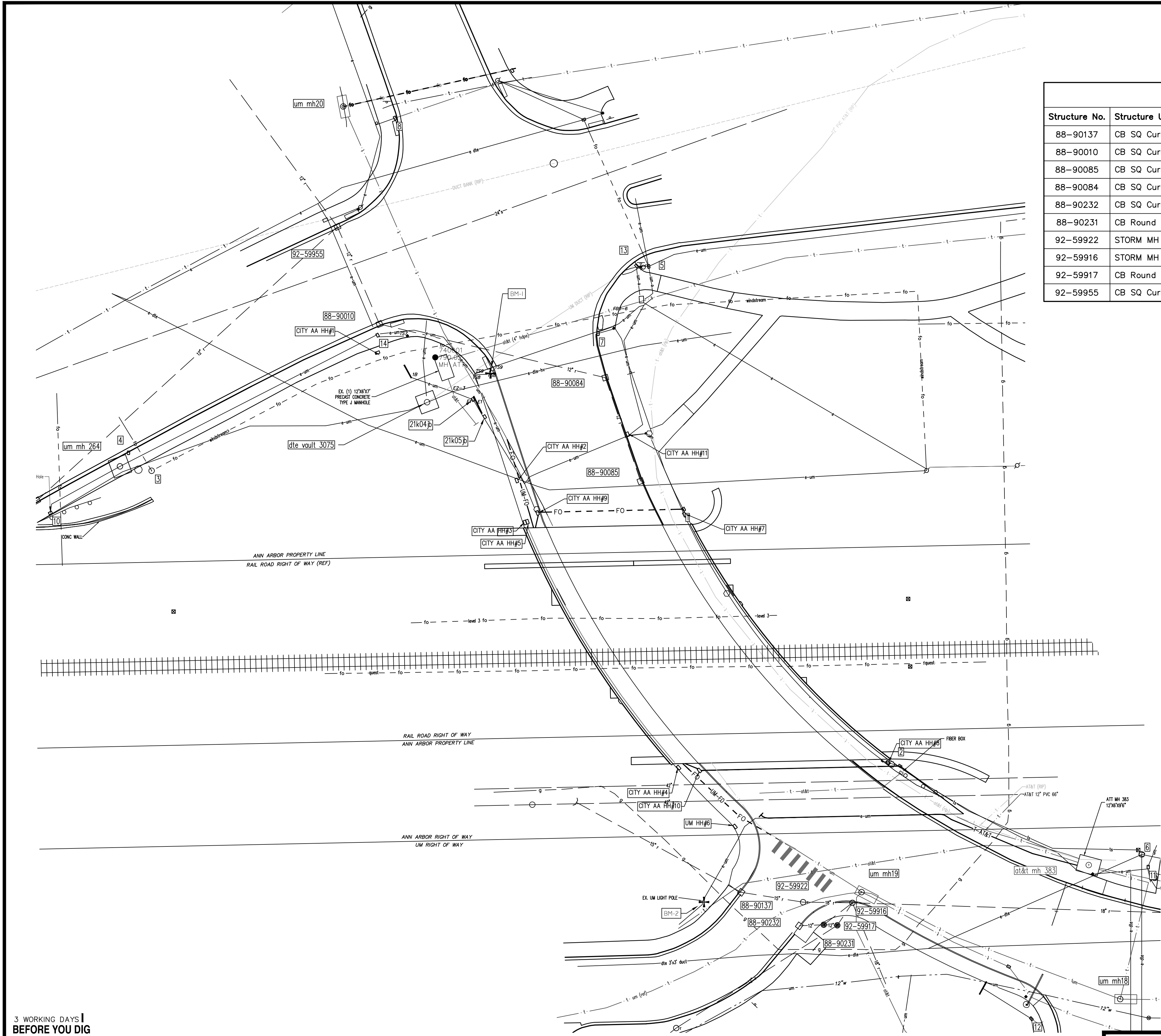
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
OVERALL UTILITY PLAN**

SCALE	INCH
1"=40'	0 1
DRAWING NO.	
2021-008-UT2	
SHEET NO.	58 OF 155

SEE ABOVE	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
BENCH MARK		ORIGINAL ISSUE	10/6/23	DLL	LCM
SURVEY BOOK					

APPROVED BY _____



STORM STRUCTURE						
Structure No.	Structure Use	Structure Size	Rim Elevation	Northing	Easting	Description
88-90137	CB SQ Curb	4' CB	804.06	286892.023	13295089.7900	301
88-90010	CB SQ Curb	3' CB	788.84	287201.663	13294892.6900	301
88-90085	CB SQ Curb	3' CB	791.90	287116.064	13295034.9700	301
88-90084	CB SQ Curb	3' CB	789.28	287172.451	13295015.7300	301
88-90232	CB SQ Curb	4' CB	804.21	286873.760	13295121.4300	301
88-90231	CB Round	2' CB	804.71	286874.376	13295134.7800	302
92-59922	STORM MH	4' CB	804.04	286886.665	13295123.5300	302
92-59916	STORM MH	5' CB	804.68	286886.312	13295150.4080	300
92-59917	CB Round	4' CB	805.56	286874.054	13295142.1600	302
92-59955	CB SQ Curb	4' CB	788.66	287254.656	13294869.7500	301

CATCH BASIN INVERTS	
Structure Number	Invert Elevations
92-59922	15" NW 790.04
	18" SE 709.04
	18" E 789.48
	18" SE 790.58
92-59916	18" SW 789.58
	12" W 789.88
	15" N 789.96
88-90137	15" SE 789.96
	12" N 783.24
88-90010	12" SE 783.34
	12" N 785.90
88-90085	12" N 785.90
	12" NW 783.78
88-90084	12" S 783.88
	12" SE 799.91
88-90232	--
	--
92-59917	--
	--
92-59955	12" S 782.36
	12" W 782.66
	15" N 774.66

UTILITY STRUCTURE						
Structure No.	Structure Use	Structure Size	Rim Elevation	Northing	Easting	Description
1	EX. AA ELEC HAND HOLE	17" x 30"	794.70	287100.786	13295058.5572	127
2	EX. AA TRAFFIC HAND HOLE	17" x 30"	803.06	286960.816	13295176.3530	127
3	Telecom MH	2' MH	792.26	287121.696	13294768.5300	160
4	Elec Hand Hole	17" x 30"	792.00	287131.508	13294755.9200	127
5	Elec Hand Hole	17" x 30"	788.11	287233.067	13295039.4000	127
6	TELECOMM MH	2' MH	802.38	286912.694	13295308.0300	160
7	Elec Hand Hole	17" x 30"	789.02	287196.412	13295011.8200	127
8	Elec Hand Hole	17" x 30"	788.00	287313.913	13294901.1500	127
10	Elec Hand Hole	17" x 30"	794.30	287098.775	13294713.3500	127
11	Elec Hand Hole	17" x 30"	802.23	286905.796	13295311.5800	127
12	Elec Hand Hole	17" x 30"	803.81	286823.132	13295247.9400	127
13	Elec Hand Hole	17" x 30"	788.22	287233.320	13295032.7900	127
14	HH #127	17" x 30"	789.38	287195.605	13294891.6700	127
21k04b	ELEC HAND HOLE	17" x 30"	791.65	287160.527	13294943.6400	127
21k05b	ELEC HAND HOLE	17" x 30"	791.25	287151.159	13294950.0421	127
at&t mh 383	at&t mh 383	12' x 6'	801.74	286906.869	13295279.2100	125
city ann arbor hh #2	PR. ELEC AA HH#2	17" x 30"	792.63	287116.297	13294967.5351	PR. ELEC AA HH#2
city ann arbor hh #11	PR. ELEC AA HH#11	17" x 30"	791.70	287141.524	13295027.8868	PR. ELEC AA HH#11
city ann arbor hh #1	PR. ELEC AA HH#1	17" x 30"	789.88	287186.079	13294891.5943	PR. ELEC AA HH#1
city ann arbor hh #3	PR. ELEC AA HH#3	17" x 30"	793.75	287093.269	13294974.8398	PR. ELEC AA HH#3
city ann arbor hh #4	PR. ELEC AA HH#4	17" x 30"	802.12	286959.348	13295059.5666	PR. ELEC AA HH#4
city ann arbor hh #7	PR. ELEC AA HH#7	17" x 30"	794.23	287097.240	13295058.0200	PR. ELEC AA HH#7
city ann arbor hh #8	PR. ELEC AA HH#8	17" x 30"	802.43	286962.749	13295169.8262	PR. ELEC AA HH#8
city ann arbor hh #9	PR. TELECOM AA HH#9	17" x 30"	793.52	287098.678	13294978.8558	PR. TELECOM AA HH#9
city ann arbor hh #10	PR. TELECOM AA HH#10	17" x 30"	802.26	286958.499	13295067.0269	PR. TELECOM AA HH#10
dte vault 3075	UM HV VAULT 265	10' x 10'	789.69	287159.068	13294918.6700	125
um hh #5	PR. ELEC UM HH#5	17" x 30"	793.74	287093.700	13294975.7714	PR. ELEC UM HH#5
um hh #6	PR. ELEC UM HH#6	17" x 30"	803.31	286927.841	13295091.6267	PR. ELEC UM HH#6
um mh 264	UM HV VAULT 264	12' x 6'	792.28	287124.100	13294751.2900	125
um mh18	TELECOMM MH 18	12' x 6'	802.19	286833.846	13295296.3500	160
um mh19	TELECOMM MH 19	12' x 6'	804.45	286892.126	13295155.4100	160
um mh20	Telecom MH 20	12' x 6'	788.71	287320.170	13294872.9900	160

* # SYMBOL LABELS STRUCTURES WITHOUT AS-BUILT IDENTIFICATION NUMBERS

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

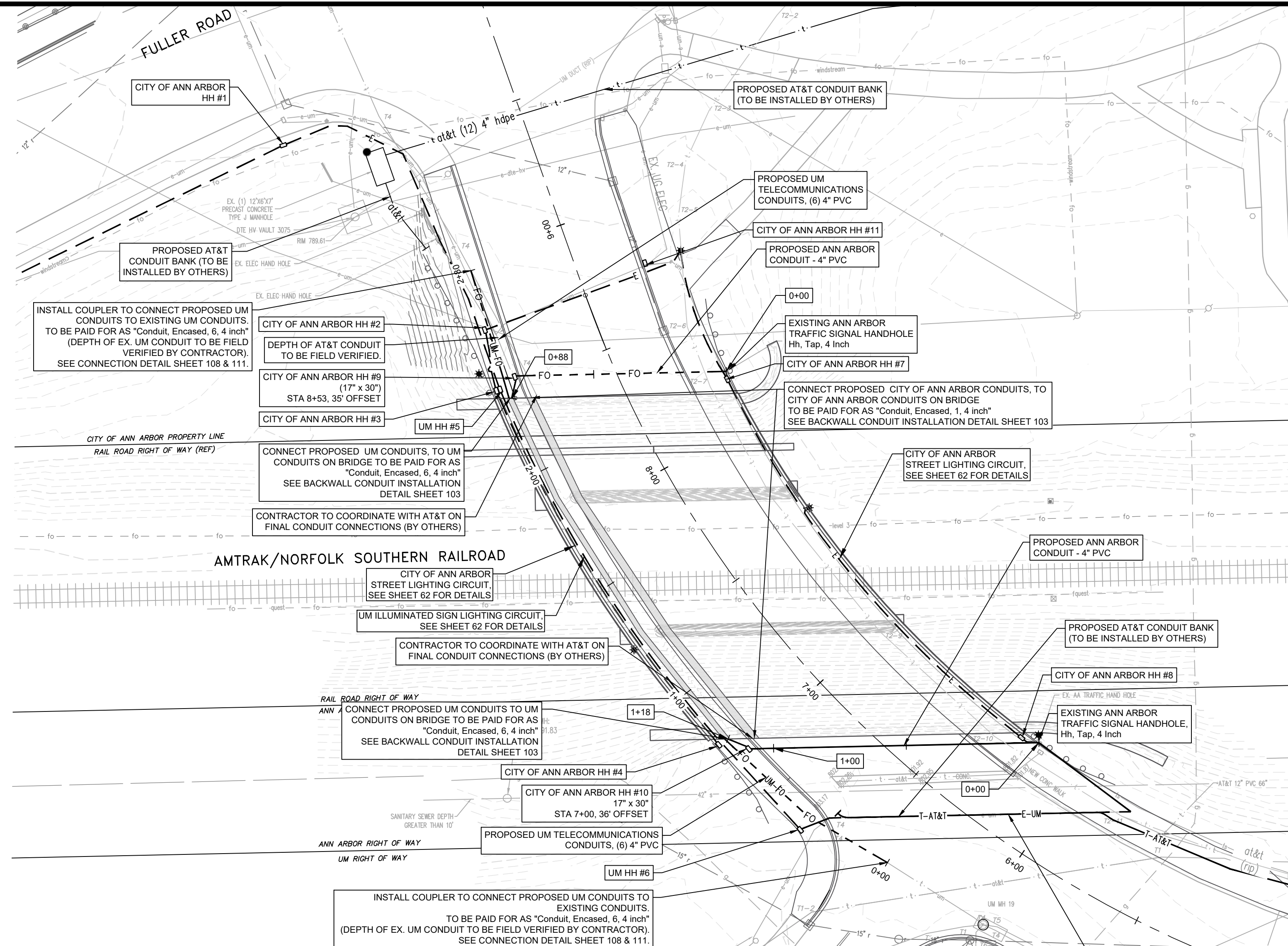
EAST MEDICAL CENTER DRIVE STRUCTURE TABLE

SCALE 1"=40'

DRAWING NO. 2021-008-UT3

SHEET NO. 59 OF 155

SEE ABOVE	BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
				ORIGINAL ISSUE	10/6/23	DLL	LCM	

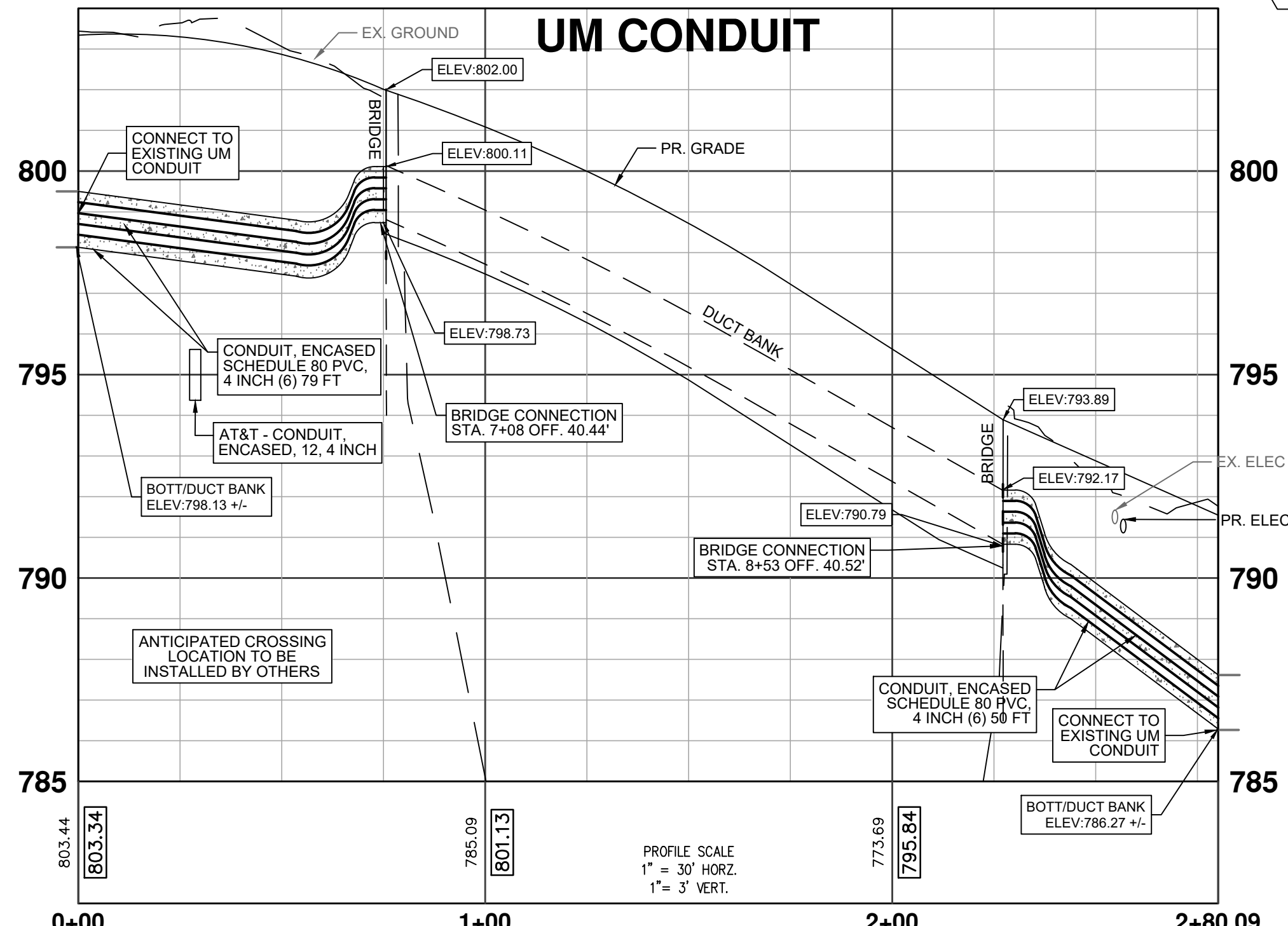


INSTALL COUPLER TO CONNECT PROPOSED UM CONDUITS TO EXISTING UM CONDUITS. TO BE PAID FOR AS "Conduit, Encased, 6, 4 inch" (DEPTH OF EX. UM CONDUIT TO BE FIELD VERIFIED BY CONTRACTOR). SEE CONNECTION DETAIL SHEET 108 & 111.

CONNECT PROPOSED UM CONDUITS, TO UM CONDUITS ON BRIDGE TO BE PAID FOR AS "Conduit, Encased, 6, 4 inch" SEE BACKWALL CONDUIT INSTALLATION DETAIL SHEET 103

CONNECT PROPOSED CITY OF ANN ARBOR CONDUITS, TO CITY OF ANN ARBOR CONDUITS ON BRIDGE TO BE PAID FOR AS "Conduit, Encased, 1, 4 inch" SEE BACKWALL CONDUIT INSTALLATION DETAIL SHEET 103

INSTALL COUPLER TO CONNECT PROPOSED UM CONDUITS TO EXISTING CONDUITS. TO BE PAID FOR AS "Conduit, Encased, 6, 4 inch" (DEPTH OF EX. UM CONDUIT TO BE FIELD VERIFIED BY CONTRACTOR). SEE CONNECTION DETAIL SHEET 108 & 111.

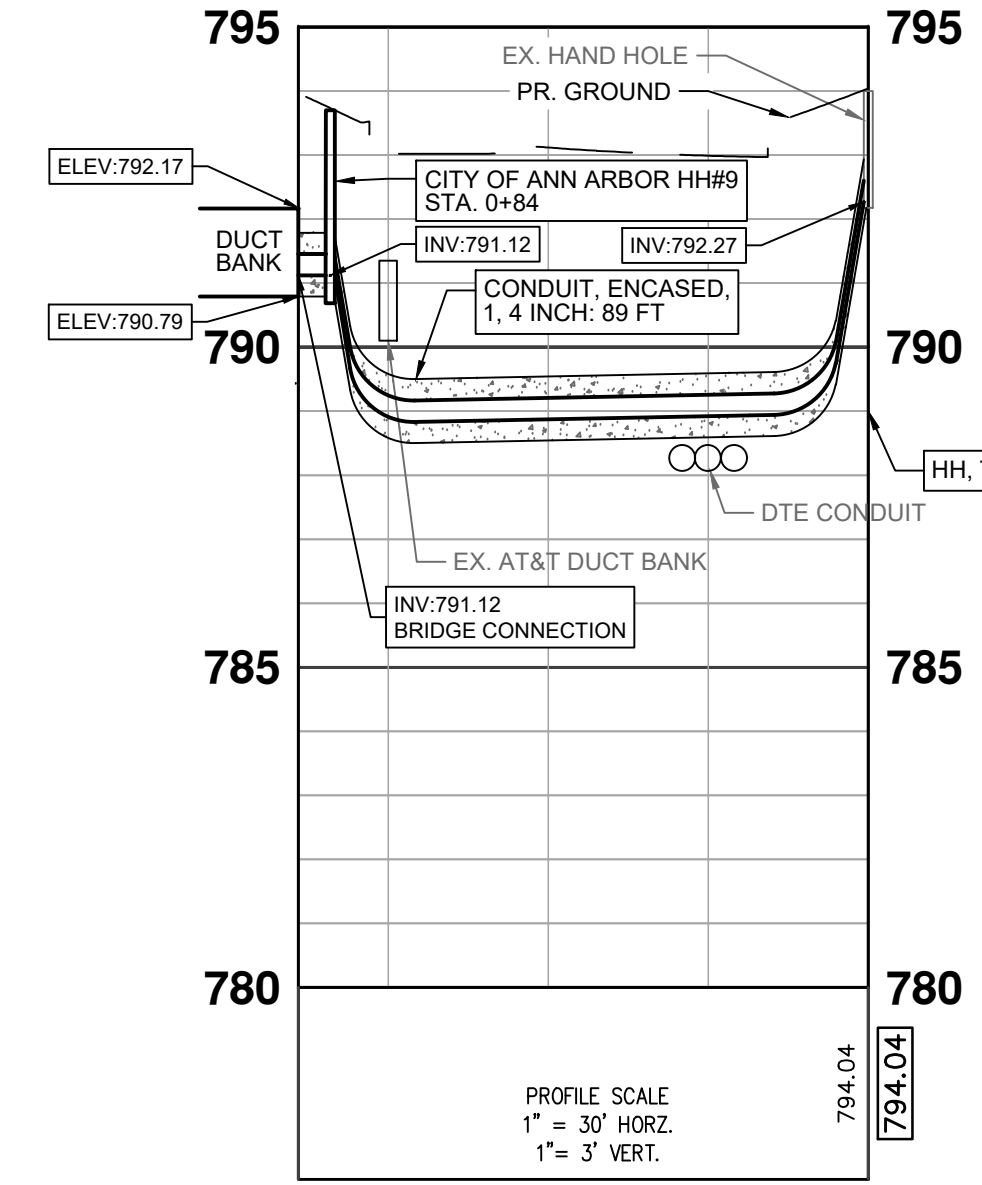


PAY ITEM	DESCRIPTION	UNITS	QUANTITY
8182021	Conduit, Encased, 6, 4 inch	FT	129
8182016	Conduit, Encased, 1, 4 inch	FT	207
8187050	Handhole Assembly, 17 inch x 30 inch	EA	2
8187050	Hh, Tap, 4 inch	EA	2

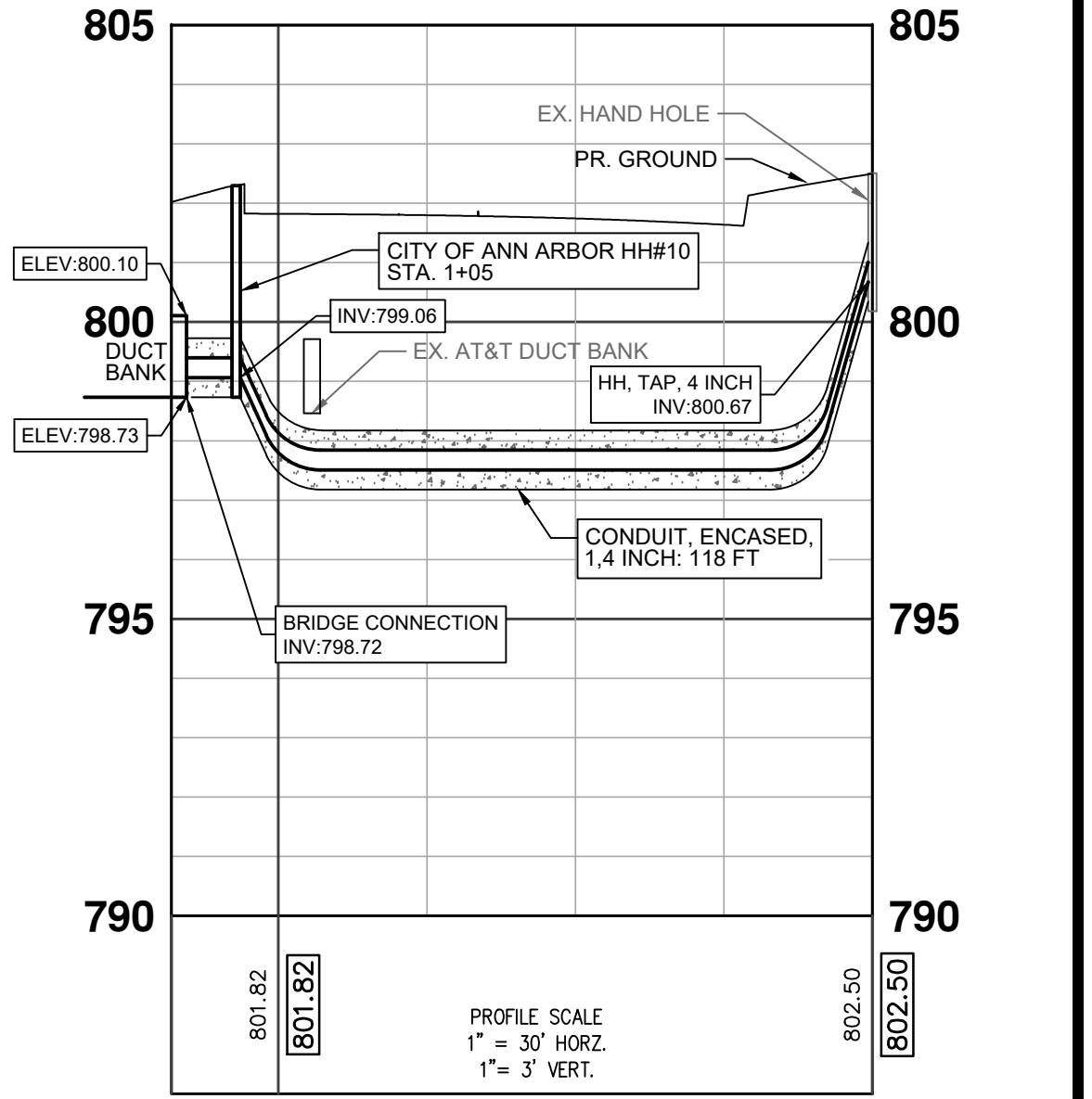
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND		EXISTING TELEPHONE		PROPOSED CURB & GUTTER		SEE ABOVE	
EXISTING FENCE	--- --- ---	EXISTING RD. & GRADE	— — —	PROPOSED SANITARY SEWER & MANHOLE	S	BENCH MARK	BM
CONTOUR	847	GAS LINE	G	STORM SEWER & CAT. BAS.	SW	SURVEY BOOK	SB
STORM SEWER & CAT. BAS.	— — —	CABLE T.V.	t	WATER MAIN W/F.H. ASSEM.	W	REV. NO.	REV.
WATER MAIN & VALVE-IN-WELL	W	ELECTRIC	e	CONTOUR	— — —	DESCRIPTION	DESCRIPTION
WATER MAIN & VALVE-IN-BOX	W	SIGN	⊥	ROAD & GRADE	— — —	DATE	DATE
						DR. BY	DR. BY
						CH. BY	CH. BY

ANN ARBOR CONDUIT (NORTH)



ANN ARBOR CONDUIT (SOUTH)



NOTES

- UM TELECOMMUNICATIONS DUCT BANK SHALL CONSIST OF SIX 4" I.D. SCH. 80 PVC CONDUITS, CONCRETE ENCASED. A 3" THICK MINIMUM CONCRETE COVER SHALL PROTECT DUCTS OVER THE ENTIRE LENGTH AND WIDTH OF THE DUCT BANK. FIBER AND INSTALLATION OF FIBER BY OWNER.
- CITY OF ANN ARBOR TELECOMMUNICATIONS DUCT BANK SHALL CONSIST OF ONE 4" SCH. 80 PVC CONDUIT, CONCRETE ENCASED. A 3" THICK MINIMUM CONCRETE COVER SHALL PROTECT DUCTS OVER THE ENTIRE LENGTH AND WIDTH OF THE CONDUIT. FIBER AND INSTALLATION OF FIBER BY OWNER.
- CONTACT CITY OF ANN ARBOR REPRESENTATIVE MARC MARENO (734)794-6350 PRIOR TO ACCESSING CITY OF ANN ARBOR HANDHOLES. CONTACT UM-ITS REPRESENTATIVE KEVIN MCLAUGHLIN, PE, RCDD (734) 615-5699 PRIOR TO ACCESSING UM HANDHOLES. CITY OF ANN ARBOR AND/OR UM REPRESENTATIVE TO BE ON-SITE WHEN ACCESSING HANDHOLES.
- CONTACT UM-ITS REPRESENTATIVE KEVIN MCLAUGHLIN, PE, RCDD (734) 615-5699 FOR INSPECTIONS AND ACCEPTANCE OF DUCT BANK CONSTRUCTION. THE CITY OF ANN ARBOR WILL INSPECT RESTORATION OF DISTURBANCES WITHIN THE PUBLIC RIGHT OF WAY.
- 17 INCH X 30 INCH HANDHOLE ASSEMBLIES SHALL CONSIST OF TWO, STACKED "QUAZITE" BOXES. THE COVER SHALL BE A LOCKING HEAVY-DUTY BOLT-DOWN TYPE WITH A LOGO THAT READS "TRAFFIC SIGNAL" OR "STREET LIGHTING", BASED ON THEIR INTENDED USE. THE TOTAL DEPTH OF THE HANDHOLE SHALL BE 18 INCHES.
- DUCT BANKS SHALL BE SUPPORTED ON UNDISTURBED SOIL OR ON PIERS EXTENDING DOWN TO UNDISTURBED SOIL.
- CHANGES IN DUCT BANK DIRECTION SHALL BE MADE WITH 10' MINIMUM RADIUS WITH MANUFACTURED SWEEPS.
- DUCT BANKS SHALL BE SLOPED DOWNWARD TOWARD MANHOLES AND AWAY FROM BUILDINGS A MINIMUM OF 6" PER 100'. DUCT BANKS SHALL NOT CONTAIN TRAPS WHERE WATER MAY ACCUMULATE.
- PULL A SOLID MANDREL AND A STIFF BRISTLED BRUSH THROUGH EACH DUCT TO CLEAN THEM AND INSURE THE ABSENCE OF KINKS AND FLAT SPOTS. A MINIMUM 3-1/4" DIAMETER BY 5' MINIMUM LONG MANDREL SHALL BE USED FOR 4" CONDUIT. THE MANDREL PULL SHALL BE WITNESSED BY THE OWNER'S REPRESENTATIVE. WHEN MANDREL PULLS DETECT CRUSHED, FLATTENED, KINKED, OR OBSTRUCTED DUCTS OR CONDUITS, ADDITIONAL DUCTS OR CONDUITS SHALL BE PROVIDED. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".
- DUCT BANKS SHALL BE MARKED WITH A 6" WIDE RED PLASTIC MARKER STRIP PLACED IN THE BACKFILL APPROXIMATELY 12" ABOVE THE ENTIRE LENGTH OF THE DUCT BANK. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".
- CONDUIT EXPANSION COUPLINGS SHALL BE INSTALLED ON ALL CONDUITS AT EACH END OF THE BRIDGE. DETAIL ON SHEET 111.
- COPPERHEAD™ COPPER COATED STEEL LOCATING WIRE, (#12 CCS EXTRA HIGH STRENGTH HARD DRAWN 1150# (SOLOSHOT)), OR EQUIVALENT, SHALL BE PLACED OUTSIDE THE DUCT AND INSTALLED WHEN DUCT PULLBACK/ PLACEMENT IS PERFORMED. TRACER WIRE IS NOT TO BE PLACED INSIDE THE DUCT. WHERE MULTIPLE DUCTS ARE PLACED, ONLY 1 TRACER WIRE SHALL BE REQUIRED PER PACKAGE. A MINIMUM OF 60" OF TRACER WIRE SHALL EXTEND FROM THE ENDPOINT OF THE DUCT AND BE NEATLY COILED AT THE DUCT PATHWAY TERMINATION ENDPOINT. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".
- #1250 LB. MULE TAPE WITH FOOTAGE MARKINGS OR EQUIVALENT SHALL BE PLACED IN ALL NEW DUCT. A MINIMUM OF 60" OF MULE TAPE SHALL EXTEND FROM THE ENDS OF THE DUCT, COILED AND SECURED TO THE END OF THE DUCT WITH TAPE OR SOME OTHER MEANS. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".
- OPEN DUCTS IN MAN HOLES SHALL BE PLUGGED WITH REMOVABLE PLUGS AFTER MANDREL PROOFING TO PREVENT DIRT AND MOISTURE FROM ENTERING THE DUCTS. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".
- CONTRACTOR TO PROVIDE SCH. 80 PVC EXPANSION JOINT EVERY 100' UNDER THE BRIDGE DECK, AS WELL AS AT EACH END OF THE BRIDGE. SEE SHEET 103 FOR DETAIL. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".
- SWEEP ACCESS ROADS TO ELIMINATE DEBRIS CAUSED BY EQUIPMENT AND CONSTRUCTION ACTIVITIES.

TELECOMMUNICATIONS PHASING PLAN

- PHASE 1:
- CONTRACTOR TO ADJUST ELEVATION OF RIM OF UM MANHOLE #19 TO MATCH ADJACENT ROADWAY GRADE.
- PHASE 2:
- CONTRACTOR TO INSTALL CITY OF ANN ARBOR HH#9 AND HH#10.
 - CONTRACTOR TO INSTALL (1) 4" SCH. 80 PVC CONDUIT FROM HH#9 TO NORTH END OF THE BRIDGE AND FROM HH#10 TO SOUTH END OF THE BRIDGE. CONTRACTOR TO INSTALL (1) 4" SCH. 80 PVC CONDUIT FROM HH#9 TO HH#10 TO THE EAST EDGE OF PHASE 2 CONSTRUCTION. CONDUITS TO BE ENCASED IN CONCRETE PER DETAIL.
 - CONTRACTOR TO INSTALL (6) 4" ID SCH. 80 PVC UM CONDUITS FROM COUPLERS AT EXISTING UM CONDUITS TO END OF BRIDGE ON NORTH AND SOUTH SIDES OF THE BRIDGE. CONDUITS TO BE ENCASED IN CONCRETE PER DETAIL.
 - CONTRACTOR TO COORDINATE WITH AT&T CONTRACTOR FOR THE CONSTRUCTION OF THE AT&T CONDUIT CONNECTIONS AT EACH END OF THE BRIDGE.
- PHASE 3:
- CONTRACTOR TO INSTALL (1) 4" SCH. 80 PVC CONDUIT FROM THE EAST EDGE OF PHASE 2 CONSTRUCTION TO THE EXISTING CITY OF ANN ARBOR TRAFFIC SIGNAL HANDHOLES NORTH AND SOUTH OF THE BRIDGE.

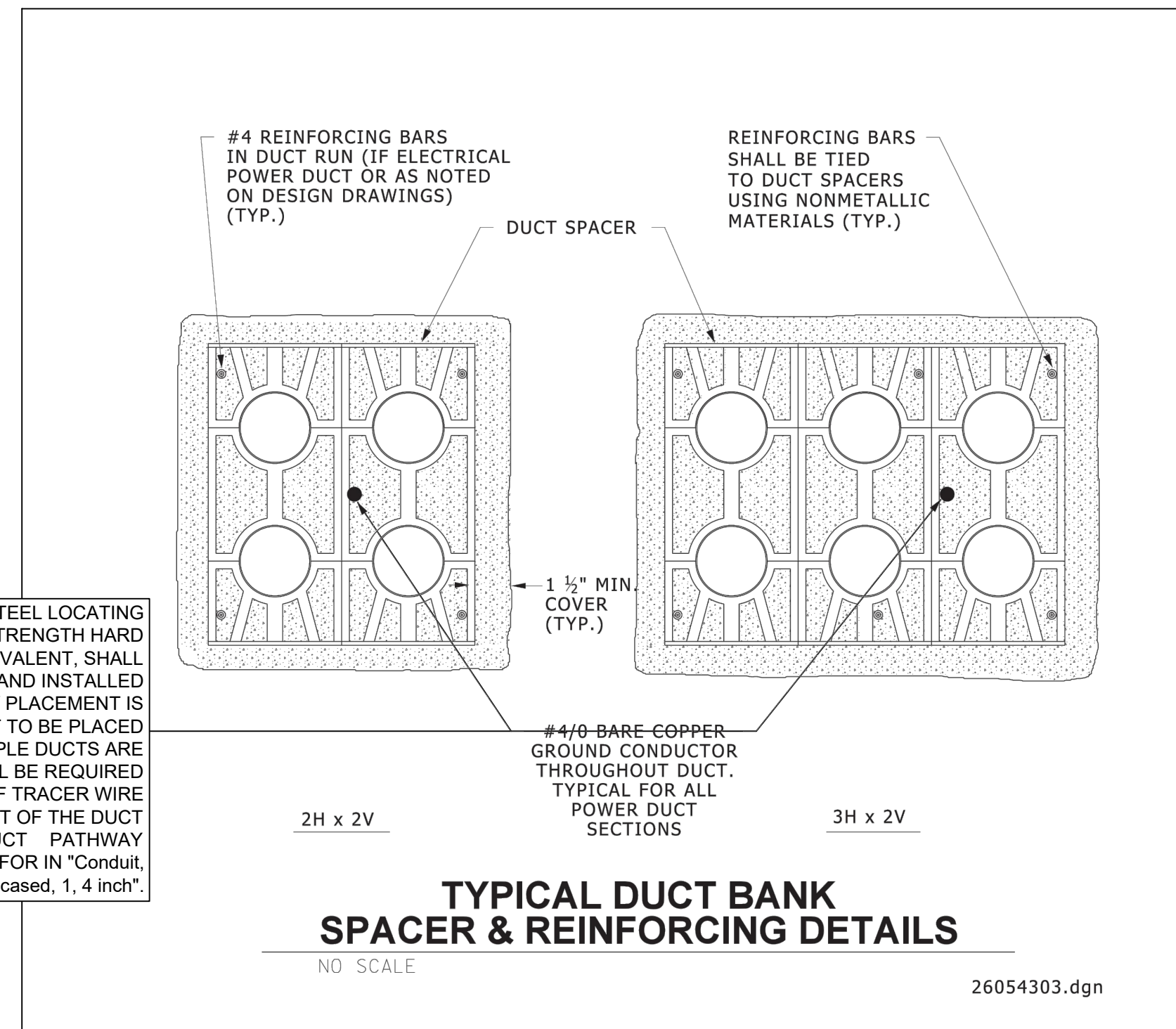


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TELECOMMUNICATIONS CONDUIT PLAN

SCALE	1"=30'
DRAWING NO.	2021-008-UT4
SHEET NO.	60 OF 155

APPROVED BY: _____

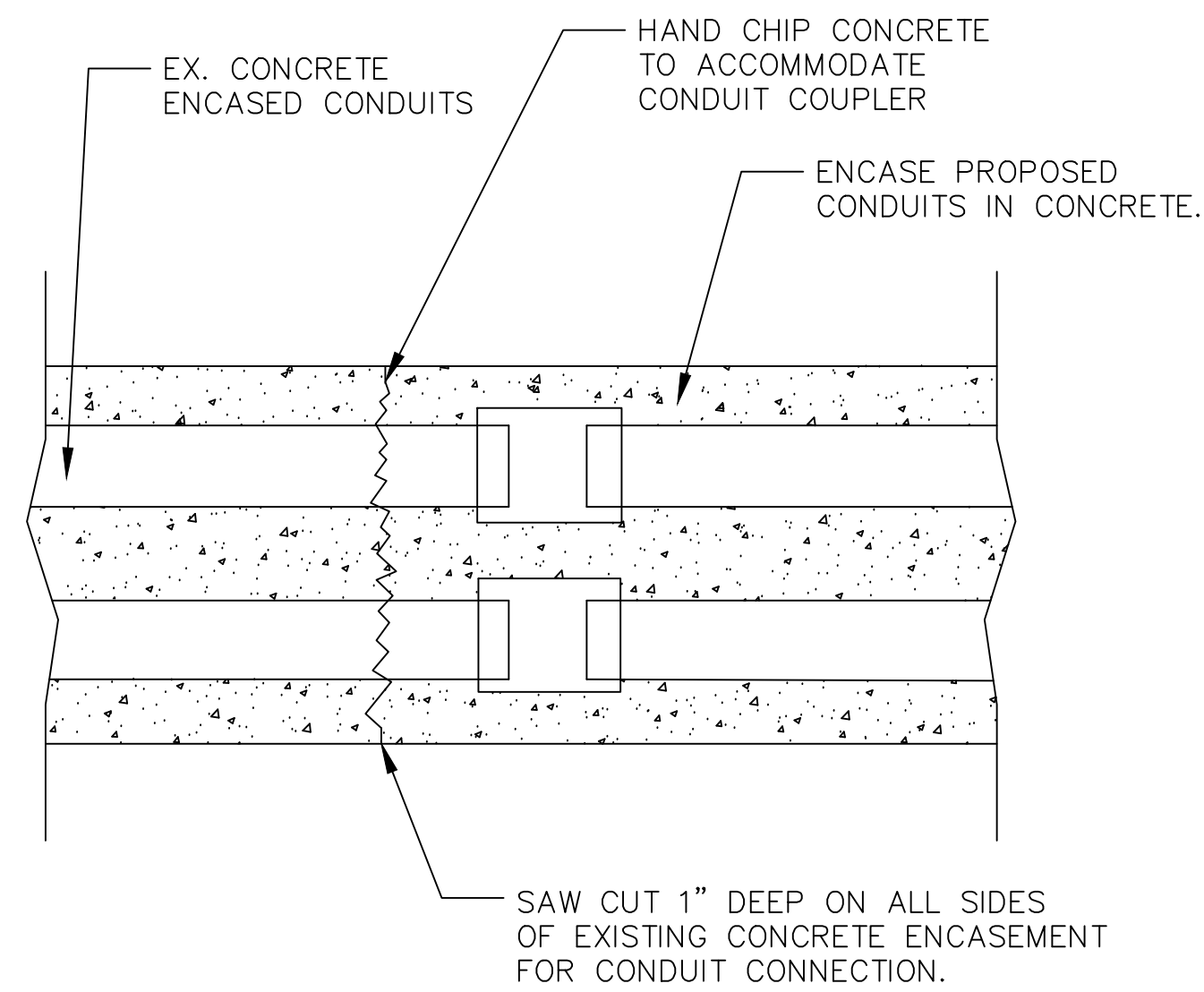


COPPERHEAD™ COPPER COATED STEEL LOCATING WIRE, (#12 CCS EXTRA HIGH STRENGTH HARD DRAWN 1150# (SOLOSHOT), OR EQUIVALENT, SHALL BE PLACED OUTSIDE THE DUCT AND INSTALLED WHEN DUCT PULLBACK/ PLACEMENT IS PERFORMED. TRACER WIRE IS NOT TO BE PLACED INSIDE THE DUCT. WHERE MULTIPLE DUCTS ARE PLACED, ONLY 1 TRACER WIRE SHALL BE REQUIRED PER PACKAGE. A MINIMUM OF 60" OF TRACER WIRE SHALL EXTEND FROM THE ENDPOINT OF THE DUCT AND BE NEATLY COILED AT THE DUCT PATHWAY TERMINATION ENDPOINT. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".

TYPICAL DUCT BANK SPACER & REINFORCING DETAILS

NO SCALE

26054303.dgn

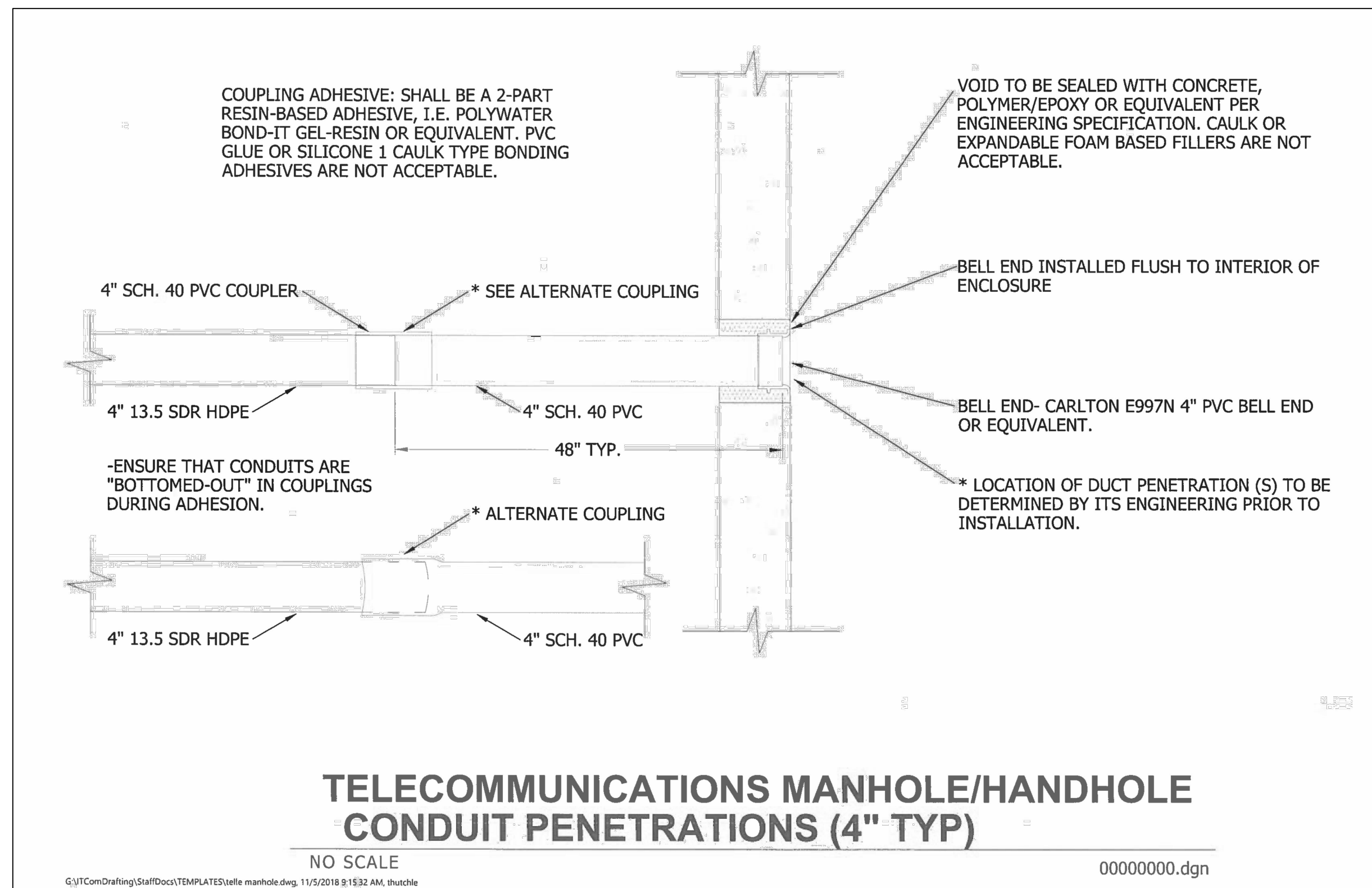


CONDUIT CONNECTION ENCASEMENT DETAIL

REV	CHANGE	DATE
B	IMAGE ENHANCEMENT	09/02/15

REMOVABLE CAP SEAL
O-RING
ROTATING COMPRESSION WING NUT
WASHER
5.946
O-RING & HOLLOW STEM
EXPANSION RANGE 3.940 - 4.330

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		HUIZAR	06/02/14
TOLERANCES:		F.GRO	06/02/14
FRACTIONAL ± 1/64		TITLE:	
ANGULAR ± 0.10°		4" KWIKIE HOLLOW STEM	
TWO PLACE DECIMAL ±0.010		SIZE	DWG. NO.
THREE PLACE DECIMAL ±0.005		A	5120-40
INTERPRET GEOMETRIC TOLERANCING PER:		REV	B
MATERIAL:		SCALE:	WEIGHT:
SEE BOM		SHEET 1 OF 1	
COMMENTS:			
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FINISH	APPLICATION	DO NOT SCALE DRAWING	



TELECOMMUNICATIONS MANHOLE/HANDHOLE CONDUIT PENETRATIONS (4" TYP)

NO SCALE

00000000.dgn

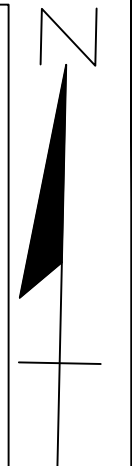
3 WORKING DAYS
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(TOLL FREE)

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DLZ	
REV. NO.	DESCRIPTION
DATE	DR. BY
10/6/23	DLL
CH. BY	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
E. MEDICAL CENTER DRIVE	
TELECOMMUNICATIONS CONDUIT DETAILS	
SCALE	INCH
1"=30'	0 1
DRAWING NO.	2021-008-UT5
SHEET NO.	61 OF 155



NOTES

- SEE SHEET 107 FOR CONDUIT DETAILS AT BRIDGE APPROACHES.
- CONDUIT SHALL BE 2 INCH OR 3 INCH SCH. 80 PVC. CONDUITS SHALL BE FITTED WITH EXPANSION JOINTS AT EACH END OF THE BRIDGE, TO BE PAID FOR IN "CONDUIT, SCHEDULE 40 PVC, 2 INCH" AND "CONDUIT, SCHEDULE 40 PVC, 3 INCH".
- ALL STREET LIGHT AND ILLUMINATED SIGN WIRING IN CONDUIT TO BE THREE (3) 6 AWG XLP/USE-2/RHH/RHW-2, IN BLACK, WHITE AND GREEN.
- CONTACT CITY OF ANN ARBOR REPRESENTATIVE MARC MARENO (734)794-6350 PRIOR TO ACCESSING CITY OF ANN ARBOR HANDHOLES. CONTACT UM-ITS REPRESENTATIVE KEVIN MCLAUGHLIN, PE, RCDD (734) 615-5699 PRIOR TO ACCESSING UM HANDHOLES. CITY OF ANN ARBOR AND/OR UM REPRESENTATIVE TO BE ON-SITE WHEN ACCESSING HANDHOLES.
- 17 INCH X 30 INCH HANDHOLE ASSEMBLIES SHALL CONSIST OF TWO, STACKED "QUAZITE" BOXES. THE COVER SHALL BE A LOCKING HEAVY-DUTY BOLT-DOWN TYPE WITH A LOGO THAT READS "TRAFFIC SIGNAL" OR "STREET LIGHTING", BASED ON THEIR INTENDED USE. THE TOTAL DEPTH OF THE HANDHOLE SHALL BE 18 INCHES.
- EXISTING UNIVERSITY OF MICHIGAN MEDICAL CENTER STREET LIGHTS AT PROPOSED LIGHT LOCATIONS L1 THROUGH L5 ARE TO BE REMOVED AND REPLACED WITH CITY OF ANN ARBOR LIGHT POLES, LUMINAIRES AND FOUNDATIONS. THE PROPOSED LIGHTS SHALL BE CONNECTED TO THE CITY OF ANN ARBOR'S EXISTING LIGHTING CIRCUIT.
- CONDUIT FOR BOTH THE ANN ARBOR STREET LIGHT CIRCUIT AND THE UNIVERSITY OF MICHIGAN MEDICAL CENTER ILLUMINATED SIGNS CIRCUIT TO BE INSTALLED IN THE NEW BRIDGE SIDEWALK AS SHOWN. CONTRACTOR SHALL INSTALL NEW WIRES BETWEEN HANDHOLE #5 AND #6 AND RECONNECT THE ILLUMINATED SIGNS CIRCUIT, TO BE PAID FOR IN "CONDUIT, SCHEDULE 40 PVC, 2 INCH" TO BE PAID FOR IN "CONDUIT, SCHEDULE 80 PVC, 2 INCH".
- LOCATE PROPOSED AND EXISTING UNDERGROUND PIPES AND UTILITIES AND PROPOSED GUARDRAIL POSTS PRIOR TO INSTALLING LIGHTING. FIELD ADJUSTMENTS MAY BE NECESSARY AS DIRECTED BY THE ENGINEER.
- COPPERHEAD COPPER COATED STEEL LOCATING WIRE, (#12 CCS EXTRA HIGH STRENGTH HARD DRAWN 1150# (SOLOSHOT)), OR EQUIVALENT, SHALL BE PLACED OUTSIDE THE DUCT OR CONDUIT AND INSTALLED WHEN DUCT/CONDUIT PULLBACK/PLACEMENT IS PERFORMED. TRACER WIRE IS NOT TO BE PLACED INSIDE THE DUCT OR CONDUIT. WHERE MULTIPLE DUCTS ARE PLACED, ONLY 1 TRACER WIRE SHALL BE REQUIRED PER PACKAGE. A MINIMUM OF 60" OF TRACER WIRE SHALL EXTEND FROM THE ENDPOINT OF THE DUCT AND BE NEARLY COILED AT THE DUCT OR CONDUIT PATHWAY TERMINATION ENDPOINT.
- STREET LIGHT POLES SHALL BE SHAKESPEARE AS30-10S1DB01/OPAR6-BK-H WITH THE FOLLOWING SPECIFICATIONS: 30' SMOOTH FINISH, ANCHOR BASE POLE WITH 4" X 12" HANDHOLE, POLE TO BE DRILLED FOR 6" ALUMINUM MAST ARM AND BASE COVER, BASE COVER TO BE 1-PIECE POWDERED COATED BLACK, AND ANCHOR BOLTS TO BE 1" DIAMETER.
- LUMINAIRE TO BE LUMICON LWS-LSL-60-GR-1-T2-OW-7P WITH THE FOLLOWING SPECIFICATIONS: 58 WATT LED STREET LUMINAIRE, 8,201 DELIVERED LUMENS, TYPE II DISTRIBUTION, 120 VOLT-277 VOLT, 3000K COLOR TEMPERATURE, 7-PIN RECEPTACLE, 20K-AMP SURGE SUPPRESSION.

MISCELLANEOUS QUANTITIES THIS SHEET			
PAY ITEM	DESCRIPTION	UNITS	QUANTITY
8182133	Conduit, Schedule 40 PVC, 2 inch	Ft	385
8182135	Conduit, Schedule 40 PVC, 3 inch	Ft	688
8190211	DB Cable, in Conduit, 600V, 1/1C#6	Ft	3456
8187050	Handhole Assembly, 17 inch x 30 inch	Ea	8
8197050	Pole Installation	Ea	5
8197050	Luminaire Installation	Ea	5
8197050	Pole Fill-Up	Ea	5

STREET LIGHT PHASING PLAN

PRIOR TO PHASE 1:

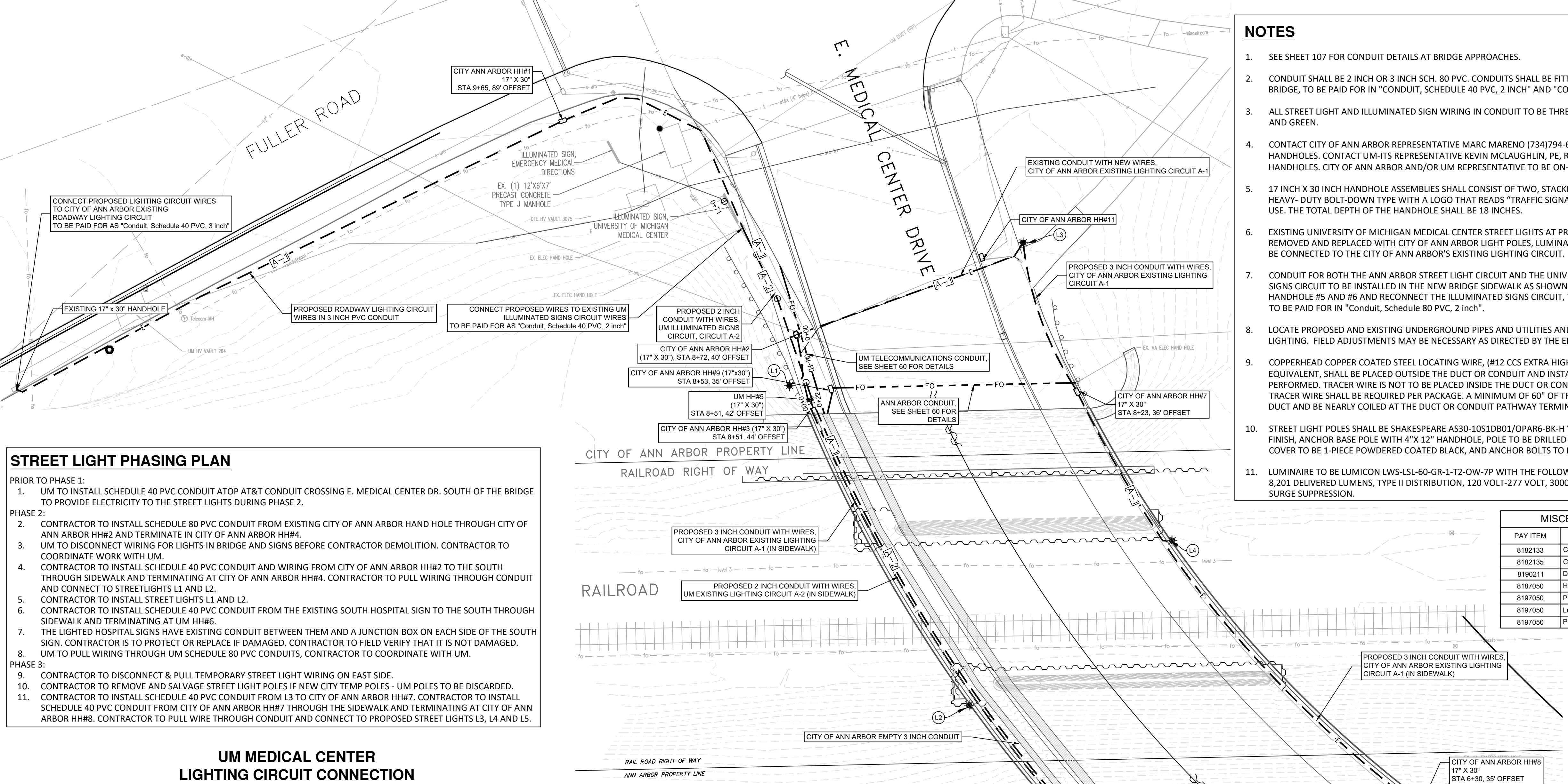
- UM TO INSTALL SCHEDULE 40 PVC CONDUIT ATOP AT&T CONDUIT CROSSING E. MEDICAL CENTER DR. SOUTH OF THE BRIDGE TO PROVIDE ELECTRICITY TO THE STREET LIGHTS DURING PHASE 2.

PHASE 2:

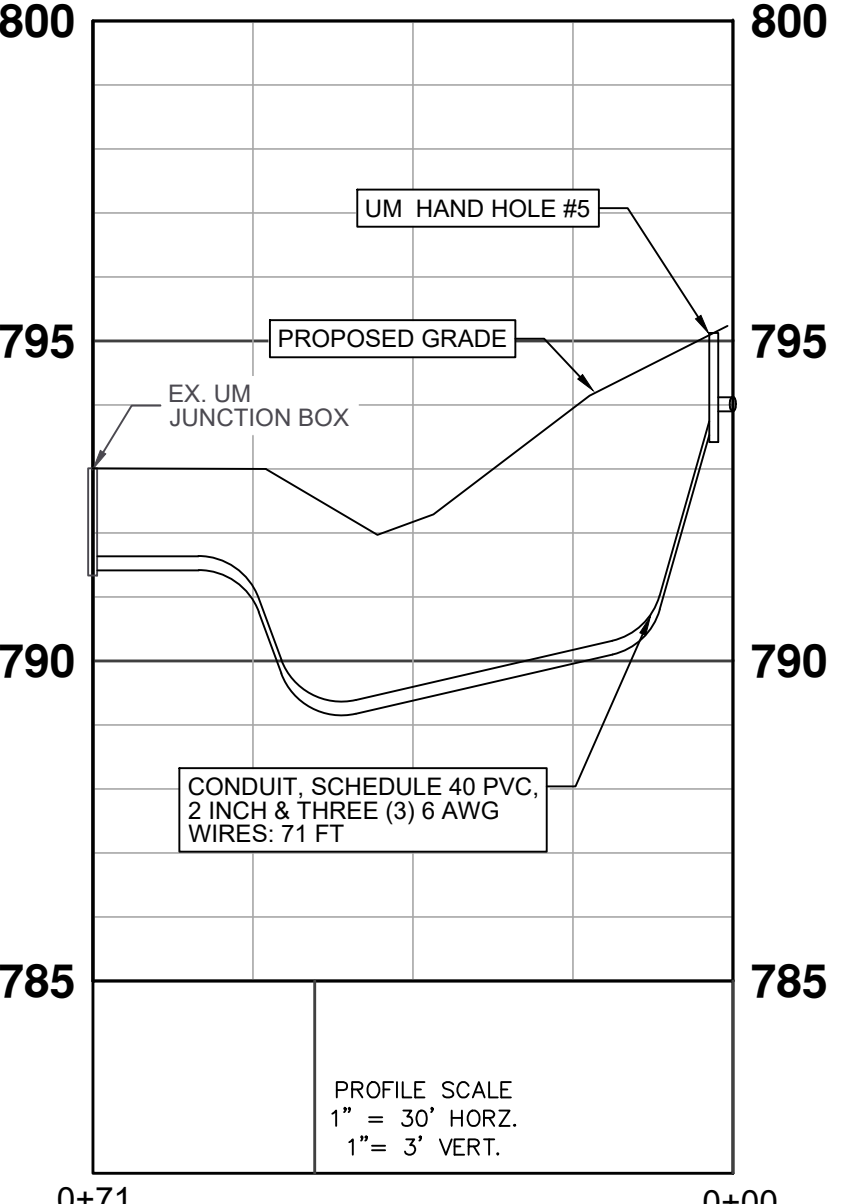
- CONTRACTOR TO INSTALL SCHEDULE 80 PVC CONDUIT FROM EXISTING CITY OF ANN ARBOR HAND HOLE THROUGH CITY OF ANN ARBOR HH#2 AND TERMINATE IN CITY OF ANN ARBOR HH#4.
- UM TO DISCONNECT WIRING FOR LIGHTS IN BRIDGE AND SIGNS BEFORE CONTRACTOR DEMOLITION. CONTRACTOR TO COORDINATE WORK WITH UM.
- CONTRACTOR TO INSTALL SCHEDULE 40 PVC CONDUIT AND WIRING FROM CITY OF ANN ARBOR HH#2 TO THE SOUTH THROUGH SIDEWALK AND TERMINATING AT CITY OF ANN ARBOR HH#4. CONTRACTOR TO PULL WIRING THROUGH CONDUIT AND CONNECT TO STREETLIGHTS L1 AND L2.
- CONTRACTOR TO INSTALL STREET LIGHTS L1 AND L2.
- CONTRACTOR TO INSTALL SCHEDULE 40 PVC CONDUIT FROM THE EXISTING SOUTH HOSPITAL SIGN TO THE SOUTH THROUGH SIDEWALK AND TERMINATING AT UM HH#6.
- THE LIGHTED HOSPITAL SIGNS HAVE EXISTING CONDUIT BETWEEN THEM AND A JUNCTION BOX ON EACH SIDE OF THE SOUTH SIGN. CONTRACTOR IS TO PROTECT OR REPLACE IF DAMAGED. CONTRACTOR TO FIELD VERIFY THAT IT IS NOT DAMAGED.
- UM TO PULL WIRING THROUGH UM SCHEDULE 80 PVC CONDUITS, CONTRACTOR TO COORDINATE WITH UM.

PHASE 3:

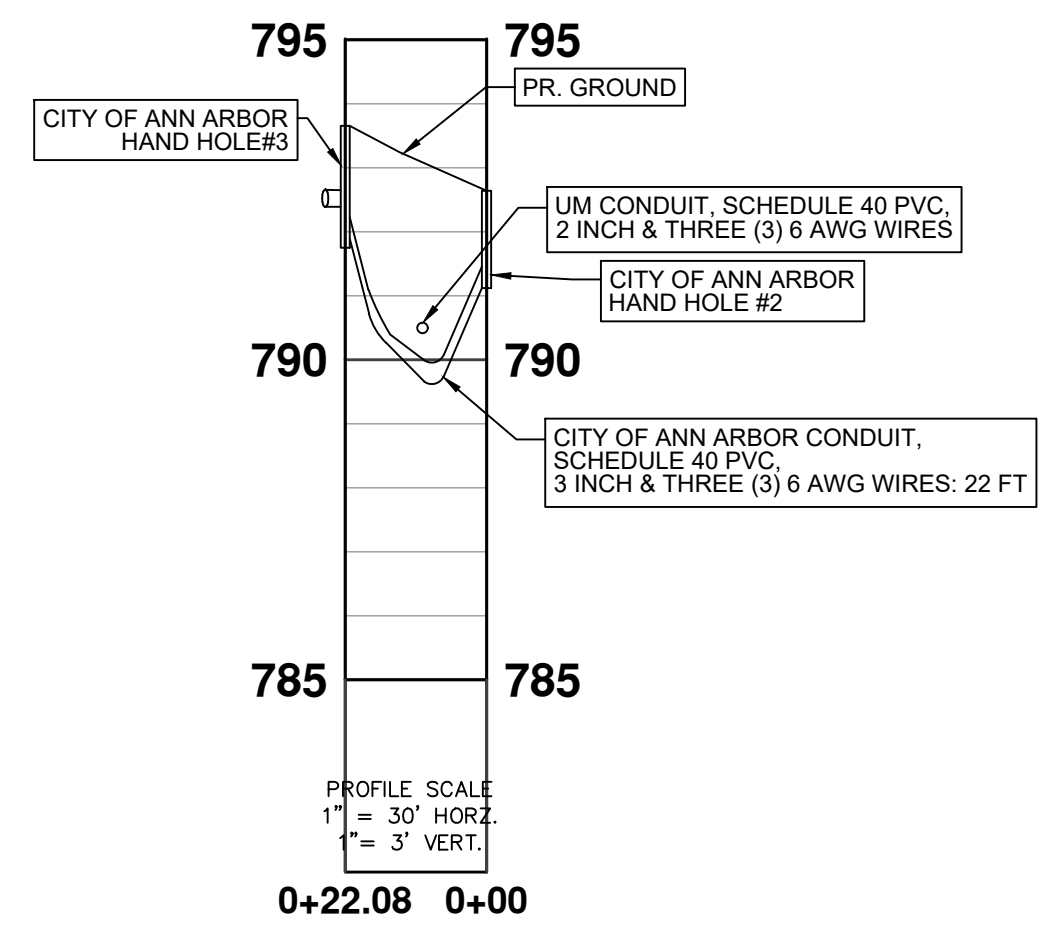
- CONTRACTOR TO DISCONNECT & PULL TEMPORARY STREET LIGHT WIRING ON EAST SIDE.
- CONTRACTOR TO REMOVE AND SALVAGE STREET LIGHT POLES IF NEW CITY TEMP POLES - UM POLES TO BE DISCARDED.
- CONTRACTOR TO INSTALL SCHEDULE 40 PVC CONDUIT FROM L3 TO CITY OF ANN ARBOR HH#7. CONTRACTOR TO INSTALL SCHEDULE 40 PVC CONDUIT FROM CITY OF ANN ARBOR HH#7 THROUGH THE SIDEWALK AND TERMINATING AT CITY OF ANN ARBOR HH#8. CONTRACTOR TO PULL WIRE THROUGH CONDUIT AND CONNECT TO PROPOSED STREET LIGHTS L3, L4 AND L5.



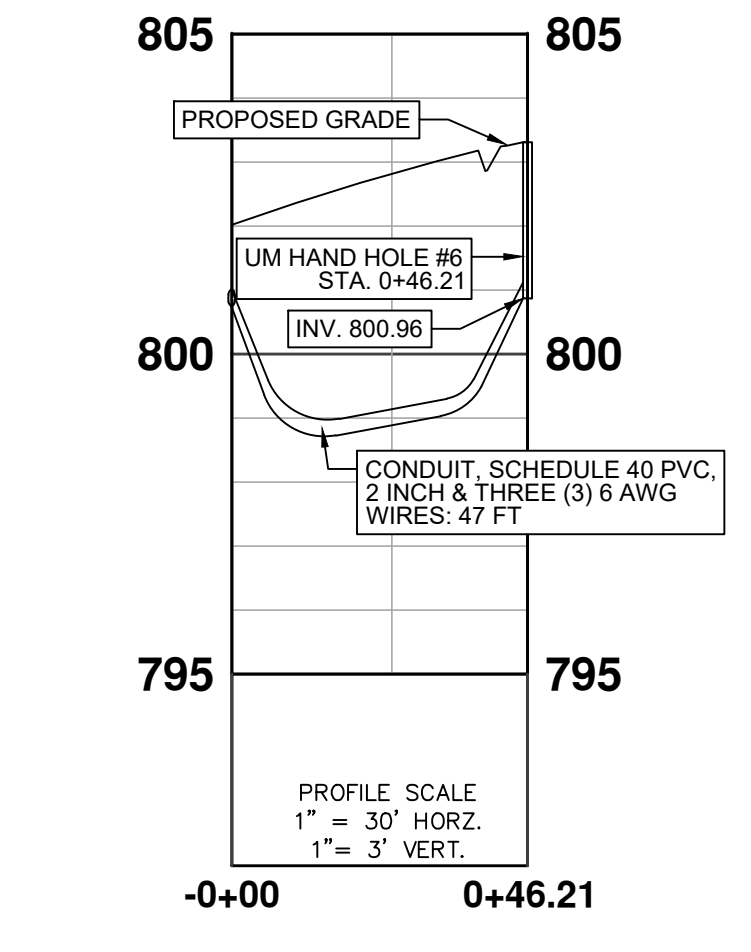
UM MEDICAL CENTER LIGHTING CIRCUIT CONNECTION (NORTH OF BRIDGE)



CITY OF ANN ARBOR LIGHTING CIRCUIT CONNECTION (NORTH OF BRIDGE)



UM MEDICAL CENTER LIGHTING CIRCUIT CONNECTION (SOUTH OF BRIDGE)



LEGEND

- | | | | | | |
|----------------------------|-----------------------------------|--------------------|----------------------|-----------------------------------|------------------------|
| EXISTING FENCE | EXISTING SANITARY SEWER & MANHOLE | EXISTING TELEPHONE | EXISTING RD. & GRADE | PROPOSED SANITARY SEWER & MANHOLE | PROPOSED CURB & GUTTER |
| CONTOUR | UTILITY POLE & GUY | GAS LINE | LEFT EDGE/RD. GRADE | STORM SEWER & CAT. BAS. | STREET LIGHT CONDUIT |
| STORM SEWER & CAT. BAS. | FIRE HYDRANT ASSEMBLY | CABLE T.V. | RIGHT EDGE/RD. GRADE | WATER MAIN W/F.H. ASSEM. | TELECOM. CONDUIT |
| WATER MAIN & VALVE-IN-WELL | END SECTION | ELECTRIC | CURB & GUTTER | ROAD & GRADE | LIGHT POLE |
| WATER MAIN & VALVE-IN-BOX | | SIGN | EDGE/GRAVEL | | HANDHOLE |

DLZ

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

STREET LIGHT ELECTRICAL PLAN

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

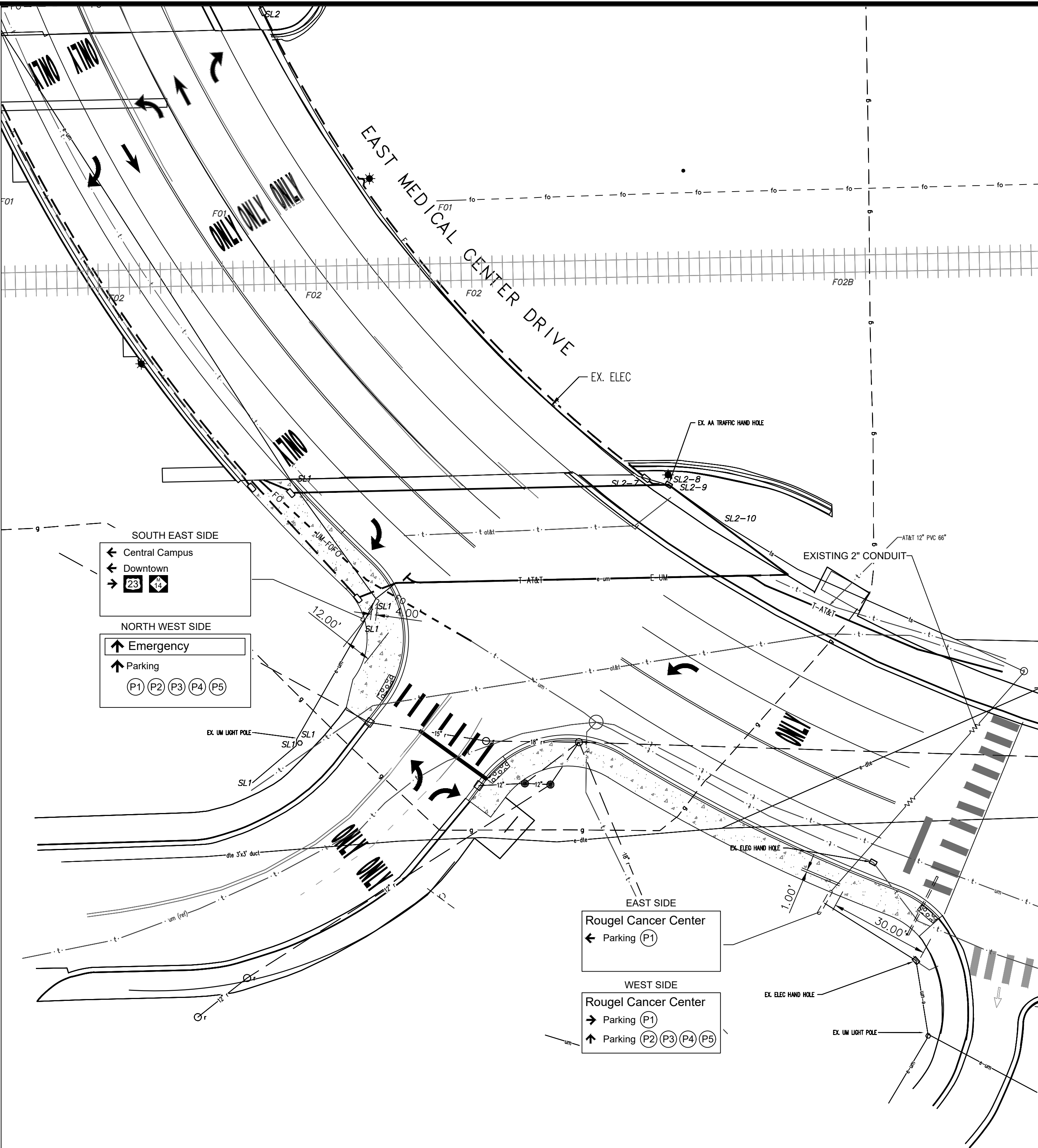
3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
800-482-7171 (TOLL FREE)

SCALE 1"=20'

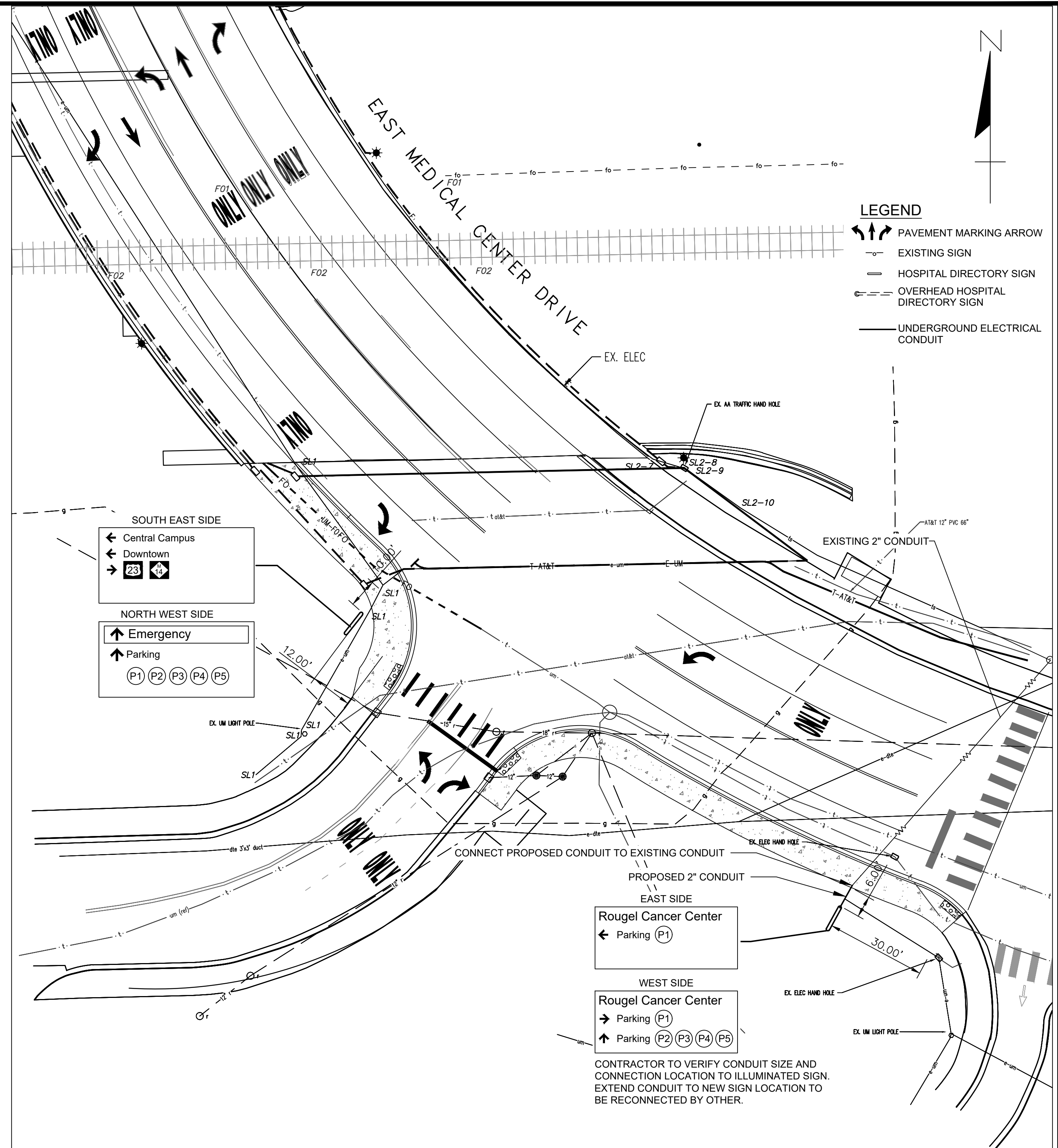
DRAWING NO. 2021-008-UT6

SHEET NO. 62 OF 155

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EXISTING SIGN LOCATION



PROPOSED SIGN LOCATION

ESTIMATED QUANTITIES THIS SHEET	
DESCRIPTION	QUANTITY
Conduit, DB, 1.2 Inch	8 FT
Hospital Sign and Foundation, Relocate	2 Ea

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

LEGEND	
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE
CONTOUR	UTILITY POLE & GUY
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY
WATER MAIN & VALVE-IN-WELL	LIGHT POLE
WATER MAIN & VALVE-IN-BOX	END SECTION
EXISTING TELEPHONE	EXISTING RD. & GRADE
GAS LINE	LEFT EDGE/RD. GRADE
CABLE T.V.	RIGHT EDGE/RD. GRADE
ELECTRIC	CURB & GUTTER
SIGN	EDGE/GRAVEL
PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
STORM SEWER & CAT. BAS.	SEE ABOVE
WATER MAIN W/F.H. ASSEM.	BENCH MARK
CONTOUR	SURVEY BOOK
ROAD & GRADE	REV. NO.

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	DLL	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DR HOSPITAL SIGN RELOCATION PLAN

SCALE: 1"=20'

DRAWING NO. 2021-008-UT7

SHEET NO. 63 OF 155

APPROVED BY: _____

EAST MEDICAL CENTER DR

WEST MEDICAL CENTER DR

AMTRAK & NORFOLK SOUTHERN R.R. TRACKS

FULLER RD

MAIDEN LN

SURVEY CONTROL AND BENCH MARKS
SEE SURVEY INFORMATION SHEET FOR SURVEY CONTROL AND BENCHMARKS

UTILITIES
SEE ROAD PLANS AND PROJECT INFORMATION AND NOTE SHEET FOR ADDITIONAL UTILITY INFORMATION

EXISTING STRUCTURE
THE EXISTING STRUCTURE IS A THREE SPAN STEEL MULTI-STRINGER STRUCTURE WITH A CLEAR ROADWAY WIDTH OF 47'-0", AN OUT-TO-OUT WIDTH OF 70'-11 1/4", AND AN OVERALL LENGTH OF 130'-2 1/2". THE STRUCTURE WAS ORIGINALLY BUILT IN 1982 AND DESIGNED FOR HS25 LOADING.

COORDINATES

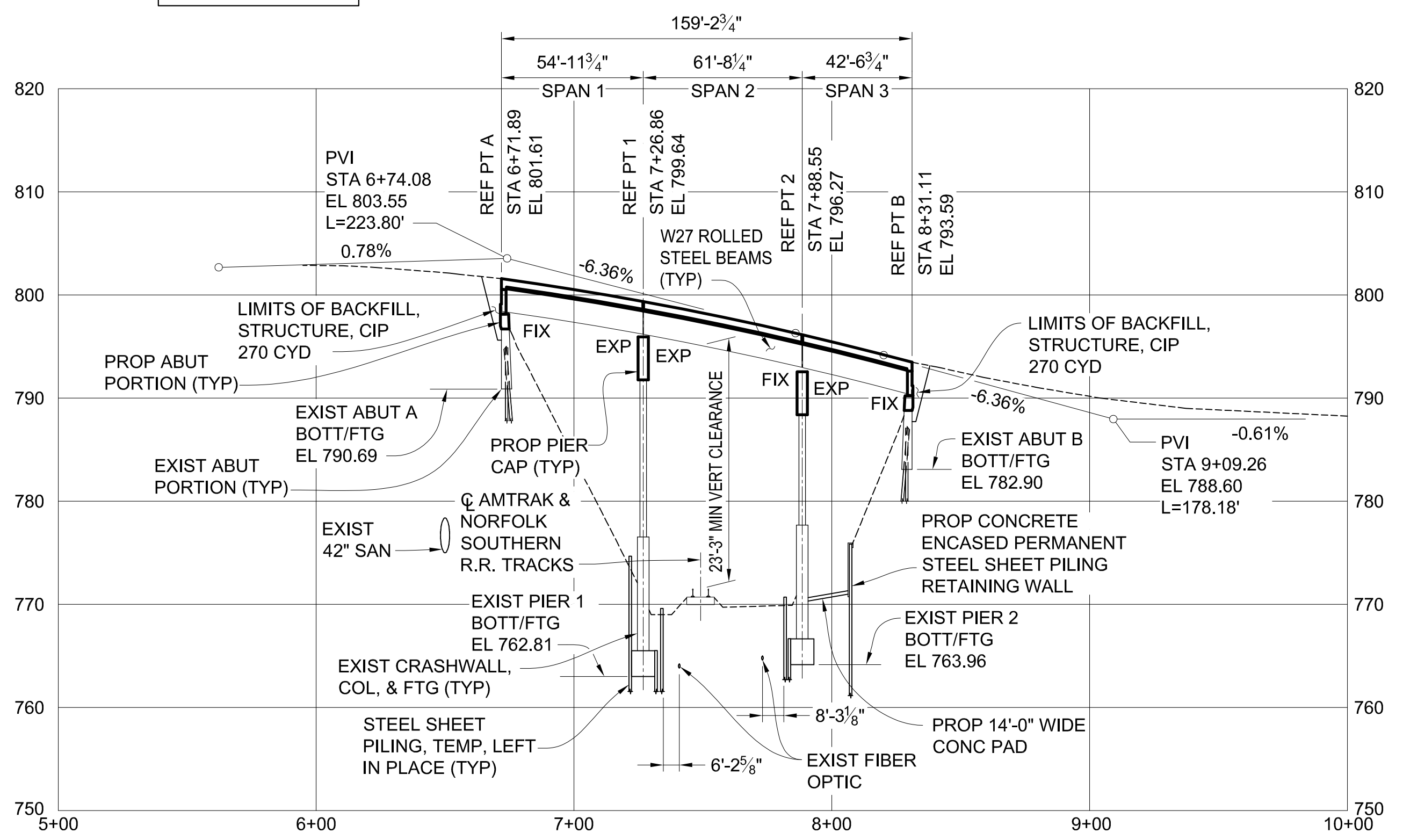
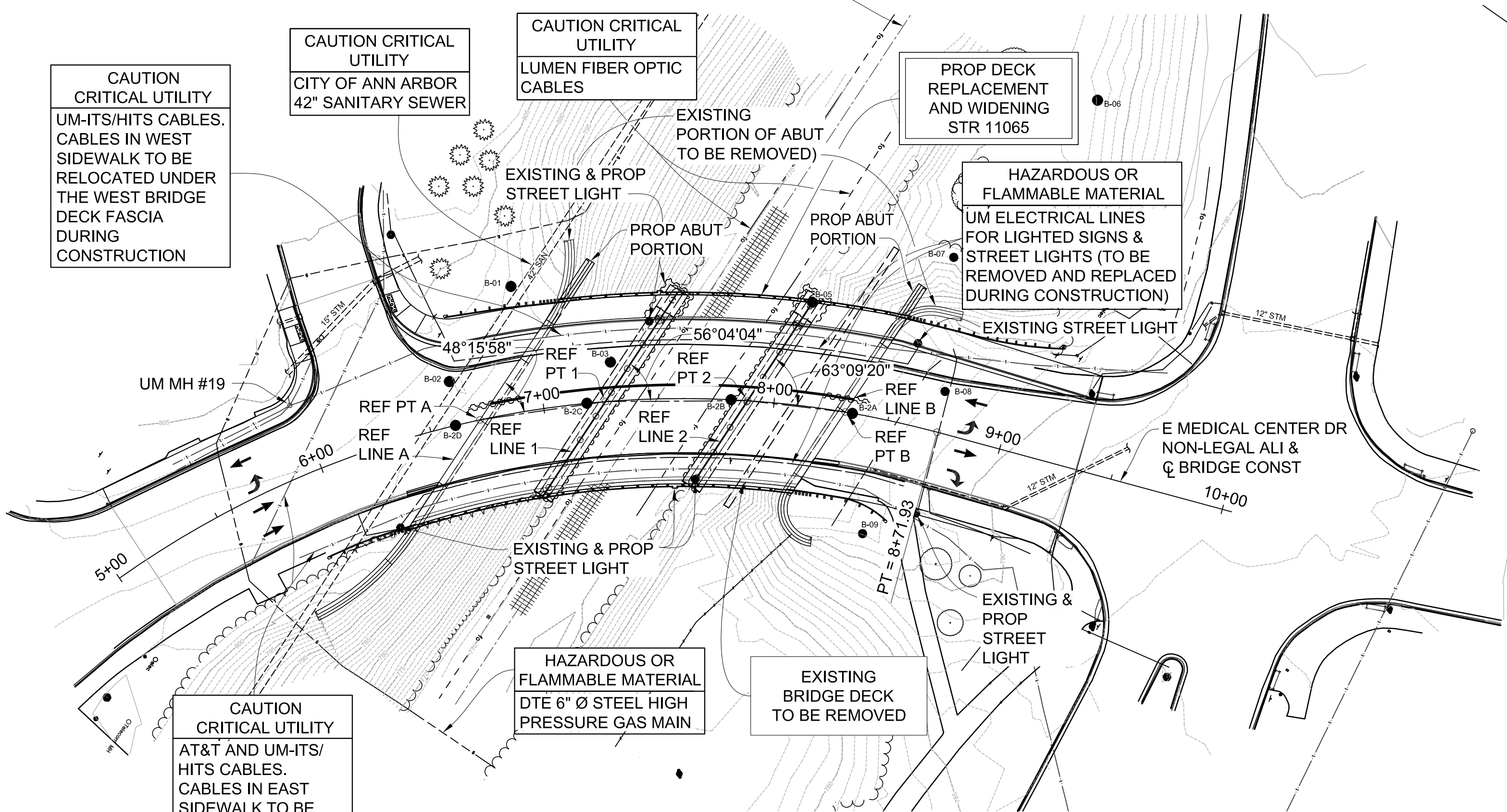
REF PT	NORTH	EAST	ELEV
A	286,963.50	13,295,113.75	801.54
1	287,003.70	13,295,076.30	799.47
2	287,054.16	13,295,040.91	795.96
B	287,091.74	13,295,020.96	793.32

EAST MEDICAL CENTER DRIVE CURVE DATA

Δ = 71°58'59" (RT)
D = 44°46'59.86"
T = 306.51'
L = 530.18'
R = 422.00'
E = 99.565'
PC = 3+41.75 N = 286,848.74 E = 13,295,414.37
PI = 6+06.84 N = 286,840.62 E = 13,295,107.97
PT = 8+71.93 N = 287,129.46 E = 13,295,005.49
EXIST SUPER = 3%
PROP SUPER = 3%

COORDINATES PROVIDED ARE TO ESTABLISH THE GEOGRAPHIC LOCATION OF THE STRUCTURE. HOWEVER SHALL NOT TAKE PRECEDENCE OVER STRUCTURAL DIMENSIONS.

SITUATION PLAN



PROFILE ALONG BRIDGE CENTERLINE

NOTES:

- THE WORK COVERED BY THESE PLANS INCLUDES REMOVAL OF THE EXISTING BRIDGE DECK, REMOVAL AND SALVAGING OF THE EXISTING BEAMS, REMOVAL OF PORTIONS OF THE SUBSTRUCTURE UNITS, CONSTRUCTION OF THE PROPOSED WIDENED BRIDGE AND PLACING SLOPE PROTECTION TO THE LIMITS SHOWN.
- LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND CONDUCT OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- MAINTAIN EAST MEDICAL CENTER DRIVE TRAFFIC OVER THE BRIDGE BY PART-WIDTH CONSTRUCTION.
- PLAN ELEVATIONS REFER TO NAVD88 DATUM.
- THE TRAIN MOVEMENT AND SPEED INFORMATION SHOWN IN THE PROPOSAL DOES NOT REPRESENT A COMMITMENT BY AMTRAK AND IS SUBJECT TO CHANGE WITHOUT NOTICE.
- IMPLEMENT MEASURES TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. ALL MEASURES IMPLEMENTED BY THE CONTRACTOR MUST BE EFFECTIVE. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ANY DEBRIS THAT FALLS WITHIN 15 FEET OF THE RAILROAD TRACKS. REMOVAL AND DISPOSAL OF ALL DEBRIS OFF-SITE SHALL NOT BE PAID FOR SEPARATELY, BUT IS INCLUDED IN OTHER ITEMS OF WORK.

3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
GENERAL PLAN OF SITE	
SCALE HOR. 1"=40'-0" VER. 1"=4'-0"	INCH 0 1
DRAWING NO. 2021-008-BR1	
SHEET NO. 64 OF 155	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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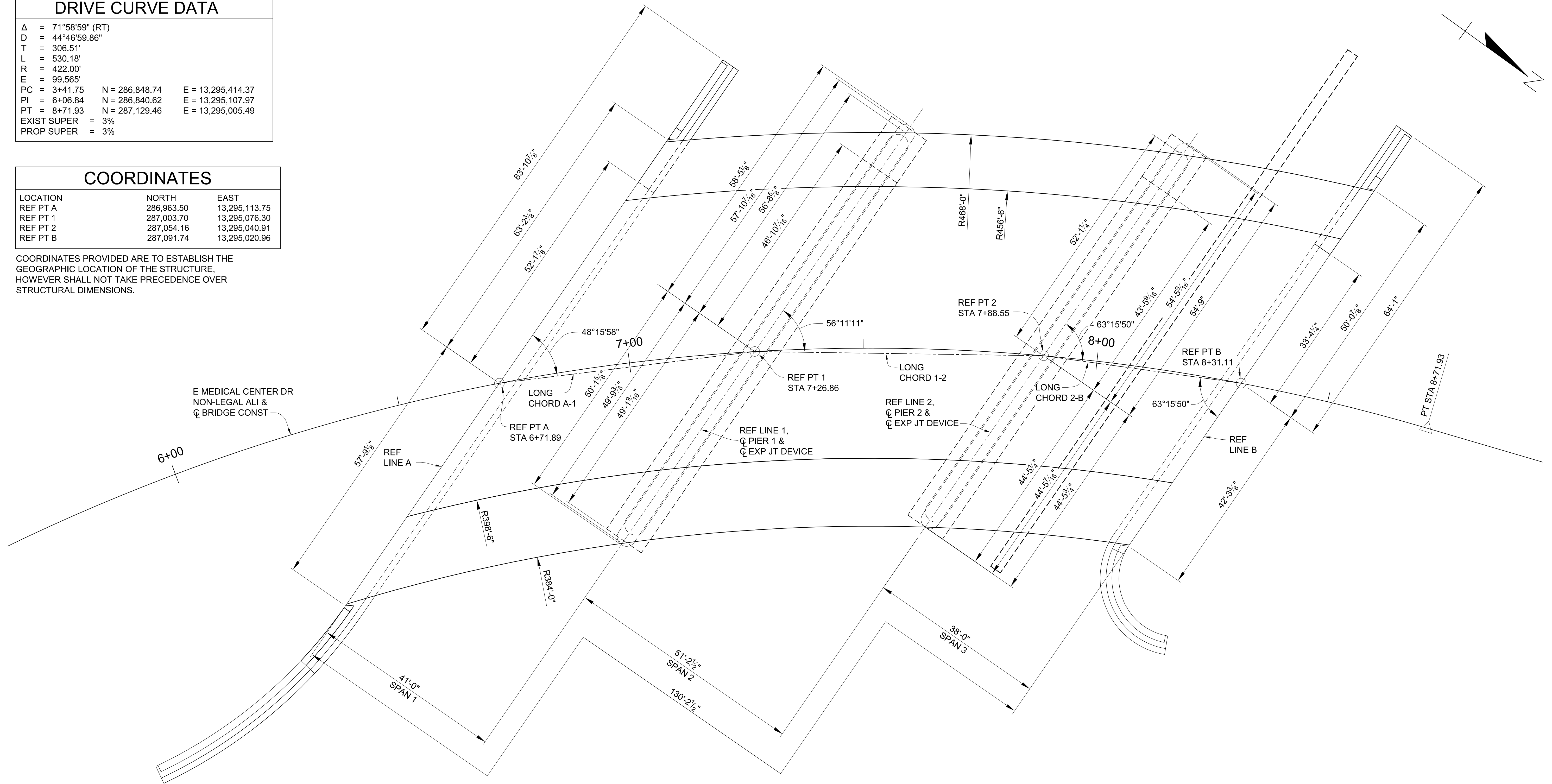
EAST MEDICAL CENTER DRIVE CURVE DATA

Δ	= 71°58'59" (RT)	
D	= 44°46'59.86"	
T	= 306.51'	
L	= 530.18'	
R	= 422.00'	
E	= 99.565'	
PC	= 3+41.75	N = 286,848.74 E = 13,295,414.37
PI	= 6+06.84	N = 286,840.62 E = 13,295,107.97
PT	= 8+71.93	N = 287,129.46 E = 13,295,005.49
EXIST SUPER	= 3%	
PROP SUPER	= 3%	

COORDINATES

LOCATION	NORTH	EAST
REF PT A	286,963.50	13,295,113.75
REF PT 1	287,003.70	13,295,076.30
REF PT 2	287,054.16	13,295,040.91
REF PT B	287,091.74	13,295,020.96

COORDINATES PROVIDED ARE TO ESTABLISH THE GEOGRAPHIC LOCATION OF THE STRUCTURE, HOWEVER SHALL NOT TAKE PRECEDENCE OVER STRUCTURAL DIMENSIONS.



3 WORKING DAYS |
BEFORE YOU DIG
CALL MISS DIG
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(TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
LAYOUT DIAGRAM	
SCALE HOR. 3/32" = 1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR2	
SHEET NO. <u>65</u> OF <u>155</u>	

APPROVED BY: _____
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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TEST HOLE NO. B-01	TEST HOLE NO. B-02	TEST HOLE NO. B-03	TEST HOLE NO. B-04	TEST HOLE NO. B-05	TEST HOLE NO. B-06
<p>LOCATION STATION: OF CL As per plan GROUND SURFACE ELEVATION: 802.31 ft</p> <p>BORING DATE 1/16/22 Water Seepage : 43.5' Water at Completion : 46.1'</p> <p>ABUT A ESTIMATED MICROPILE TIP EL 725.69</p>	<p>LOCATION STATION: OF CL As per plan GROUND SURFACE ELEVATION: 801.69 ft</p> <p>BORING DATE 1/15/22 Water Seepage : 33.5' Water at Completion : 33.2'</p> <p>ABUT A ESTIMATED MICROPILE TIP EL 725.69</p>	<p>LOCATION STATION: OF CL As per plan GROUND SURFACE ELEVATION: 774.70 ft</p> <p>BORING DATE 1/29/22 Water Seepage : 8.5' Water at Completion : 13.9' (11.0' Prior to Adding Water) Notes: Concrete Deck = 9', Top of Ground at Boring = 25.0' Below Top of Deck</p> <p>PIER 1 ESTIMATED MICROPILE TIP EL 722.81</p>	<p>LOCATION STATION: OF CL As per plan GROUND SURFACE ELEVATION: 776.71 ft</p> <p>BORING DATE 1/6/22 Water Seepage : 6' Water at Completion : None Observed</p> <p>E.O.B. 20.0 ft</p>	<p>LOCATION STATION: OF CL As per plan GROUND SURFACE ELEVATION: 772.02 ft</p> <p>BORING DATE 1/4/22 Water Seepage : 6' Water at Completion : 30'</p>	<p>LOCATION STATION: OF CL As per plan GROUND SURFACE ELEVATION: 782.04 ft</p> <p>BORING DATE 1/3/22 Water Seepage : None Observed Water at Completion : None Observed</p> <p>E.O.B. 20.0 ft</p>

3 WORKING DAYS
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

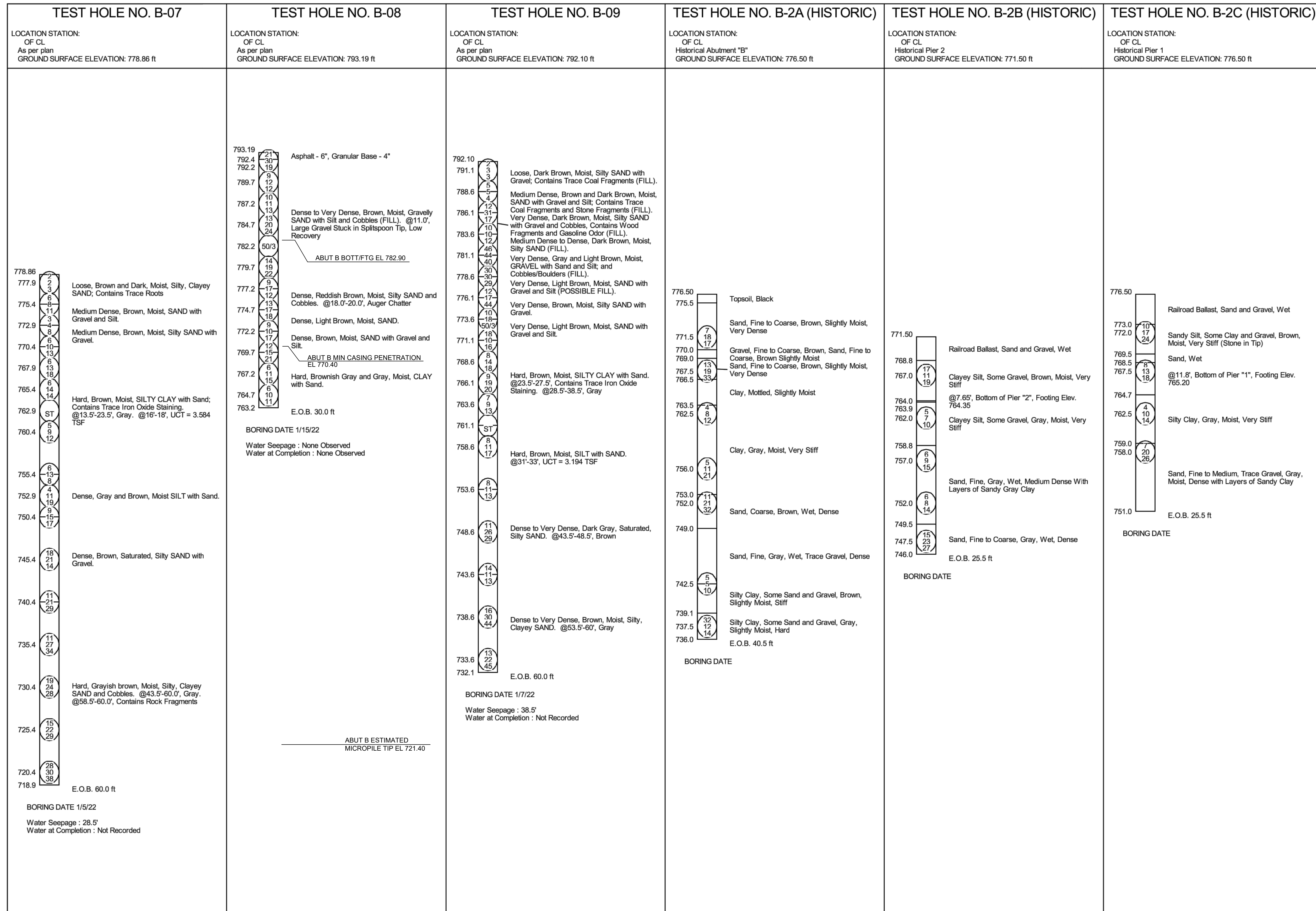
EAST MEDICAL CENTER DRIVE
SOIL BORINGS

SCALE	INCH
NONE	0 1
DRAWING NO.	
2021-008-BR3	
SHEET NO. 66 OF 155	

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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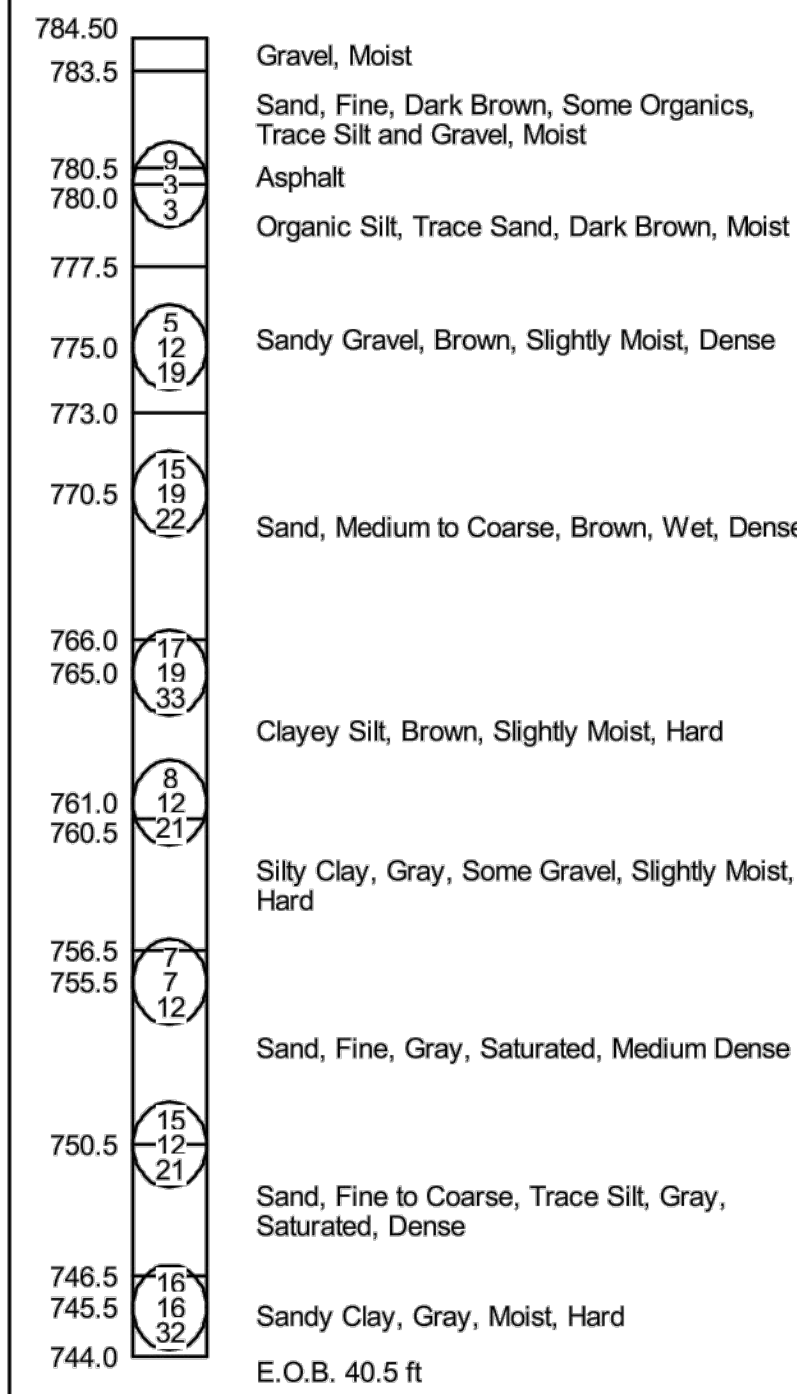


3 WORKING DAYS
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(TOLL FREE)

DLZ					PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR				
EAST MEDICAL CENTER DRIVE					SCALE NONE 0 INCH 1				
SOIL BORINGS					DRAWING NO. 2021-008-BR4				
REV. NO. DESCRIPTION DATE DR.BY CH.BY					SHEET NO. 67 OF 155				
APPROVED BY					CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734				

TEST HOLE NO. B-2D (HISTORIC)

LOCATION STATION:
 OF CL
 Historical Abutment "A"
 GROUND SURFACE ELEVATION: 784.50 ft



BORING DATE

NOTES:

NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. X 1.5" I.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 6" INCREMENTS USING A 140 lb HAMMER FALLING 30".

0	1st 6 in
0	2nd 6 in
0	3rd 6 in

WATER LEVELS MAY BE INFLUENCED BY RESIDUAL BORING WATER

THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

SEE GENERAL PLAN OF SITE AND STRUCTURE SHEETS FOR SOIL BORING LOCATIONS.

3 WORKING DAYS!
BEFORE YOU DIG
CALL MISS DIG
 800-482-7171
 (TOLL FREE)



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

SOIL BORINGS

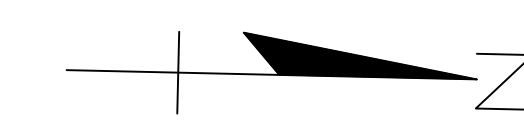
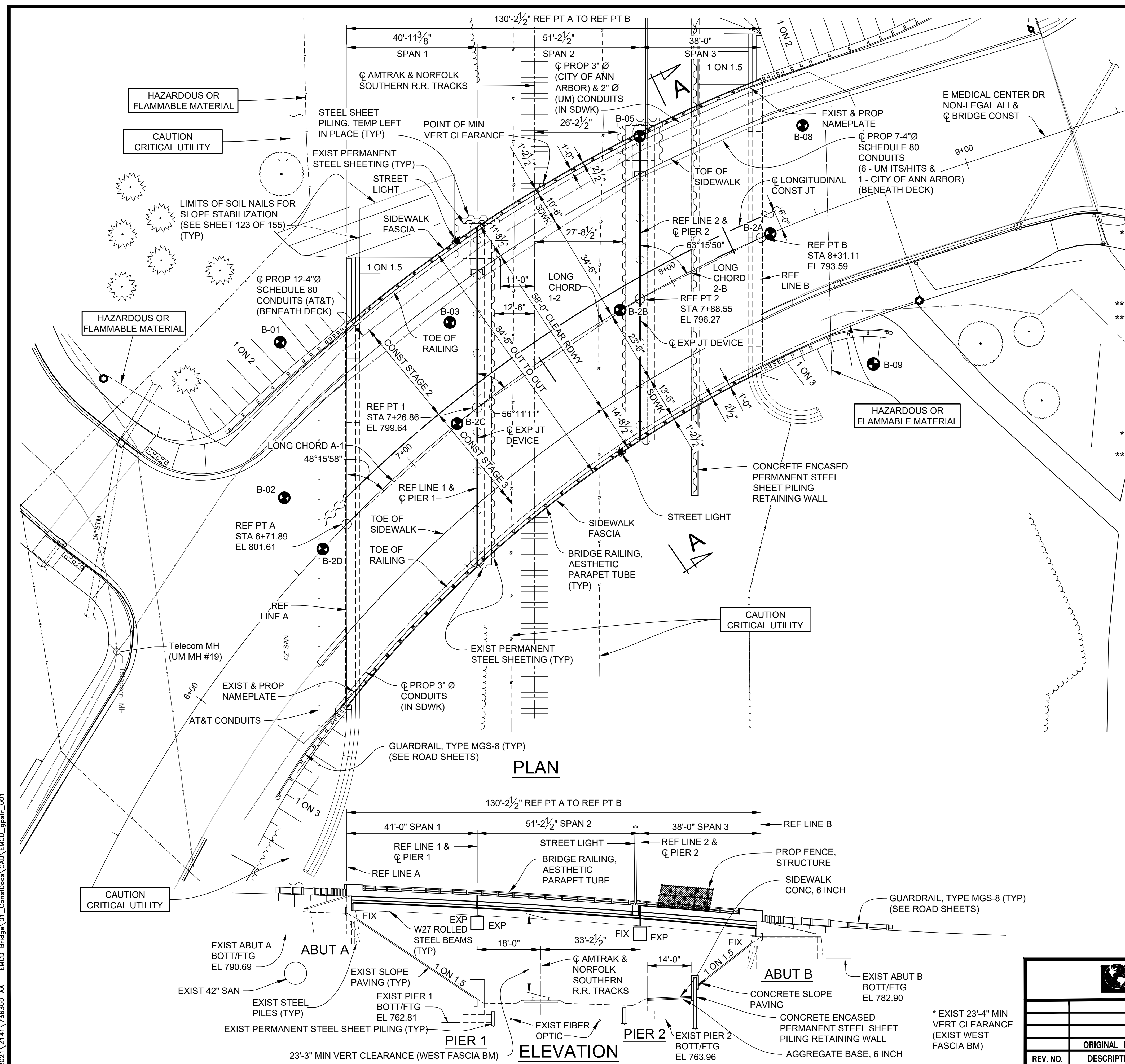
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

SCALE NONE	INCH 0 1
DRAWING NO. 2021-008-BR5	
SHEET NO. <u> 68 </u> OF <u> 155 </u>	

APPROVED BY _____

CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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ESTIMATED QUANTITIES THIS SHEET

DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Relocation and Site Cleanup	Dlr			15,000	15,000
** Structures, Rem Portions (STR 11065)	LSUM	0.9	0.1		1
Backfill, Structure, CIP	Cyd	500	500	340	1,340
Excavation, Fdn	Cyd	500	500	400	1,400
*** Dewatering System, Excavation	Ea		2		2
Steel Sheet Piling, Temp	Sft	360			360
Steel Sheet Piling, Temp, Left in Place	Sft		520		520
False Decking	Sft	20,230			20,230
Railroad Inspection and Flagging	Dlr	180,000	20,000		200,000
**** Slope Paving Header	Ft		40	87	127
**** Slope Paving, Conc	Syd		20	30	50
Structure Survey During Construction (STR 11065)	LSUM	1			1
Conduit, Schedule 80, 4 inch, Structure	Ft	2,940			2,940
Conduit, Schedule 40, 2 inch	Ft		160		160
Conduit, Schedule 40, 3 inch	Ft			330	330

** INCLUDES REMOVAL OF EXISTING RAILINGS, SIDEWALKS, DECK, PIER CAPS, PORTIONS OF CRASHWALLS AND ABUTMENTS, PORTIONS OF SLOPE PAVING BEHIND PIER 2, AND THE EXIST 10'-0" WIDE CONCRETE PAD BEHIND PIER 2.

*** FOR DEWATERING OF PERMANENT STEEL SHEET PILING ENCLOSURES FOR PROPOSED PIER WIDENING.

**** CATG 0002 QUANTITY IS FOR WIDENED PORTIONS OF SLOPE PAVING ON WEST SIDE OF BRIDGE. CATG 0003 QUANTITY IS FOR REPAIRS TO SLOPE PAVING BEHIND PIER 2 AFTER CONSTRUCTION OF CONCRETE ENCASED STEEL SHEET PILING RETAINING WALL.

NOTES:

THE RECONSTRUCTION DESIGN OF THE SUPERSTRUCTURE, PIER CAPS, AND WIDENED SUBSTRUCTURE UNITS IS BASED ON 1.2 TIMES THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION HL-93 LOADING WITH THE EXCEPTION THAT THE DESIGN TANDEM PORTION OF THE HL-93 LOAD DEFINITION IS REPLACED BY A SINGLE 60 KIP AXLE LOAD BEFORE APPLICATION OF THIS 1.2 FACTOR. THE RESULTING LOAD IS DESIGNATED HL-93 MOD. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE ORIGINAL STRUCTURE WAS DESIGNED FOR HS25 LOADING.

FOR DETAILS OF CONCRETE SLOPE PAVING PROTECTION, SEE MDOT STANDARD PLAN B-102-SERIES.

FALSE DECKING INCLUDES THE AREA BOUNDED BY REFERENCE LINES A & B AND OUTSIDE FLANGE FASCIA'S OF FASCIA BEAMS. THE ESTIMATED AREA IS 9237 SFT DURING REMOVAL AND 10,602 SFT DURING CONSTRUCTION.

INSTALL SHEET PILING USING EITHER AN IMPACT HAMMER OR A VARIABLE MOMENT DRIVER/EXTRACTOR OPERATED TO MINIMIZE VIBRATIONS. DO NOT USE VIBRATORY HAMMERS THAT ARE NOT VARIABLE MOMENT.

SHOES SHALL BE REQUIRED FOR PROP SHEET PILING DUE TO THE ANTICIPATED PRESENCE OF COBBLES/BOULDERS DURING DRIVING.

GROUNDWATER MAY BE PRESENT WITHIN THE PROPOSED STEEL SHEETING ENCLOSURES FOR THE PIER WIDENING. THE COST OF DEWATERING IS INCLUDED IN THE PAY ITEM "DEWATERING SYSTEM, EXCAVATION"

3 WORKING DAYS
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(TOLL FREE)

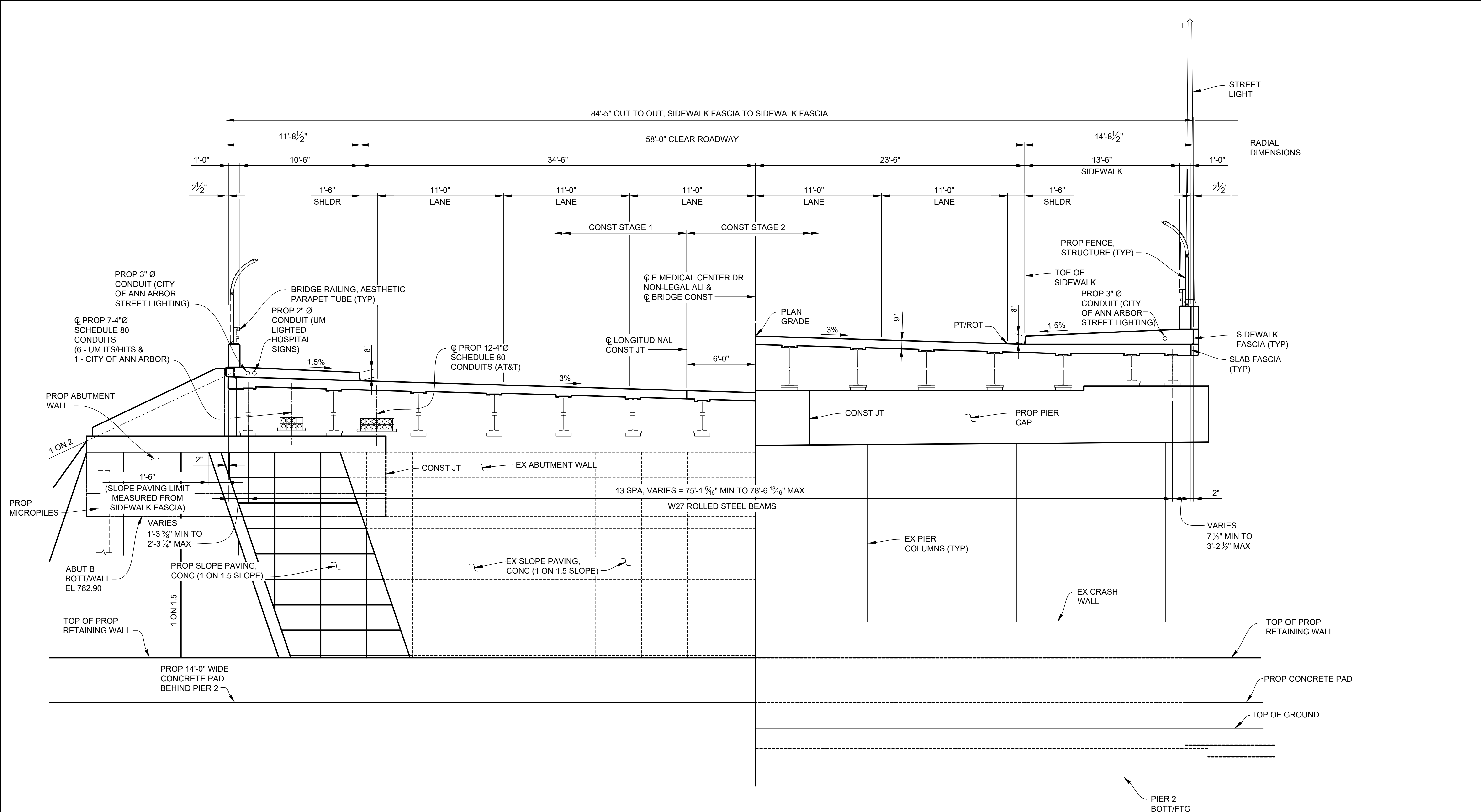
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
GENERAL PLAN OF STRUCTURE	
SCALE HOR. 1/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR6	
SHEET NO. <u>69</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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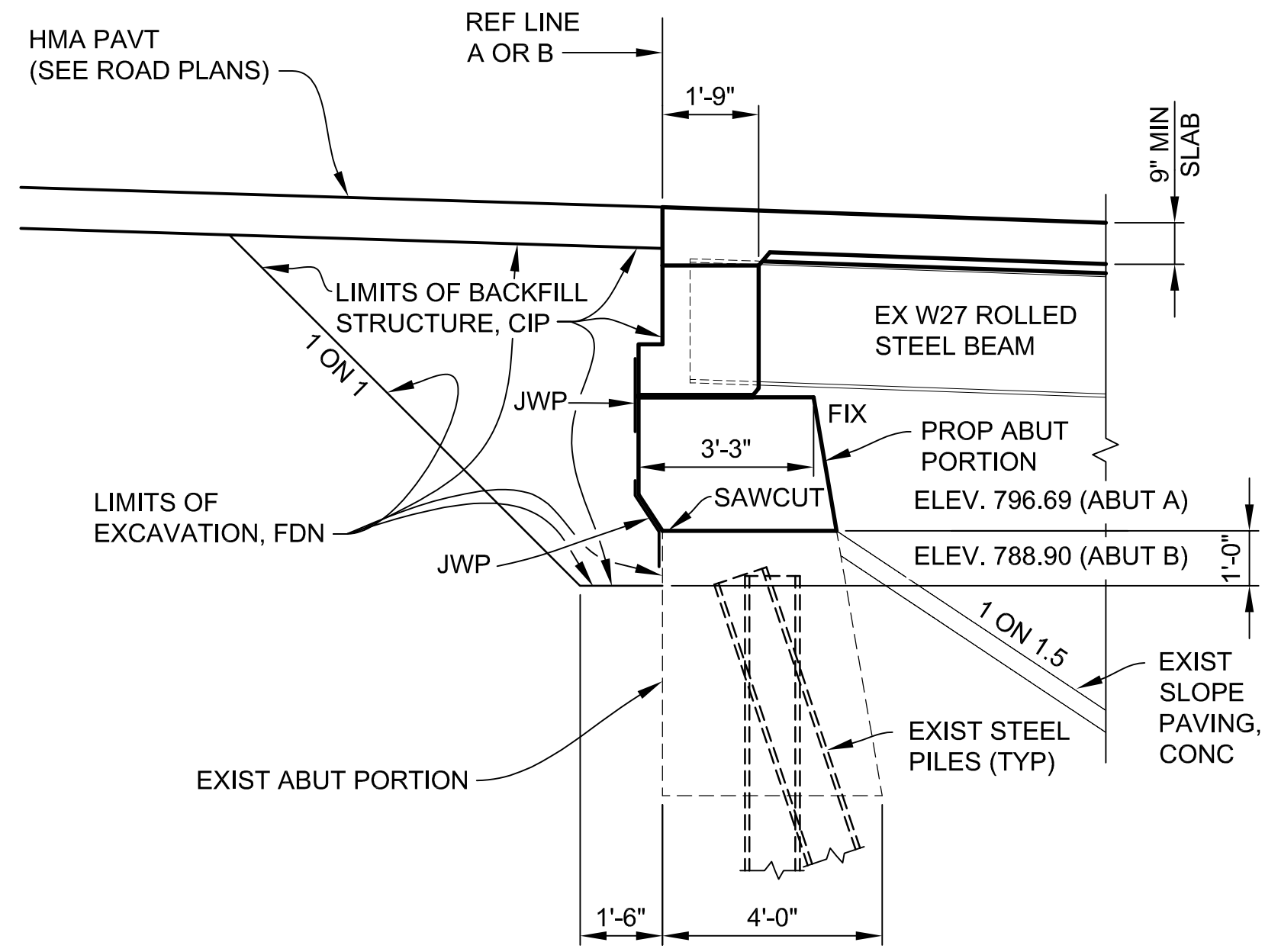
SECTION A-A

3 WORKING DAYS!
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 800-482-7171
 (TOLL FREE)

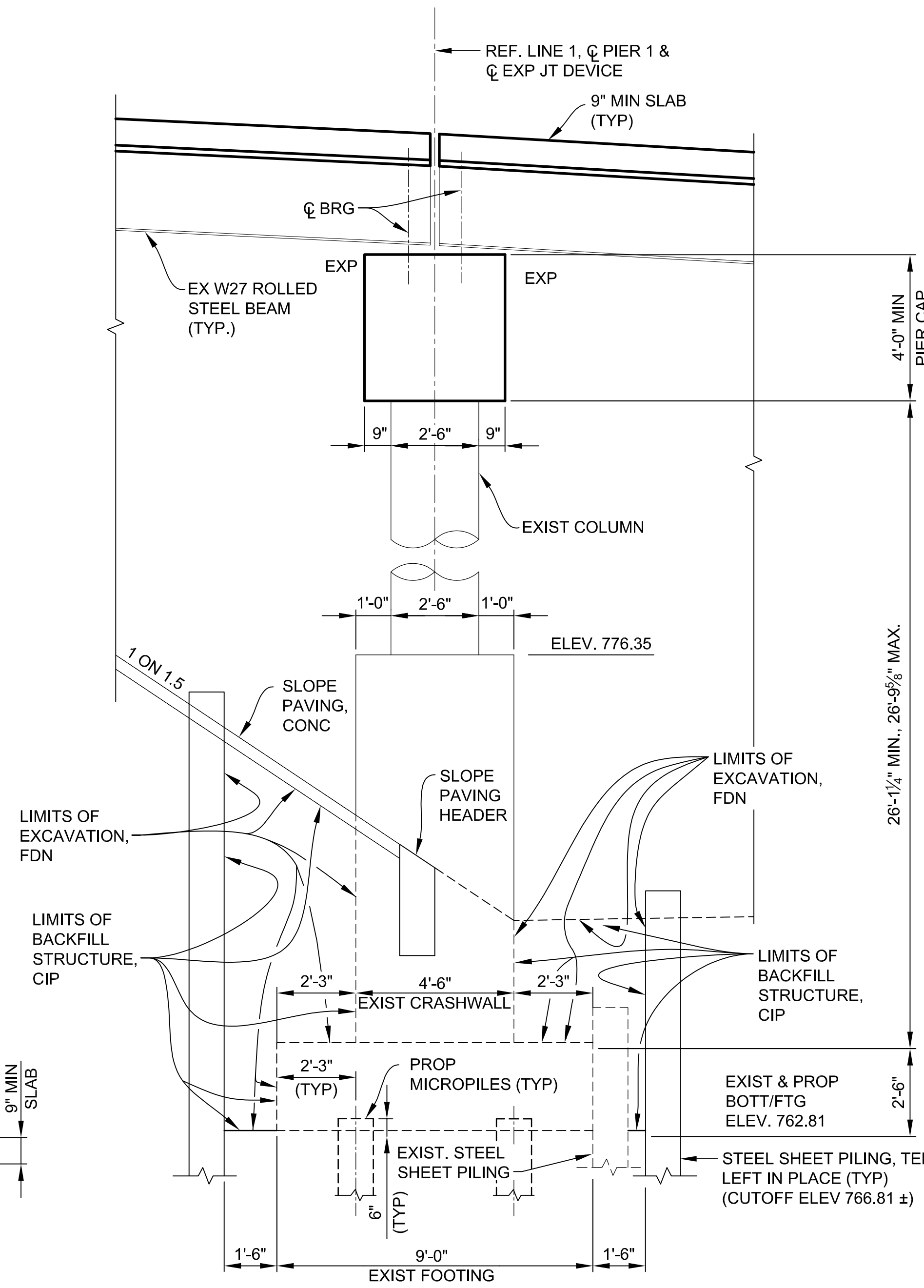
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
GENERAL PLAN OF STRUCTURE	
SCALE HOR. 1/4"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR7	
SHEET NO. <u>70</u> OF <u>155</u>	

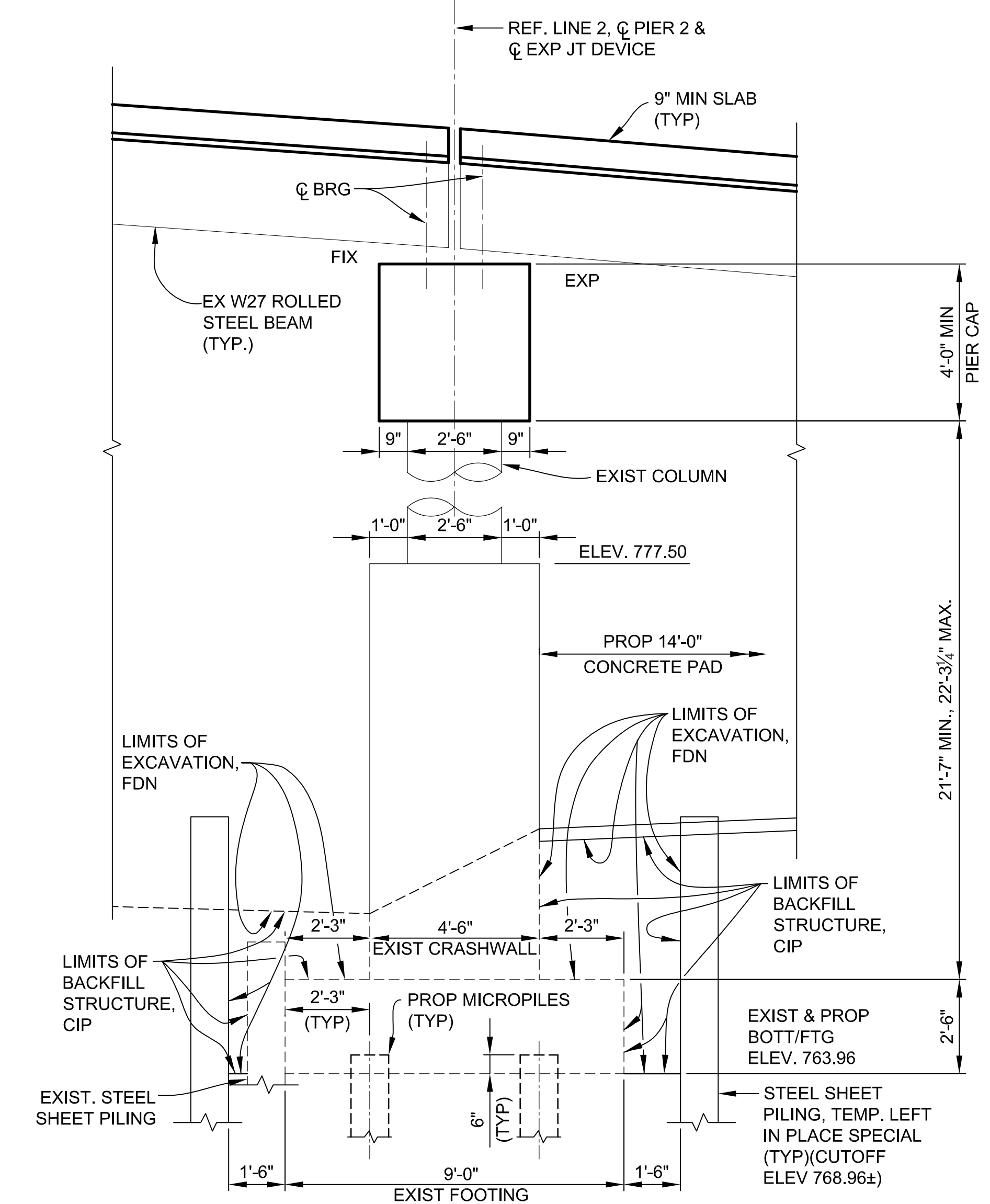
APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



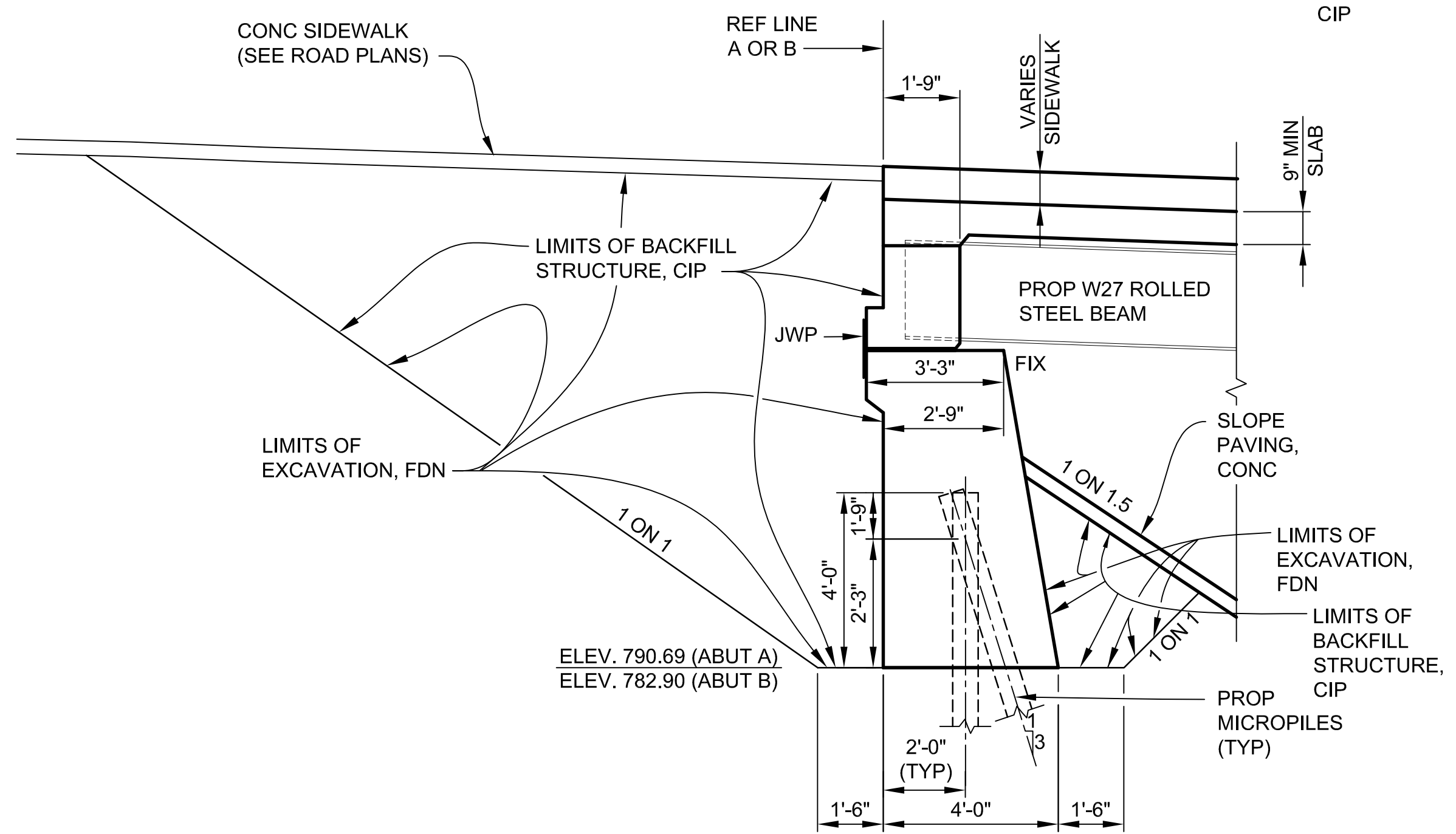
**TYPICAL ABUTMENT SECTION
(PARTIAL REPLACEMENT)**



SECTION AT PIER 1



SECTION AT PIER 2



**TYPICAL ABUTMENT SECTION
(FULL REPLACEMENT)**

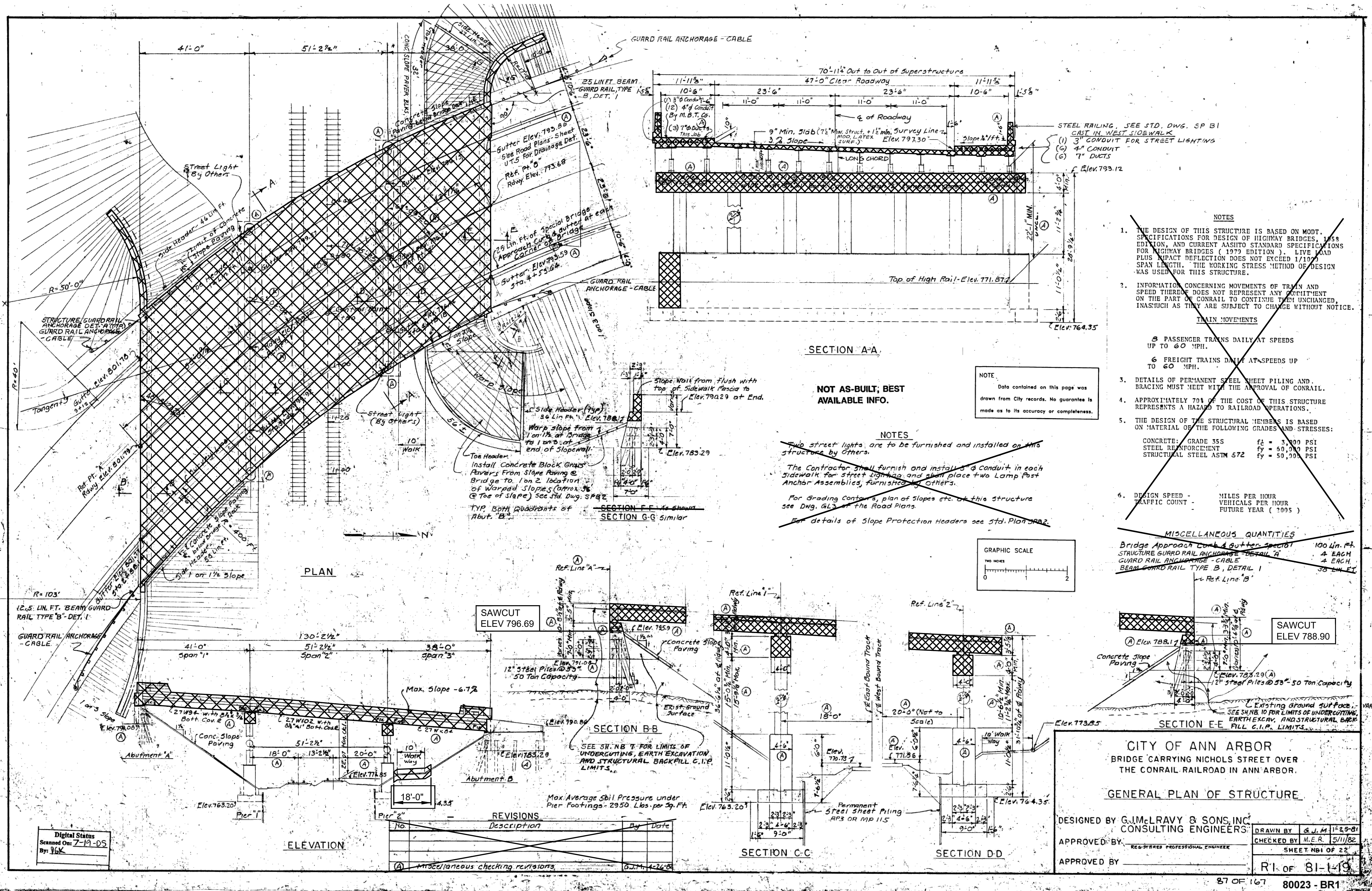
3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
GENERAL PLAN OF STRUCTURE	
SCALE HOR. 3/8"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR8	
SHEET NO. <u>71</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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NOTES:

REMOVE EXISTING RAILINGS, SIDEWALKS, STRUCTURE LIGHTING, AND DECK. CARE SHALL BE TAKEN TO SALVAGE EXISTING SHEAR DEVELOPERS. WHERE EXISTING SHEAR DEVELOPERS ARE DAMAGED THEY SHALL BE REPLACED IN KIND. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".

SAW-CUT THE DECK ON BOTH THE TOP AND BOTTOM SURFACE PRIOR TO DECK REMOVAL PROCEDURES.

EXISTING STRUCTURE NAME PLATES AND TRAFFIC SIGNS SHALL BE SALVAGED, CLEANED AND REINSTALLED ON PROPOSED STRUCTURE. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".

REMOVE EXISTING PIER CAPS AND PORTIONS OF THE CRASH WALL. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING VERTICAL REINFORCEMENT IN PIER COLUMNS AND EMBED IN PROPOSED PIER CAP. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING HORIZONTAL REINFORCEMENT IN THE CRASH WALL. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".

REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".

EXISTING BEAMS SHALL BE REMOVED AND PLACED ASIDE FOR REHABILITATION AND GALVANIZING. EXISTING DIAPHRAGMS AND CONNECTION PLATES SHALL BE REMOVED. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".

PLAN ELEVATIONS REFER TO NAVD88 DATUM. ELEVATION EQUATION: PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

PROPOSED WORK
 DENOTES REMOVAL PORTIONS

- NOTES**
- THE DESIGN OF THIS STRUCTURE IS BASED ON MODT. SPECIFICATIONS FOR DESIGN OF HIGHWAY BRIDGES, 1988 EDITION, AND CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (1979 EDITION). LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/100 SPAN LENGTH. THE WORKING STRESS METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.
 - INFORMATION CONCERNING MOVEMENTS OF TRAIN AND SPEED THEREOF DOES NOT REPRESENT ANY COMMITMENT ON THE PART OF CONRAIL TO CONTINUE THEM UNCHANGED, INASMUCH AS THEY ARE SUBJECT TO CHANGE WITHOUT NOTICE.
- TRAIN MOVEMENTS**
- 5 PASSENGER TRAINS DAILY AT SPEEDS UP TO 60 MPH.
- 6 FREIGHT TRAINS DAILY AT SPEEDS UP TO 60 MPH.
- DETAILS OF PERMANENT STEEL SHEET PILING AND BRACING MUST MEET WITH THE APPROVAL OF CONRAIL.
 - APPROXIMATELY 70% OF THE COST OF THIS STRUCTURE REPRESENTS A HAZARD TO RAILROAD OPERATIONS.
 - THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:
- | | |
|---------------------------|-----------------------------|
| CONCRETE: GRADE 355 | f _c = 3,000 PSI |
| STEEL REINFORCEMENT | f _y = 60,000 PSI |
| STRUCTURAL STEEL ASTM 572 | f _y = 50,000 PSI |
- DESIGN SPEED - NILES PER HOUR
TRAFFIC COUNT - VEHICLES PER HOUR
FUTURE YEAR (2005)

MISCELLANEOUS QUANTITIES

Bridge Approach Curb & Gutter Section 100 Lin. Ft.

STRUCTURE GUARD RAIL ANCHORAGE - DETAIL A 4 EACH

GUARD RAIL ANCHORAGE - CABLE 4 EACH

BEAM GUARD RAIL TYPE B, DETAIL 1 30 LIN. FT.

CITY OF ANN ARBOR
BRIDGE CARRYING NICHOLS STREET OVER THE CONRAIL RAILROAD IN ANN ARBOR.

GENERAL PLAN OF STRUCTURE

DESIGNED BY G.J. McLAVY & SONS, INC.
CONSULTING ENGINEERS

APPROVED BY: _____
REGISTERED PROFESSIONAL ENGINEER

APPROVED BY: _____

DRAWN BY G.J.M. 11-29-81
CHECKED BY M.E.R. 5/11/82
SHEET NO. 1 OF 23

R1 OF 81-1-19

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
EAST MEDICAL CENTER DRIVE			
EXISTING GENERAL PLAN OF STRUCTURE REMOVAL			
SCALE NONE	INCH 0 1		
DRAWING NO. 2021-008-BR9			
SHEET NO. 72 OF 155			
APPROVED BY	CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734		

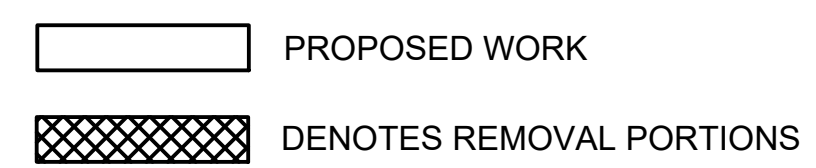
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
1	ORIGINAL ISSUE	10-6-23	DAF	CLH

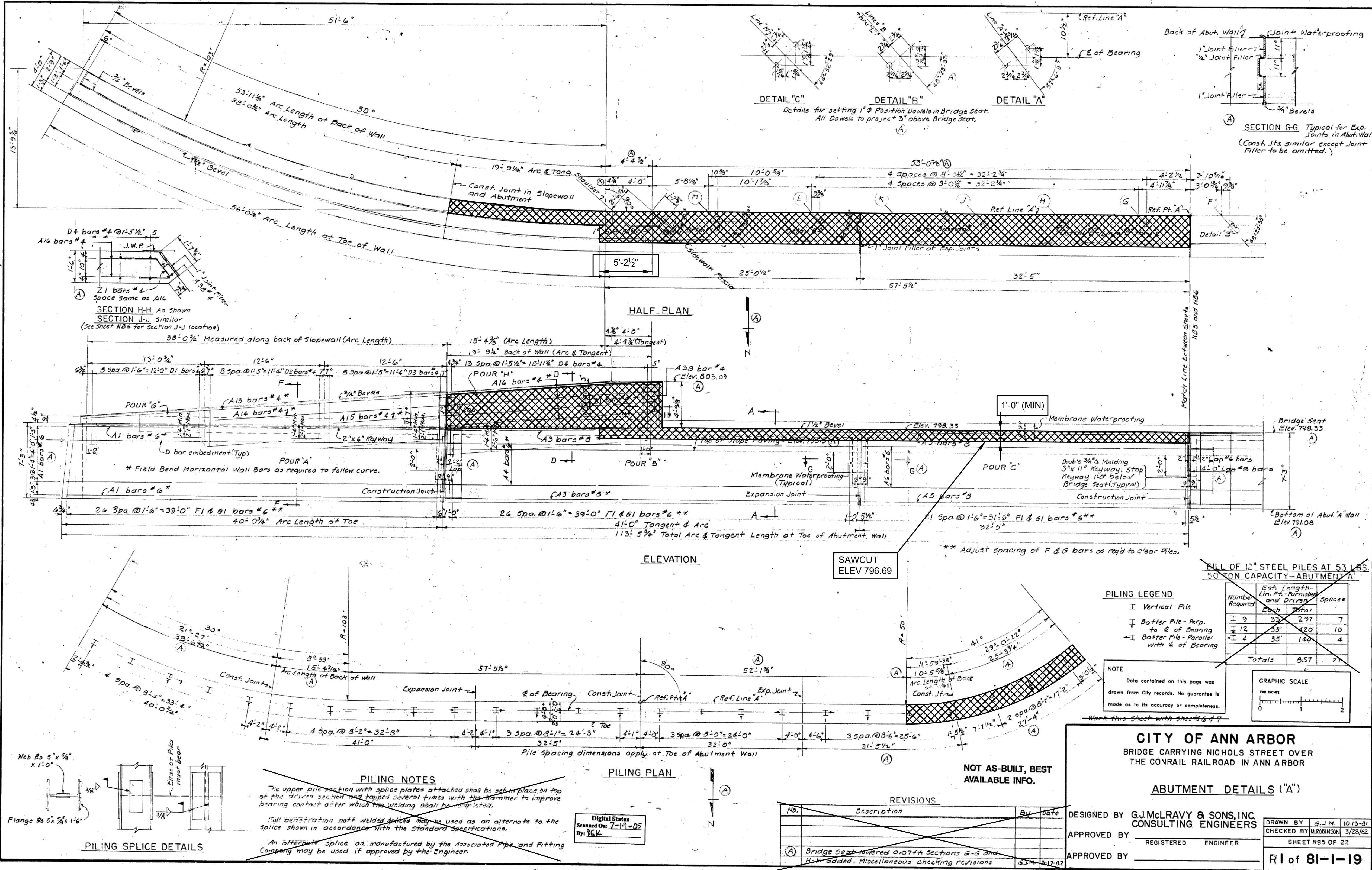
NOTES:

REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".

PLAN ELEVATIONS REFER TO NAVD88 DATUM. ELEVATION EQUATION: PROP ELEV. = EXIST. PLAN ELEV. -0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.





X:\Projects\2021\2141\736300_AA - EMCD Bridge\01_Constr\Docs\CAD\EMCD_rem_002

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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
ORIGINAL ISSUE		10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

EXISTING ABUTMENT A DETAILS
REMOVAL

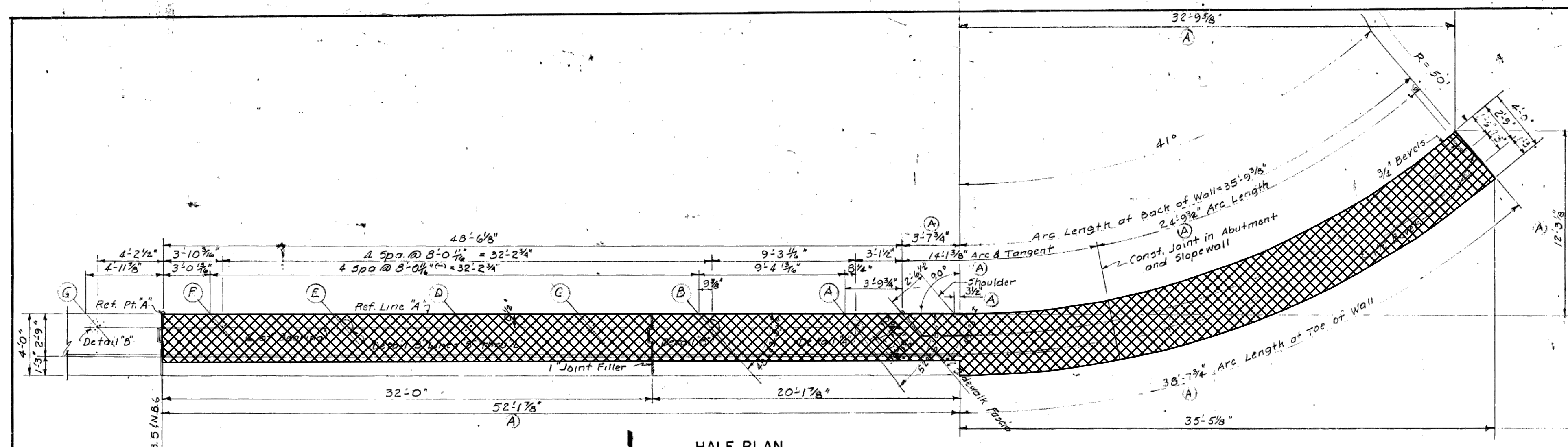
SCALE NONE 0 INCH 1

DRAWING NO. 2021-008-BR10

SHEET NO. 73 OF 155

APPROVED BY

CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



SUBSTRUCTURE CONCRETE ABUTMENT A		
POUR	LOCATION	CU. YDS.
A	Wall	35.6
B	Wall	36.9
C	Wall	29.4
D	Wall	29.0
E	Wall	27.1
F	Wall	23.0
G	Sloped Wall	4.6
H	Sloped Wall	4.9
J	Sloped Wall	3.1
K	Sloped Wall	2.9
Total		196.5

MISCELLANEOUS QUANTITIES	
Membrane Waterproofing	320 Sq. Ft.
Concrete Slope Forming 4" Thickness	502 Sq. Yds.
Headers - Slope Piles	132 Lin. Ft.
Low Temperature Protection	142 Cu. Yds.

INCIDENTAL QUANTITIES	
1/2" Joint Filler	152 Sq. Ft.
1" Joint Filler	62 Sq. Ft.

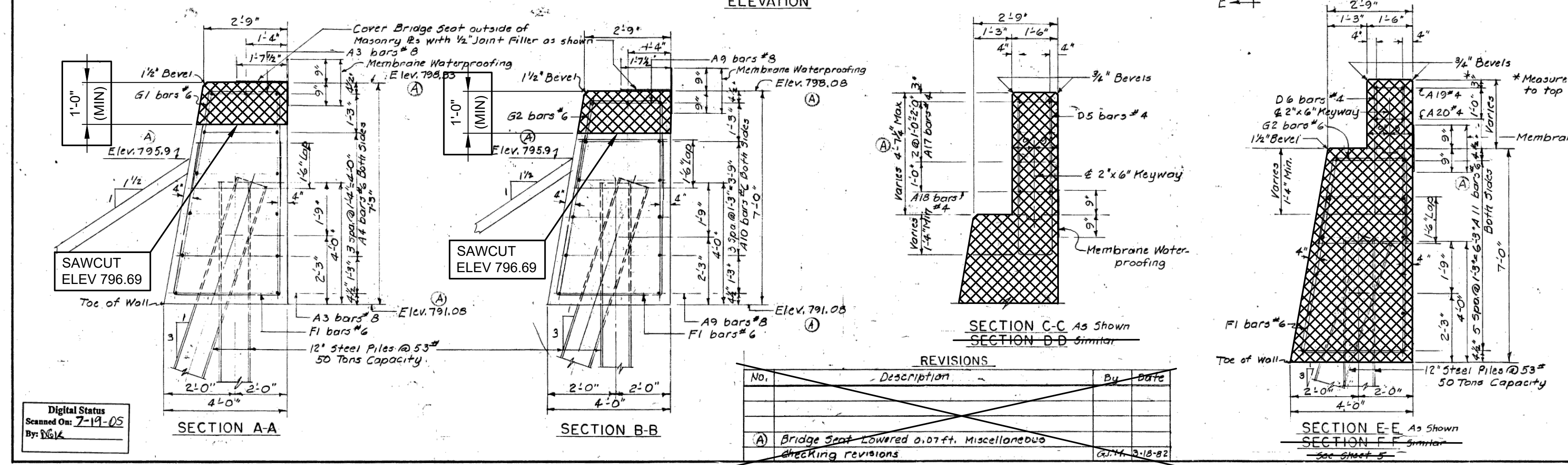
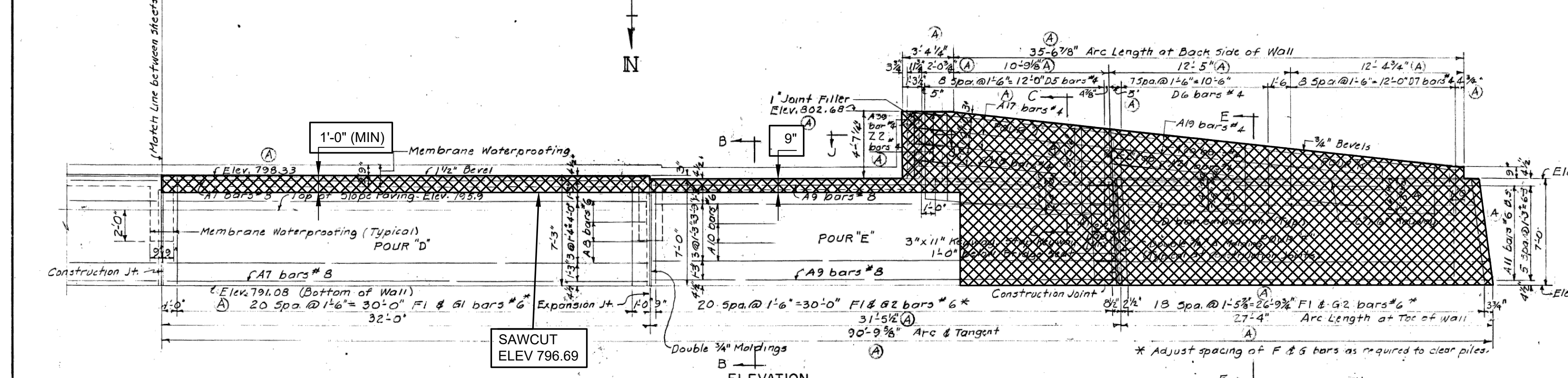
NOTES:
 REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".
 PLAN ELEVATIONS REFER TO NAVD88 DATUM. ELEVATION EQUATION: PROP ELEV. = EXIST. PLAN ELEV. -0.39 FT

NOTES:
 Bridge Seats shall be finished to provide true planes at the elevations shown and shall not vary more than 1/8" under a 10' straight edge nor more than 1/8" under any bearing.
 Sloped walls shall not be cast until the superstructure is complete to the tops of the railing bases.
 For molding and bevel details see std. Dwg. R11.
 After the steel piles are driven and cut off the portions to be embedded in concrete shall be thoroughly cleaned of all loose paint, scale and dirt to ensure that a satisfactory bond between the steel and concrete will be obtained.
 Pile driving equipment shall be in accordance with Art. 5.02 of the Standard Specifications.
 Piles shall be driven with such accuracy that the ends of the piles to be embedded in concrete are within 3 inches of the locations shown on the Plans.
 Joint Filler shall be incidental to Substructure Concrete and will not be paid for separately.

GRAPHIC SCALE
 0 1 2
 FEET

NOTE
 Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

NOT AS-BUILT, BEST AVAILABLE INFO.



REVISIONS		
No.	Description	By Date
(A)	Bridge Seat Lowered 0.07ft. Miscellaneous checking revisions	CD/TA 3/18/22

Work this Sheet with Sheets 5 & 6

CITY OF ANN ARBOR
 BRIDGE CARRYING NICHOLS STREET OVER THE CONRAIL RAILROAD IN ANN ARBOR

ABUTMENT "A" DETAILS

DESIGNED BY G.J. McLAVY & SONS, INC. CONSULTING ENGINEERS
 APPROVED BY [Signature] REGISTERED PROFESSIONAL ENGINEER
 APPROVED BY [Signature]

DRAWN BY [Signature] 10/14/21
 CHECKED BY [Signature] 3/26/22
 SHEET NO. 6 OF 22
 R1 of 81-1-19

92 OF 167 80023 - BR6

X:\Projects\2021\2141\736300_AA - EMCD Bridge\01_Constr\Docs\CAD\EMCD_rem_003

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE
 EXISTING ABUTMENT A DETAILS
 REMOVAL

SCALE NONE 0 1 INCH

DRAWING NO. 2021-008-BR11
 SHEET NO. 74 OF 155

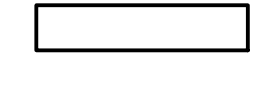
APPROVED BY [Signature] CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734


NOTES:

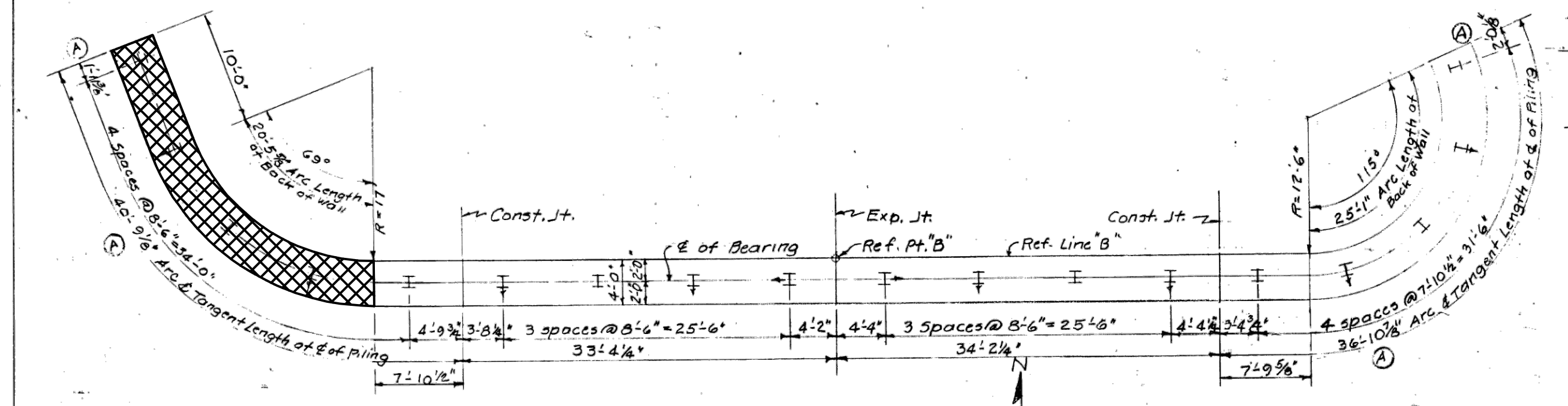
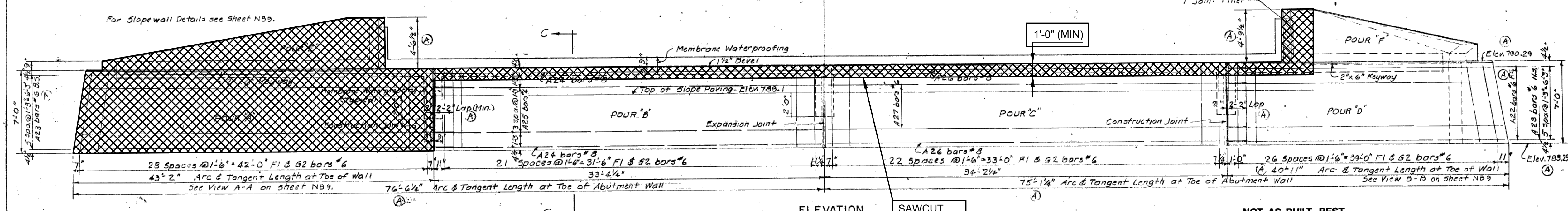
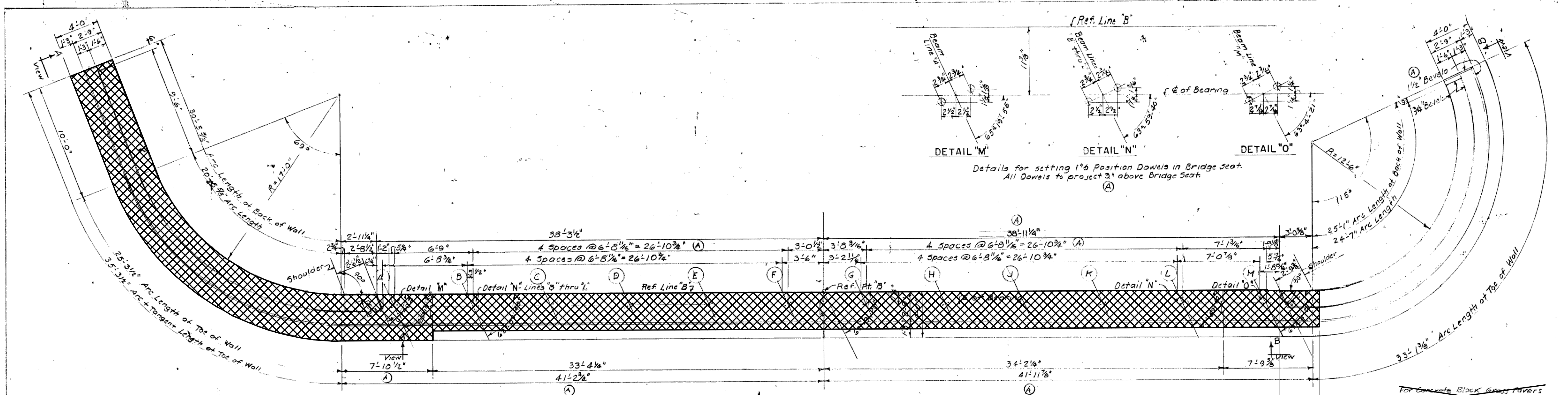
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PLAN ELEVATIONS REFER TO NAVD88 DATUM. ELEVATION EQUATION: PROP ELEV. = EXIST. PLAN ELEV. -0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

 PROPOSED WORK

 DENOTES REMOVAL PORTIONS



BILL OF 12" STEEL PILES AT 53 LBS. 55 TON CAPACITY-ABUTMENT "B"

PILING LEGEND	Number Required	Est. Length - Lin. Ft. - Furnished and Driven		Splices
		Each	Total	
Vertical Pile	1	22	192	5
Batter Pile - Perp. to E of Bearing	8	25	200	5
Batter Pile - Parallel with E of Bearing	2	25	50	1
Totals		442	442	11

For Splice Details and Piling Notes see Sheet NB9

MISCELLANEOUS QUANTITIES

Membrane Waterproofing	220 Sq. Ft.
Concrete Slope Paving - 1" Min. Thickness	350 Sq. Yds.
Headers - Slope Paving & Grass Pavers	274 Lin. Ft.
Low Temperature Protection - Subst. Concrete 126 Cu. Yds.	
3" Thick Concrete Black Grass Pavers	270 Sq. Yds.

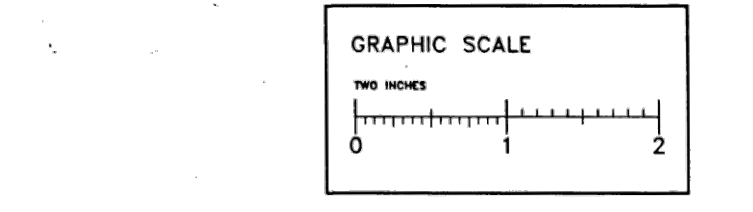
INCIDENTAL QUANTITIES

1/2" Joint Filler	113 Sq. Ft.
1" Joint Filler	57 Sq. Ft.

SUBSTRUCTURE CONCRETE ABUTMENT "B"

POUR	LOCATION	CU. YDS.
A	Wall	25.7
B	Wall	29.2
C	Wall	29.9
D	Wall	32.3
E	Sloped Wall	5.3
F	Sloped Wall	4.6
Total		137.0

Digital Status
Scanned On: 7-10-05
By: DCK



NOTE
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

CITY OF ANN ARBOR
BRIDGE CARRYING NICHOLS STREET OVER THE CONRAIL RAILROAD IN ANN ARBOR

ABUTMENT "B" DETAILS

DESIGNED BY GJM LRAVY & SONS, INC. CONSULTING ENGINEERS
APPROVED BY: [Signature] REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: G.J.M. 10-21-01
CHECKED BY: M.ROBINSON 3/23/02
SHEET NB8 OF 22

APPROVED BY: [Signature] 8-12-02

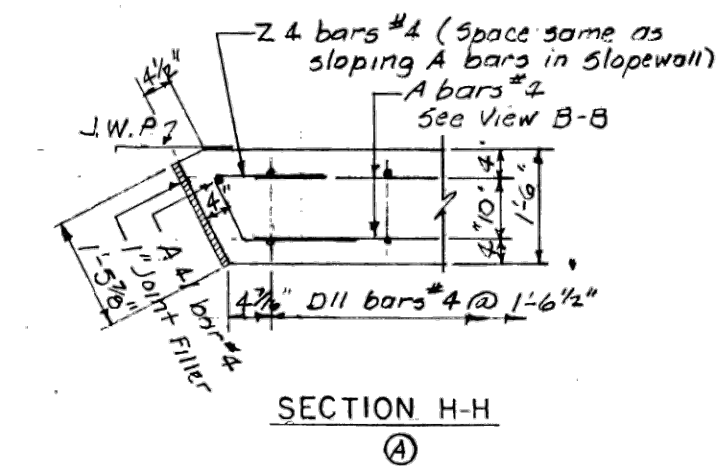
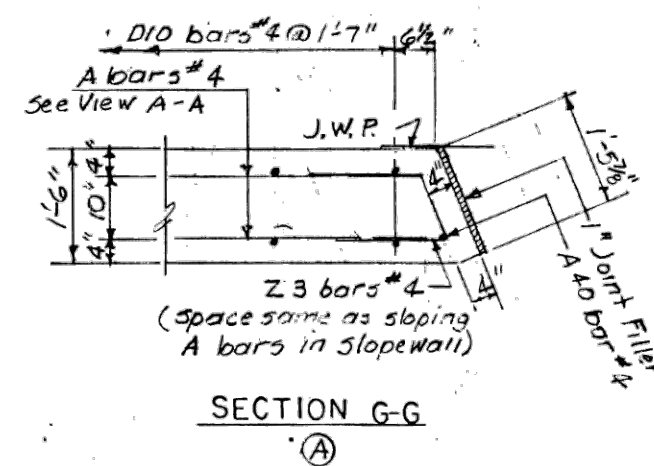
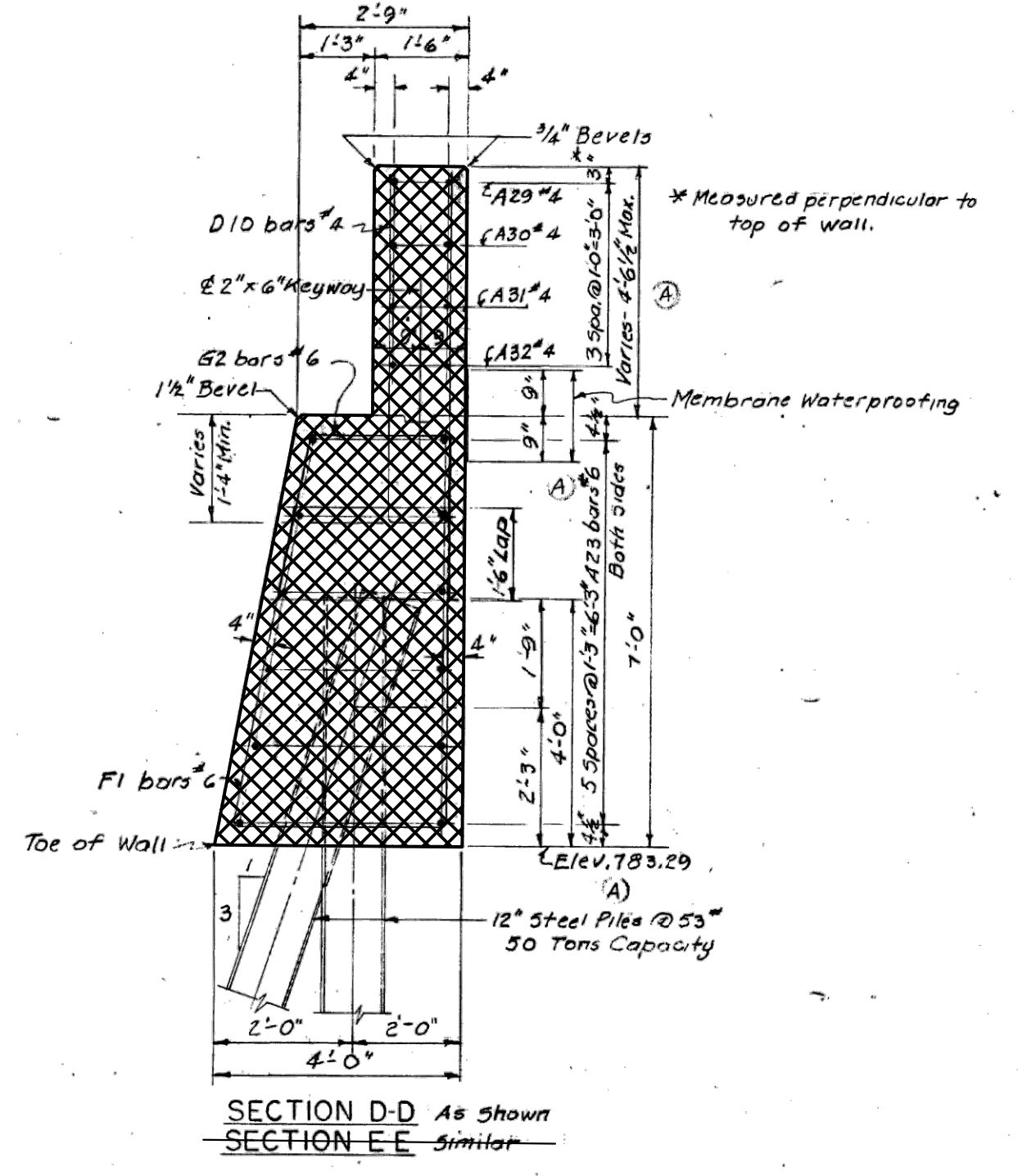
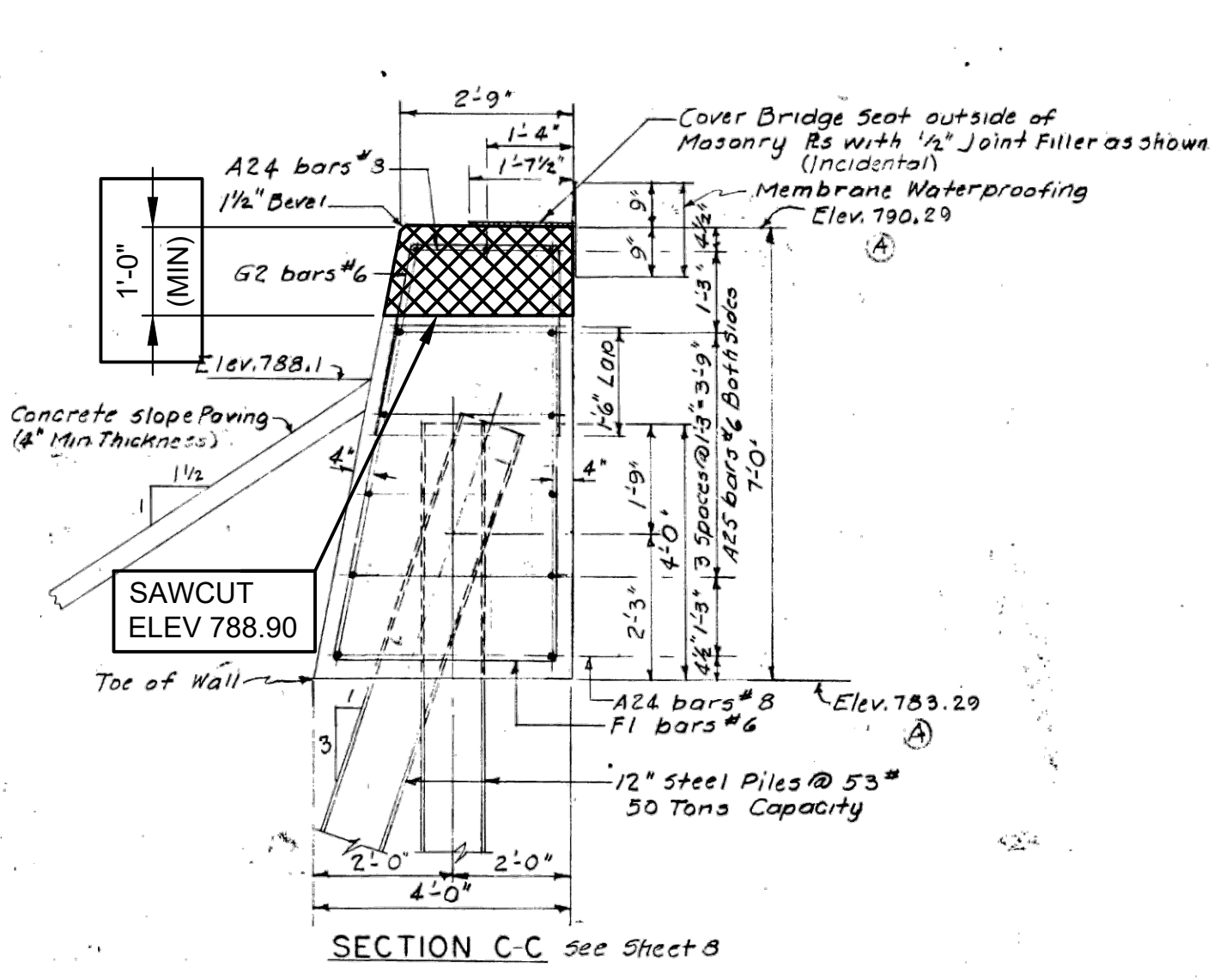
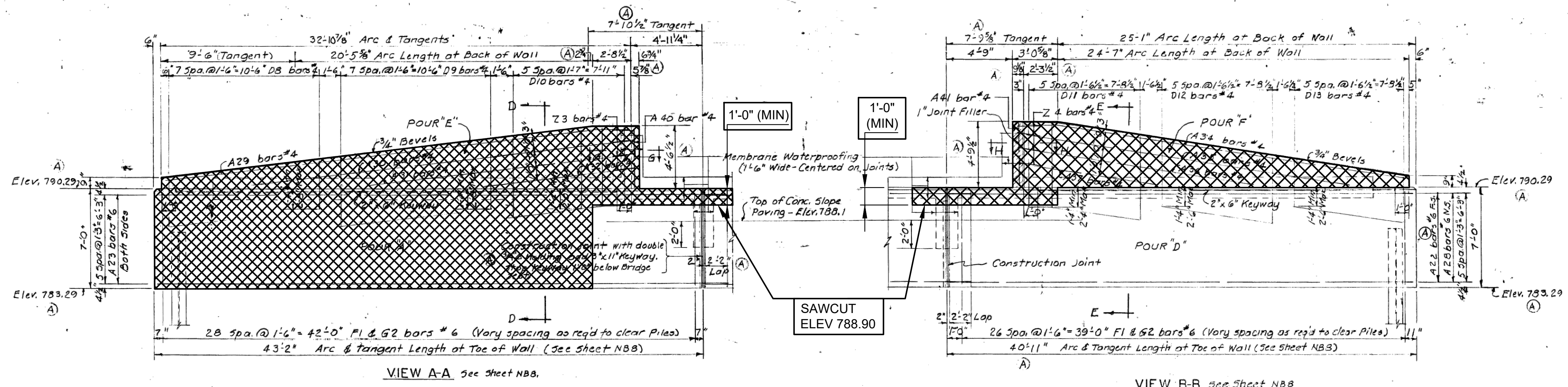
94 OF 167
80023 - BR8

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)		DLZ		PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
				SCALE NONE 0 INCH 1	
				DRAWING NO. 2021-008-BR12	
				SHEET NO. 75 OF 155	
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH	

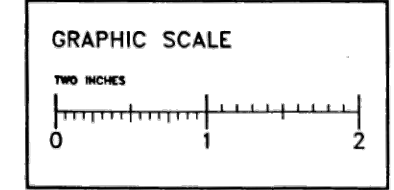
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

NOTES:
 REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".
 PLAN ELEVATIONS REFER TO NAVD88 DATUM. ELEVATION EQUATION: PROP ELEV. = EXIST. PLAN ELEV. -0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.
 [Symbol: Solid rectangle] PROPOSED WORK
 [Symbol: Cross-hatched rectangle] DENOTES REMOVAL PORTIONS



NOTE
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NOT AS-BUILT, BEST AVAILABLE INFO.

Work this Sheet with Sheet NB9 & NB10

CITY OF ANN ARBOR
 BRIDGE CARRYING NICHOLS STREET OVER THE CONRAIL RAILROAD IN ANN ARBOR

ABUTMENT "B" DETAILS

DESIGNED BY G.J.McLRAVY & SONS, INC. CONSULTING ENGINEERS
 APPROVED BY [Signature] REGISTERED PROFESSIONAL ENGINEER
 APPROVED BY [Signature]

DRAWN BY G.J.M. 10-23-81
 CHECKED BY M.ROBINSON 4/1/82
 SHEET NB9 OF 22

R1 of 81-1-19

95 OF 167 80023 - BR9

REVISIONS			
No.	Description	By	Date
(A)	Bridge seat lowered 0.07 Ft. and miscellaneous checking revisions. Sections G-G and H-H added.	GJM	10-20-81

Digital Status
 Scanned On: 7-19-05
 By: D.G.K.

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DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE
 EXISTING ABUTMENT B DETAILS
 REMOVAL

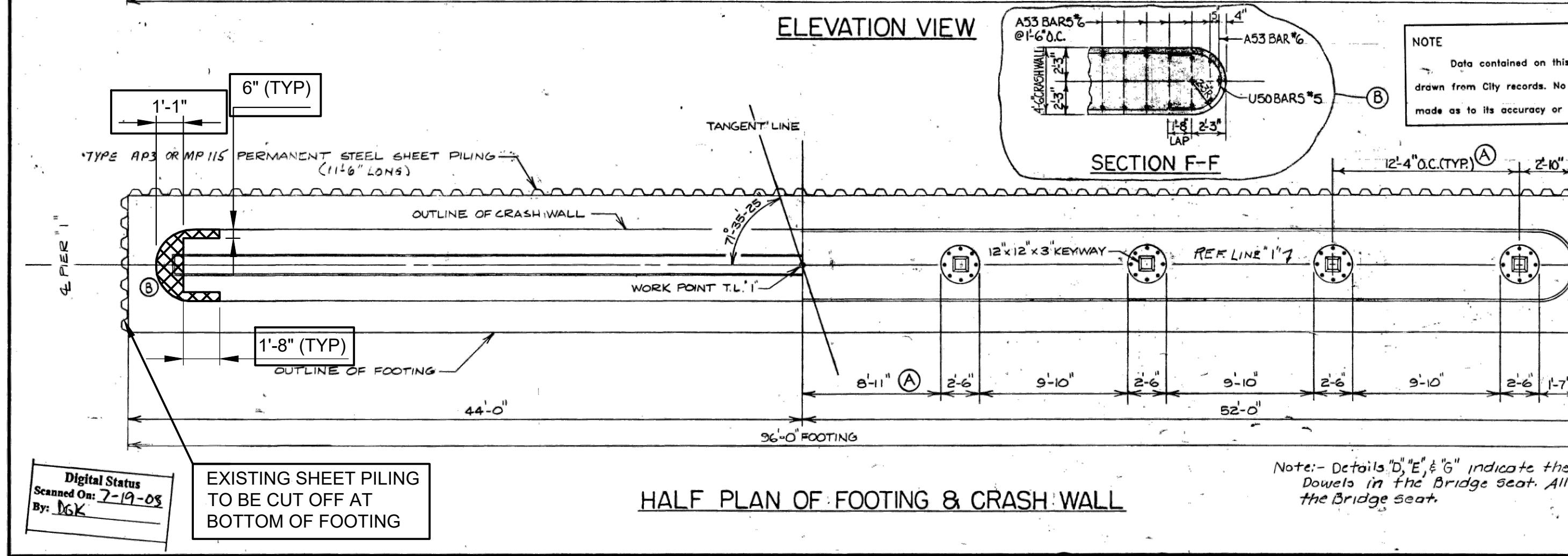
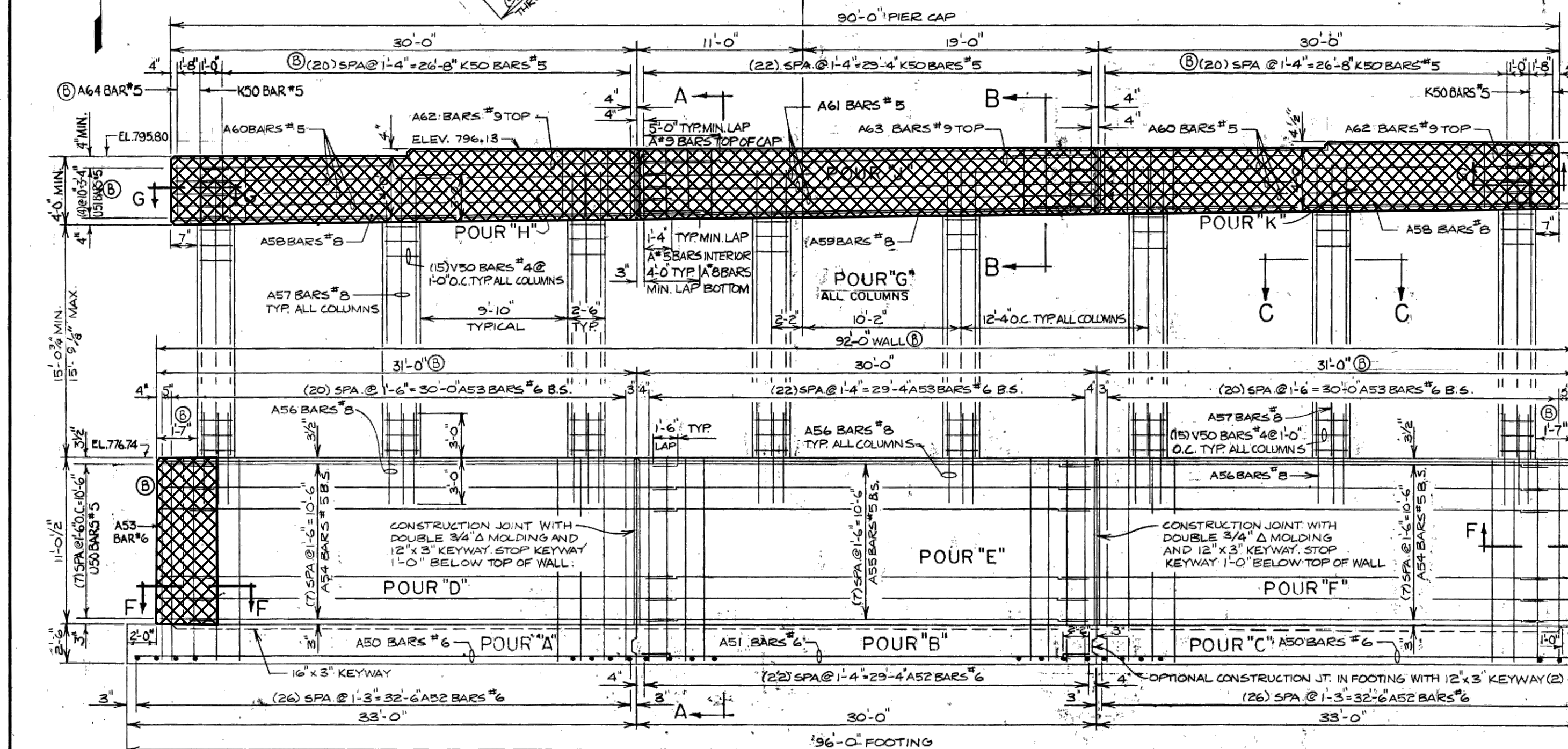
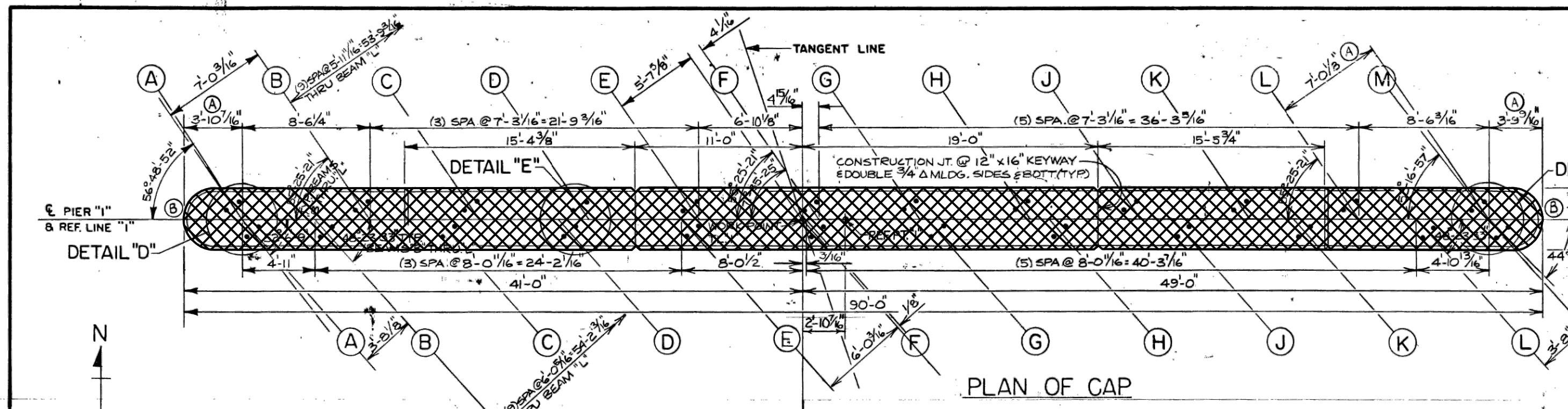
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DRAWING NO. 2021-008-BR13

SHEET NO. 76 OF 155

APPROVED BY

CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



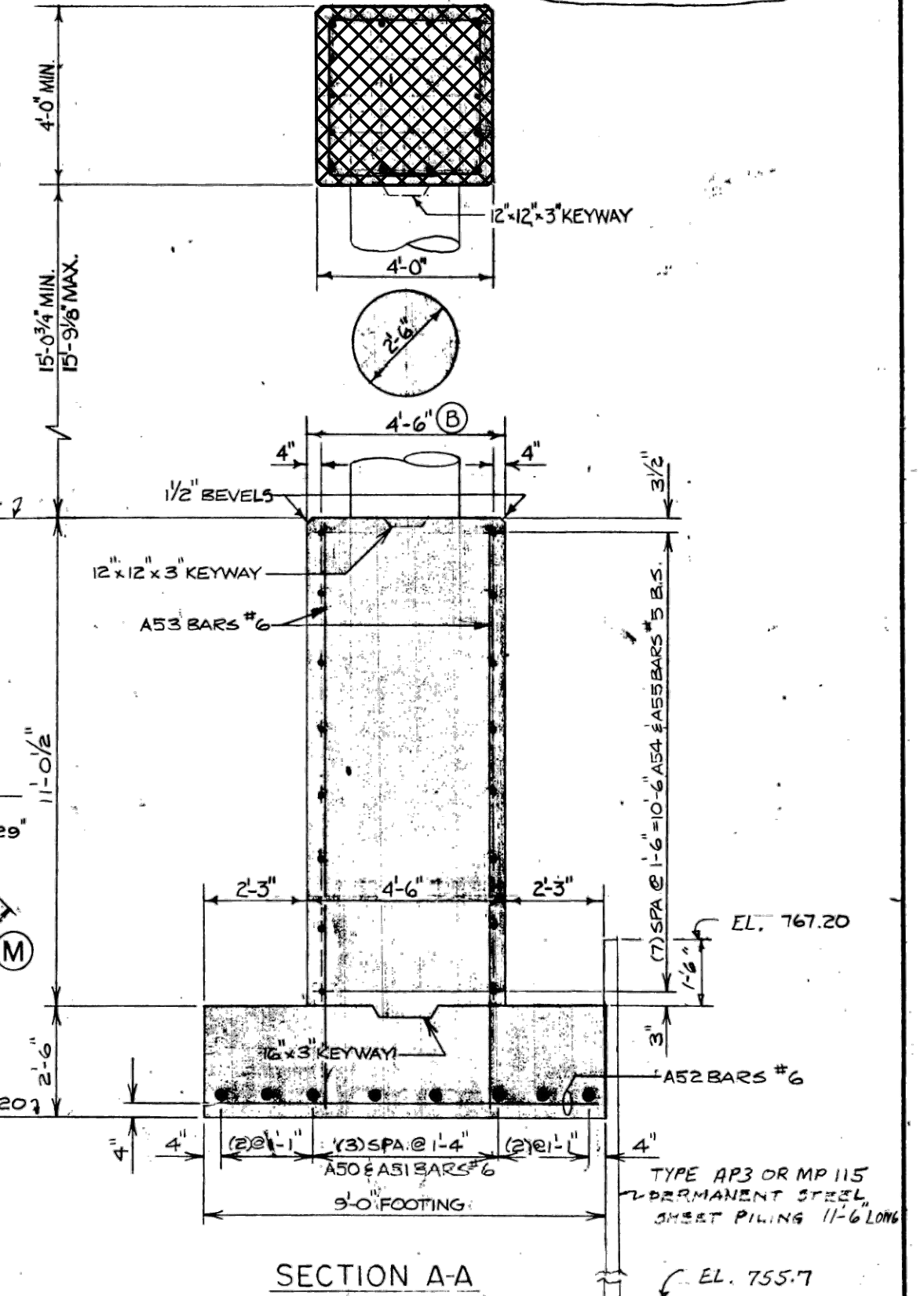
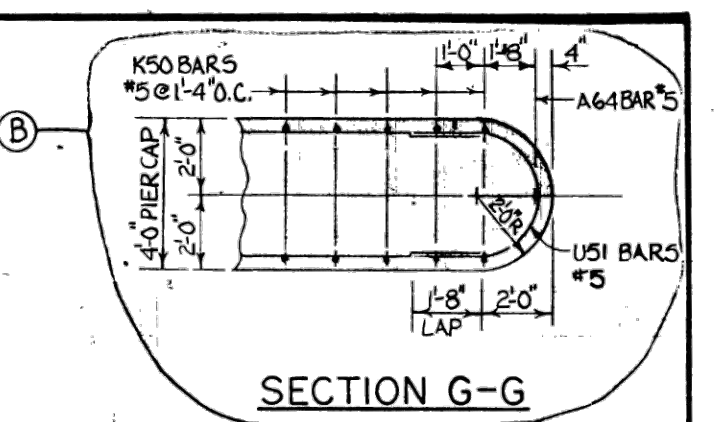
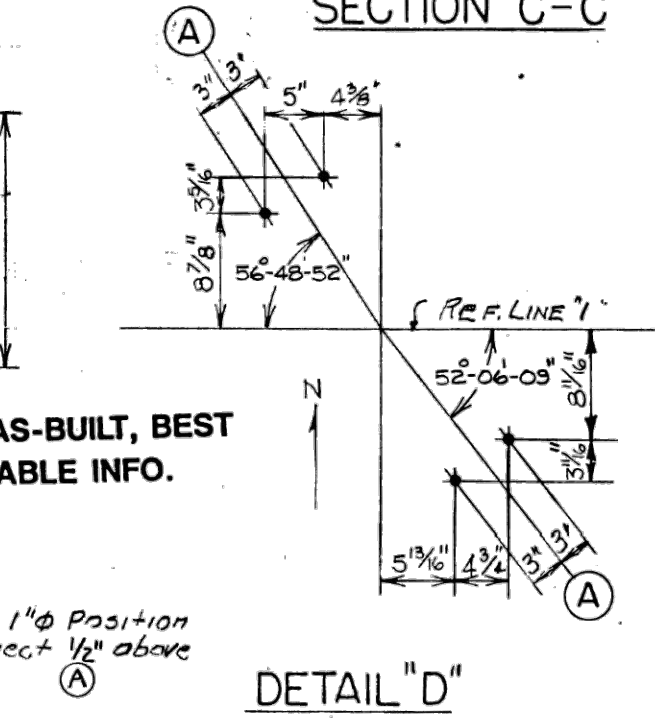
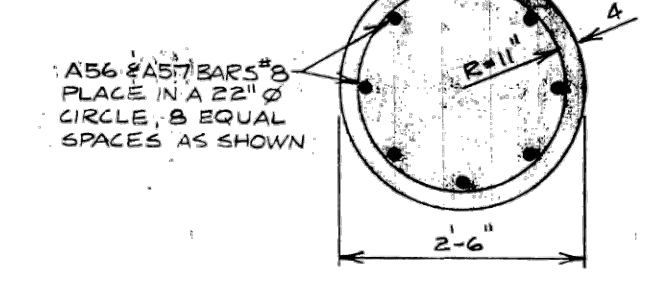
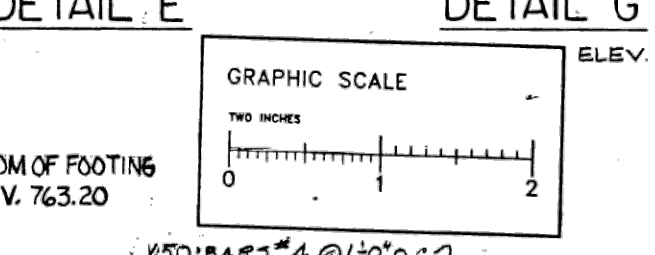
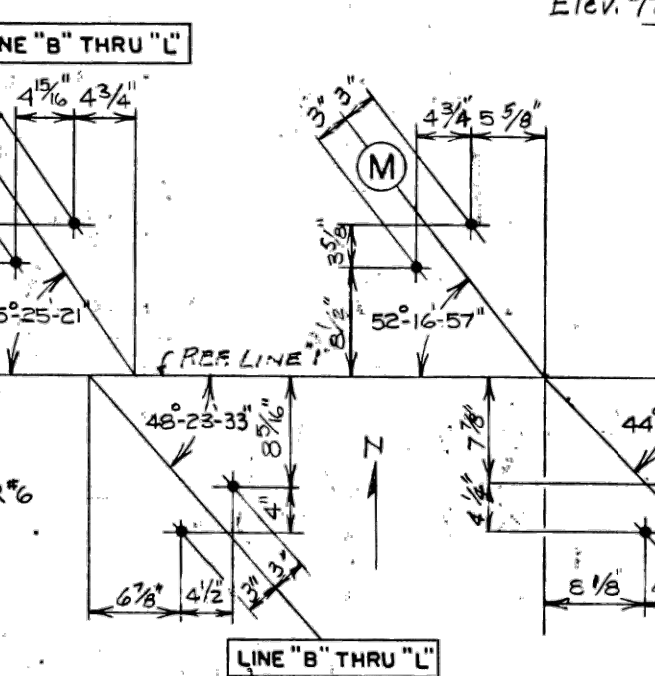
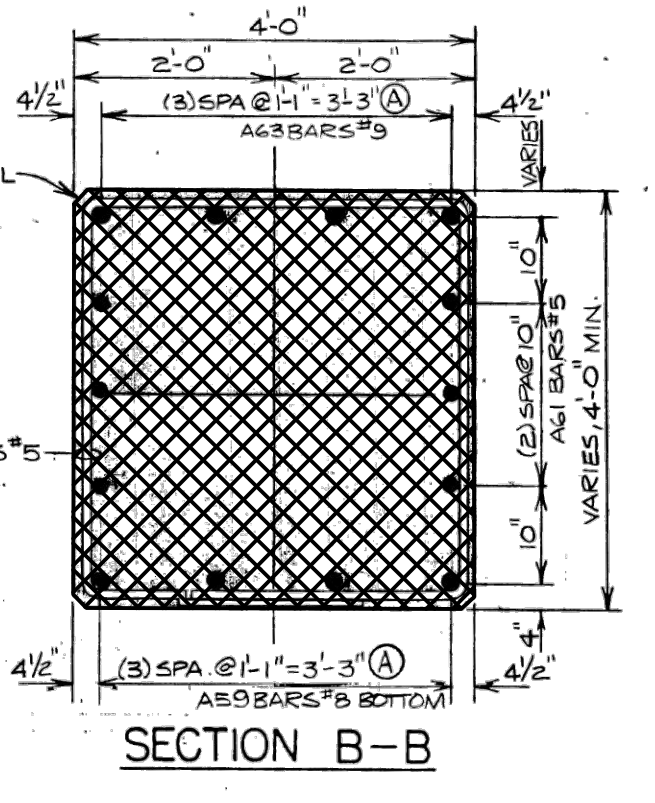
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Scanned On: 7-19-08
By: LCK

EXISTING SHEET PILING
TO BE CUT OFF AT
BOTTOM OF FOOTING

HALF PLAN OF FOOTING & CRASH WALL

Note: Details "D", "E", & "G" indicate the locations of 1"Ø Dowels in the Bridge seat. All Dowels to project 1/2" above the Bridge seat.

NOT AS-BUILT, BEST AVAILABLE INFO.



POUR	LOCATION	CU. YDS.
A	Footing	27.5
B	Footing	25.0
C	Footing	27.5
D	Wall	57.0
E	Wall	55.2
F	Wall	57.0
G	Columns	22.2
H	Cap	18.0
J	Cap	18.5
K	Cap	18.0
Total		325.9

MISCELLANEOUS QUANTITIES	
Permanently Steel Sheet Piling	131 sq. Ft.
Protective Sealant Coating for Concrete	360 sq. Ft.
Low Temperature Protection Substructure Concrete	316.7 cu. Yds.

REVISIONS		
NO.	DESCRIPTION	BY DATE
1	CRASH WALL & PIER CAP ENDS ROUNDED	MER 4/8/02
2	CHECKING REVISIONS	6MC 7/5/02

CITY OF ANN ARBOR
BRIDGE CARRYING NICHOLS STREET OVER
THE CONRAIL RAILROAD IN ANN ARBOR

PIER "I" DETAILS

DESIGNED BY G.J. McLRAY & SONS, INC. CONSULTING ENGINEERS
APPROVED BY _____ REGISTERED PROFESSIONAL ENGINEER
APPROVED BY _____

DRAWN BY GMC 4/81
CHECKED BY M. ROBINSON 3/26/02
SHEET NB01 OF 22
RI OF 81-1-19

NOTES:
REMOVE EXISTING PIER CAPS AND PORTIONS OF THE CRASH WALL. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING VERTICAL REINFORCEMENT IN PIER COLUMNS AND EMBED IN PROPOSED PIER CAP. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING HORIZONTAL REINFORCEMENT IN THE CRASH WALL. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".
PLAN ELEVATIONS REFER TO NAVD88 DATUM.
ELEVATION EQUATION:
PROP ELEV. = EXIST. PLAN ELEV. -0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

□ PROPOSED WORK
▨ DENOTES REMOVAL PORTIONS

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3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

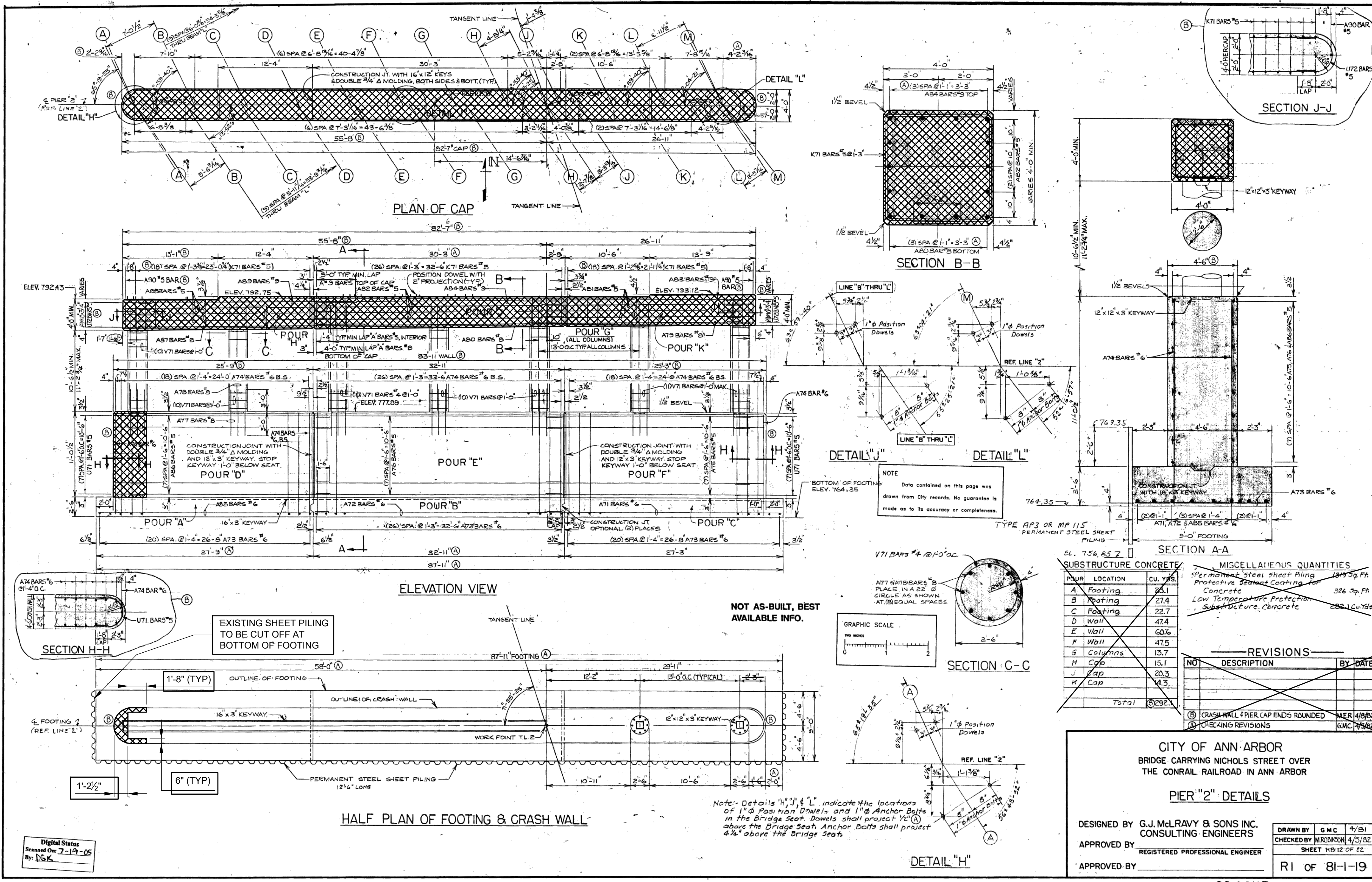
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE
EXISTING PIER 1 DETAILS
REMOVAL

SCALE NONE 0 INCH 1
DRAWING NO. 2021-008-BR14
SHEET NO. 77 OF 155

APPROVED BY _____
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



NOTES:
 REMOVE EXISTING PIER CAPS AND PORTIONS OF THE CRASH WALL. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING VERTICAL REINFORCEMENT IN PIER COLUMNS AND EMBED IN PROPOSED PIER CAP. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING HORIZONTAL REINFORCEMENT IN THE CRASH WALL. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)".
 PLAN ELEVATIONS REFER TO NAVD88 DATUM.
 ELEVATION EQUATION:
 PROP ELEV. = EXIST. PLAN ELEV. -0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.
 [Symbol] PROPOSED WORK
 [Symbol] DENOTES REMOVAL PORTIONS

SUBSTRUCTURE CONCRETE		MISCELLANEOUS QUANTITIES	
POUR	LOCATION	CU. YDS.	
A	Footing	23.1	Permanent Steel Sheet Piling 137.59 Ft
B	Footing	27.4	Protective Sealant Coating for Concrete 326 Sq. Ft
C	Footing	22.7	Low Temperature Protection Substructure Concrete 282.1 Cu Yds
D	Wall	47.4	
E	Wall	60.6	
F	Wall	47.5	
G	Columns	13.7	
H	Cap	15.1	
J	Cap	20.3	
K	Cap	14.3	
Total		292.1	

REVISIONS		
NO	DESCRIPTION	BY DATE
1	CRASH WALL & PIER CAP ENDS ROUNDED	NER 4/18/22
2	CHECKING REVISIONS	GMC 7/5/22

CITY OF ANN ARBOR
 BRIDGE CARRYING NICHOLS STREET OVER
 THE CONRAIL RAILROAD IN ANN ARBOR
PIER "2" DETAILS
 DESIGNED BY G.J. McRAVY & SONS INC.
 CONSULTING ENGINEERS
 APPROVED BY [Signature]
 REGISTERED PROFESSIONAL ENGINEER
 APPROVED BY [Signature]

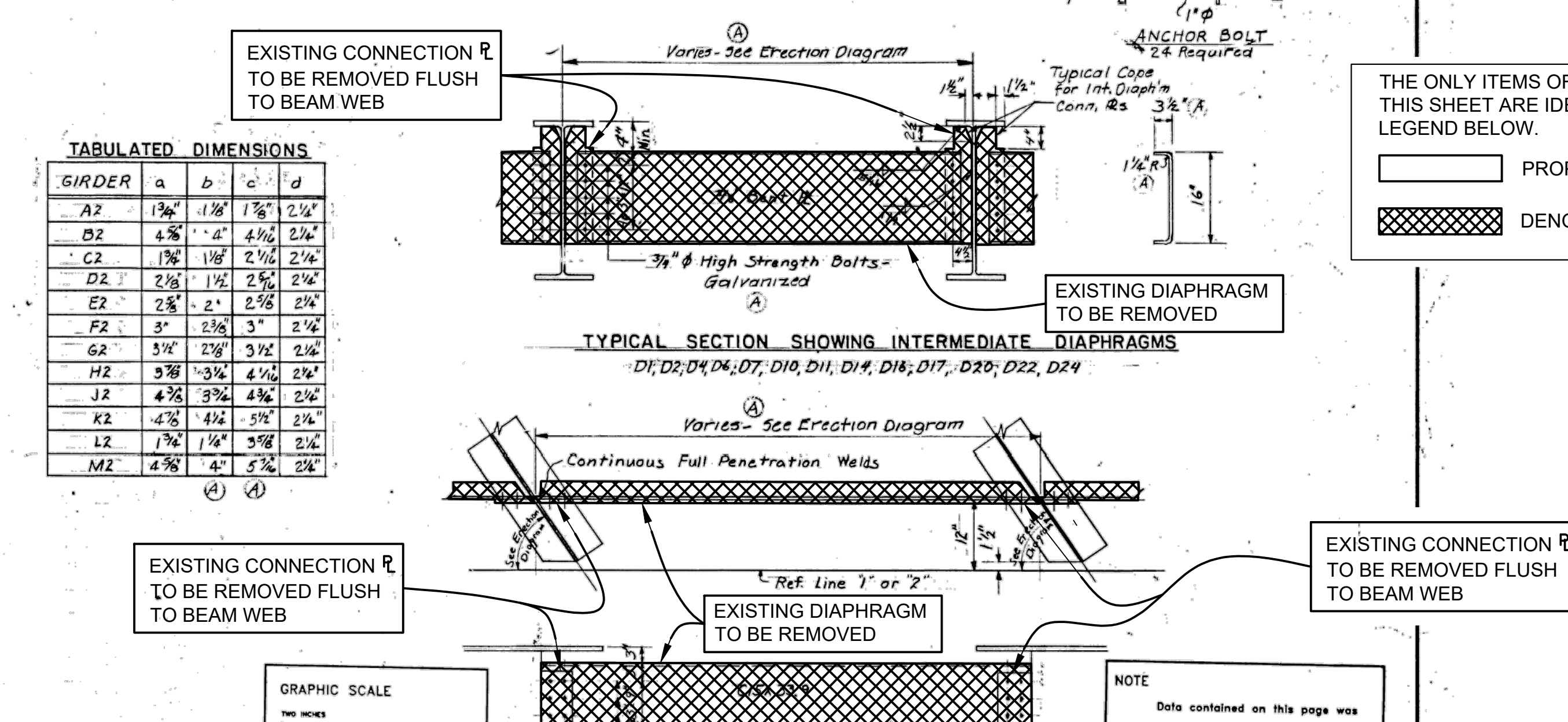
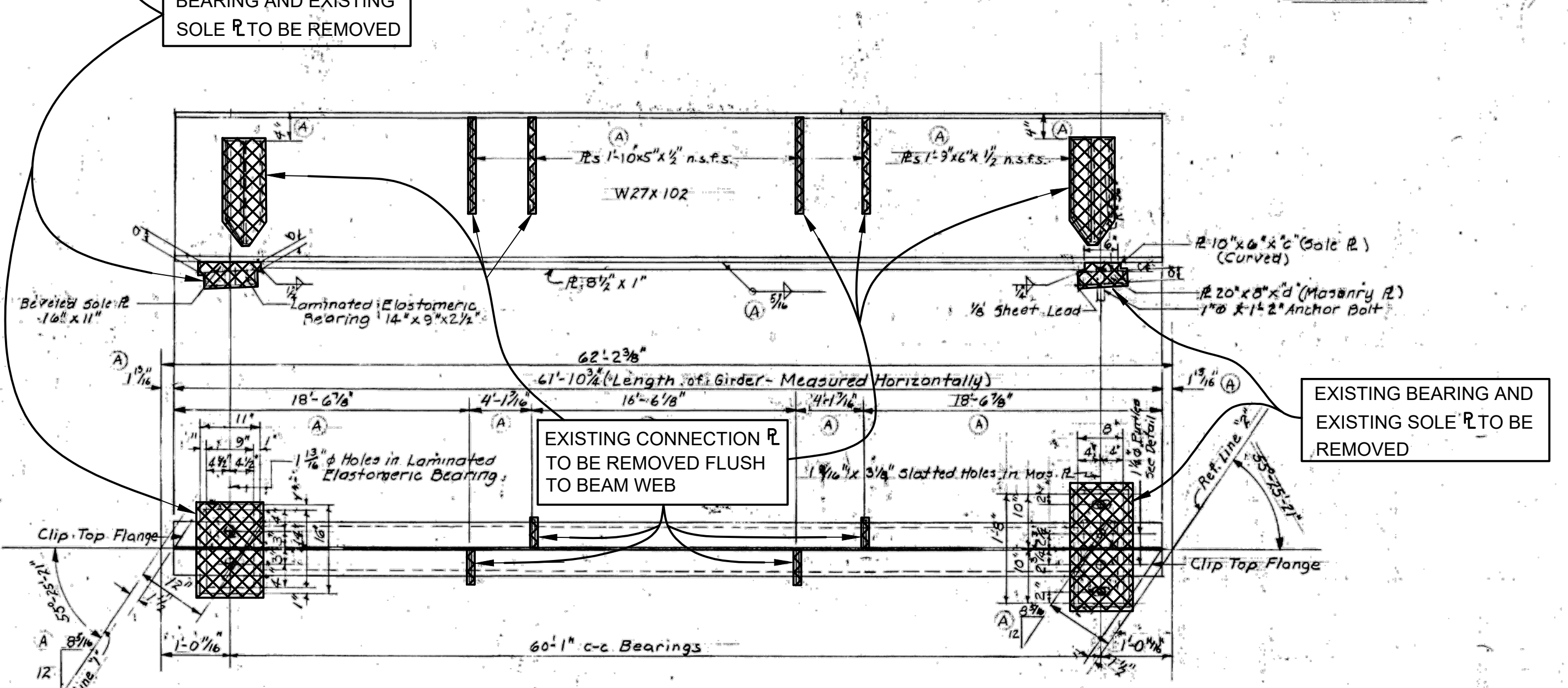
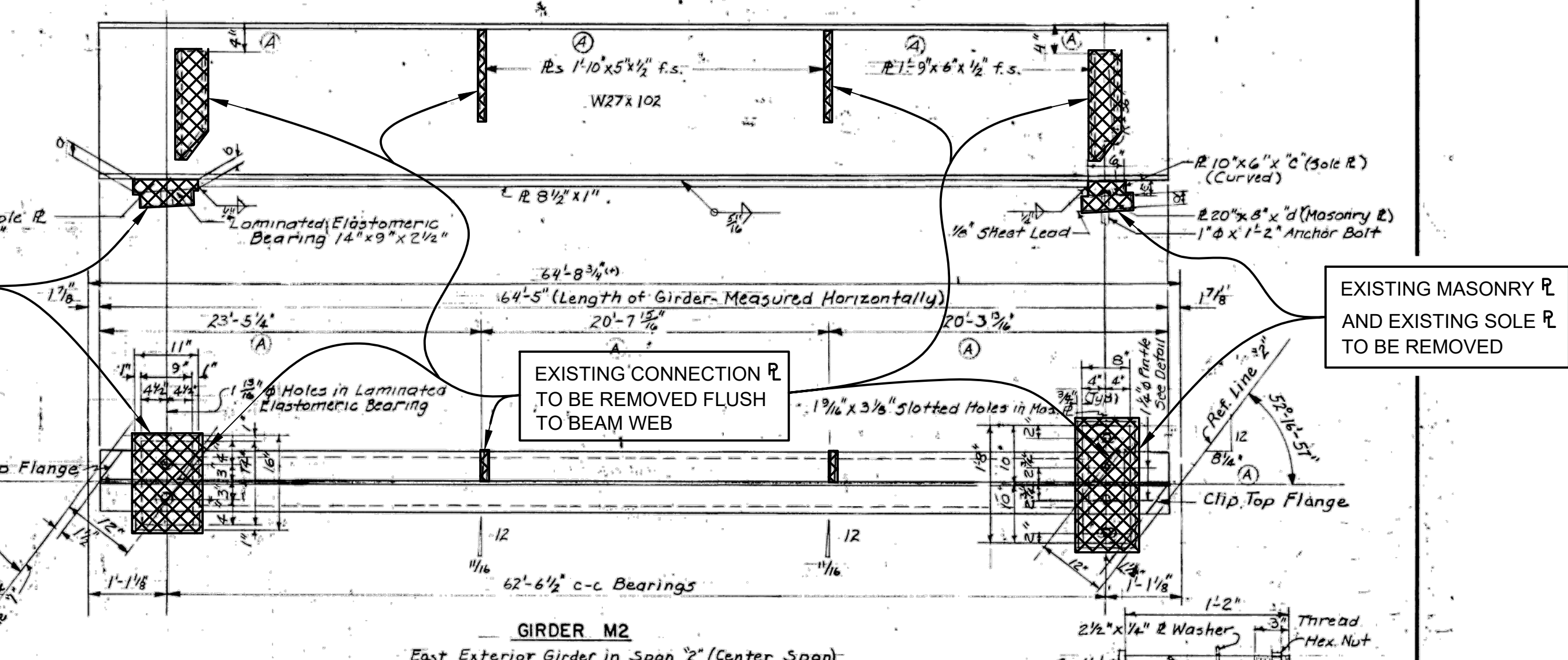
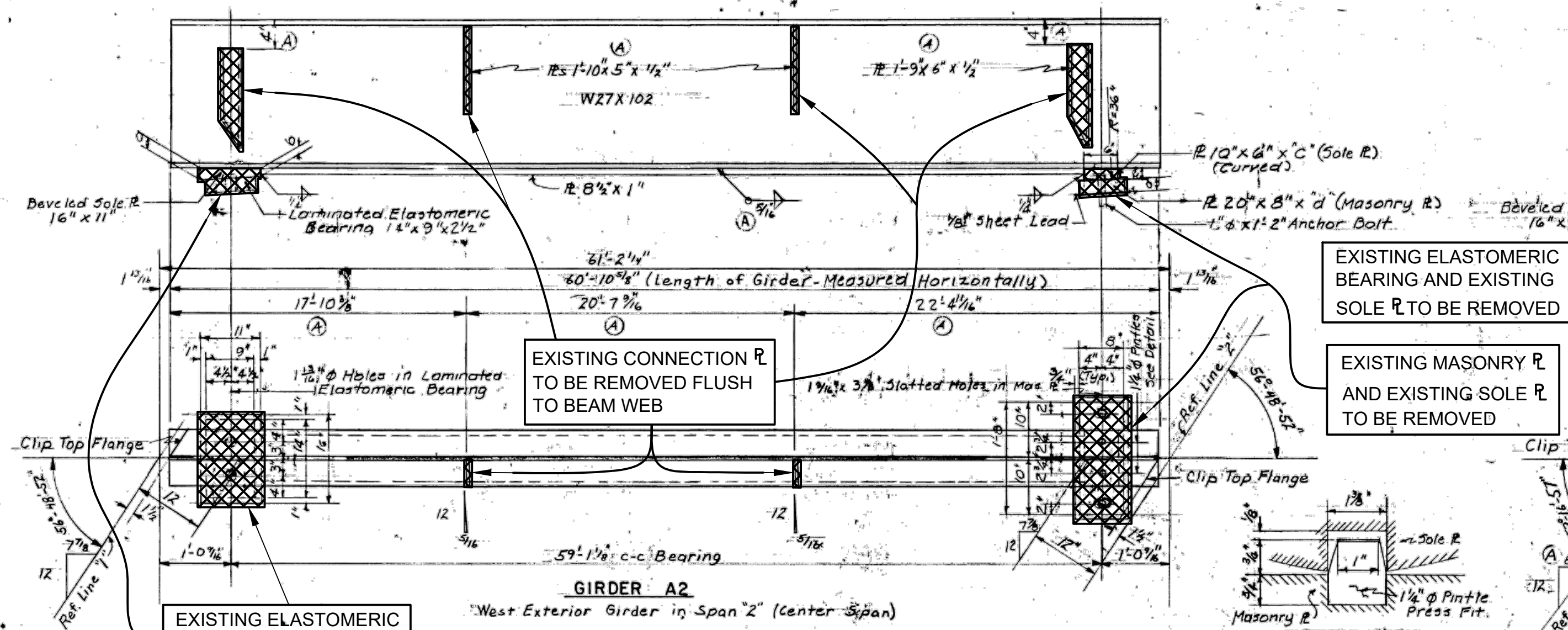
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 Scanned On: 7-19-05
 By: [Signature]

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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	SCALE NONE 0 INCH 1
EXISTING PIER 2 DETAILS	DRAWING NO. 2021-008-BR15
REMOVAL	SHEET NO. 78 OF 155
APPROVED BY [Signature]	

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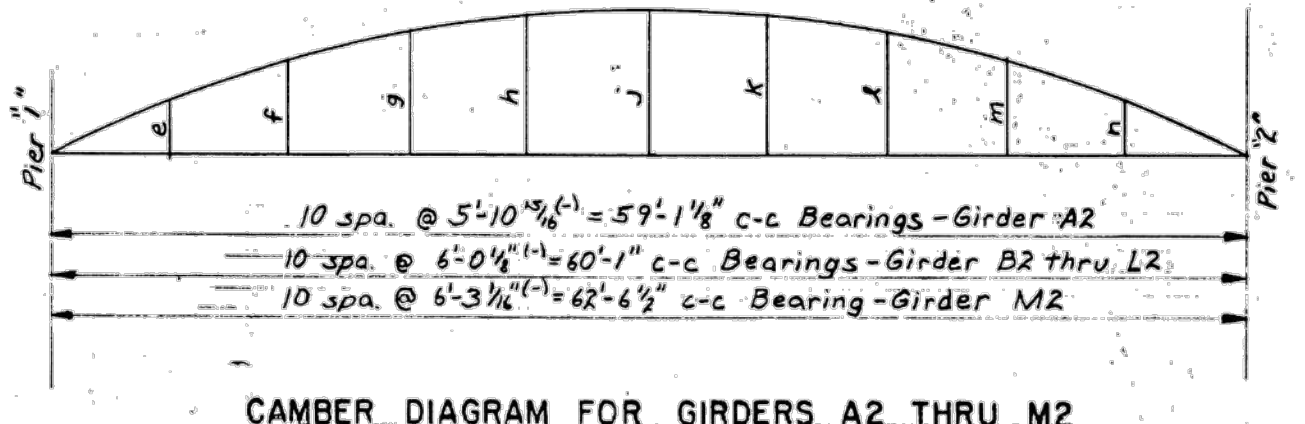


TABULATED DIMENSIONS

GIRDER	a	b	c	d
A2	1 3/8"	1 1/8"	1 3/8"	2 1/4"
B2	4 5/8"	1" a	4 1/2"	2 1/4"
C2	1 7/8"	1 1/8"	2 1/4"	2 1/4"
D2	2 1/8"	1 1/2"	2 3/4"	2 1/4"
E2	2 3/8"	2"	2 3/8"	2 1/4"
F2	3"	2 3/8"	3"	2 1/4"
G2	3 1/4"	2 3/8"	3 1/2"	2 1/4"
H2	3 3/8"	1 3/4"	4 1/4"	2 1/4"
J2	4 1/8"	3 3/4"	4 3/8"	2 1/4"
K2	4 3/8"	4 1/4"	5 1/4"	2 1/4"
L2	1 3/8"	1 1/4"	3 3/8"	2 1/4"
M2	4 3/8"	4"	5 3/8"	2 1/4"

TABULATED DIMENSIONS FOR CAMBER DIAGRAMS

GIRDER	e	f	g	h	j	k	l	m	n
A2	1"	1 3/4"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	3/4"
B2	1"	1 1/4"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	3/4"
C2	1"	1 3/4"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	3/4"
D2	1"	1 3/4"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	3/4"
E2	1 1/4"	1 3/4"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	1 1/4"
F2	1 1/4"	1 3/4"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	1 1/4"
G2	1 1/4"	1 3/4"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	1 3/4"	1 3/4"	1 1/4"
H2	1 1/8"	2 1/4"	2 3/4"	3"	3 3/4"	3"	2 1/4"	2"	1 1/4"
J2	1 1/8"	2 1/4"	2 3/4"	3"	3 3/4"	3"	2 1/4"	2"	1 1/4"
K2	1 1/8"	2 1/4"	2 3/4"	3"	3 3/4"	3"	2 1/4"	2"	1 1/4"
L2	1 3/8"	2 3/4"	3 1/4"	3 3/4"	3 3/4"	3 3/4"	2 3/4"	2 1/4"	1 3/4"
M2	1 3/8"	2 3/4"	3 1/4"	3 3/4"	3 3/4"	3 3/4"	2 3/4"	2 1/4"	1 3/4"



Digital Status
Scanned On: 7-19-05
By: LBS

NOT AS-BUILT, BEST AVAILABLE INFO.

Note: The Intermediate Diaphragm locations shown are suggested locations only.

REVISIONS

No.	Description	By	Date
(A)	Miscellaneous checking revisions	B.J.H.	4-9-82

CITY OF ANN ARBOR
BRIDGE CARRYING NICHOLS STREET OVER THE CONRAIL RAILROAD IN ANN ARBOR

STRUCTURAL STEEL DETAILS
SPAN "2"

DESIGNED BY: G.J. McLAVY & SONS, INC. CONSULTING ENGINEERS
APPROVED BY: REGISTERED ENGINEER

DRAWN BY: G.J.M. 7-30-81
TRACED BY: TLD 8-13-81
CHECKED BY: M.E.R. 4/20/82

SHEET NO. 19 OF 22
R1 OF 81-1-19

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

PROPOSED WORK

DENOTES REMOVAL PORTIONS

NOTE
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

DLZ

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

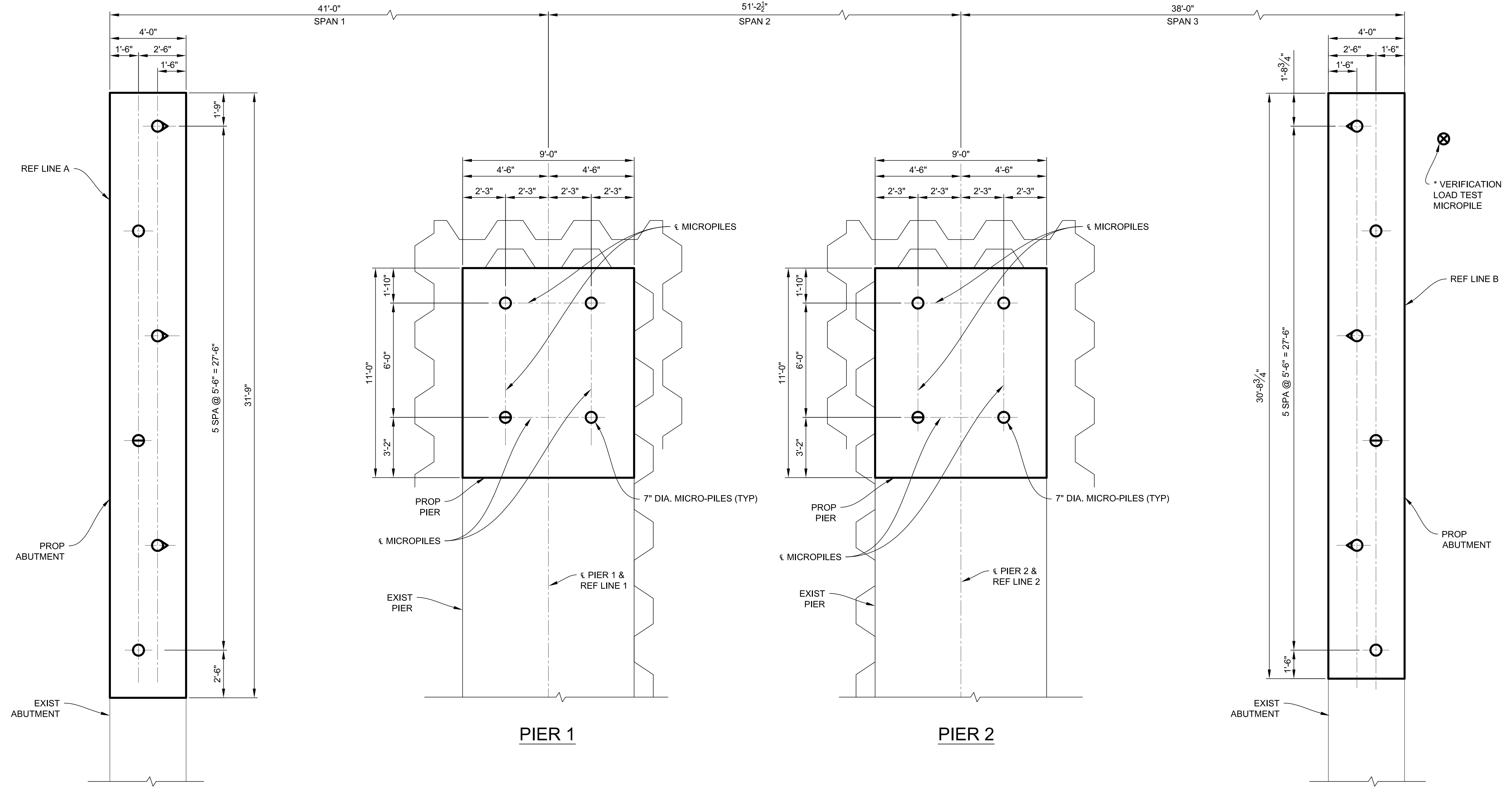
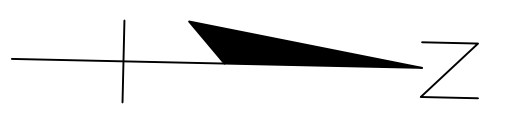
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE
EXISTING STRUCTURAL STEEL DETAILS
REMOVAL

SCALE NONE 0 INCH 1

DRAWING NO. 2021-008-BR16

SHEET NO. 79 OF 155



ESTIMATED QUANTITIES THIS SHEET					
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Micropile, Type B, Furn and Install, LRFD	Ea		20		20
Micropile, Load Test, Proof, LRFD	Ea		4		4
Micropile, Load Test, Verification, LRFD	Ea		1		1
Micropile Mobilization, LRFD (STR 11065)	LSUM		1		1

* LOCATION OF VERIFICATION LOAD TEST MICROPILE SHALL BE NEAR, EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

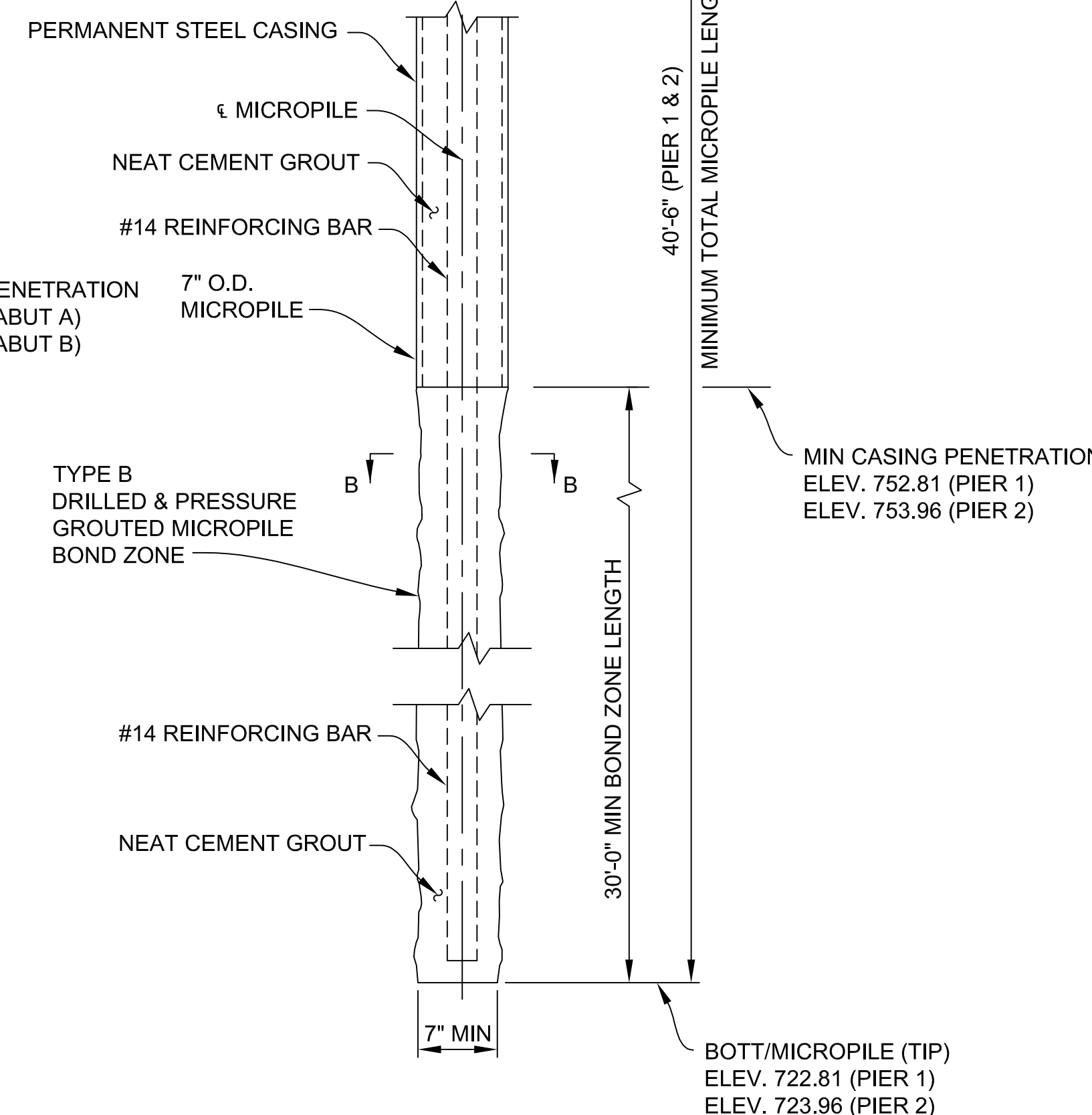
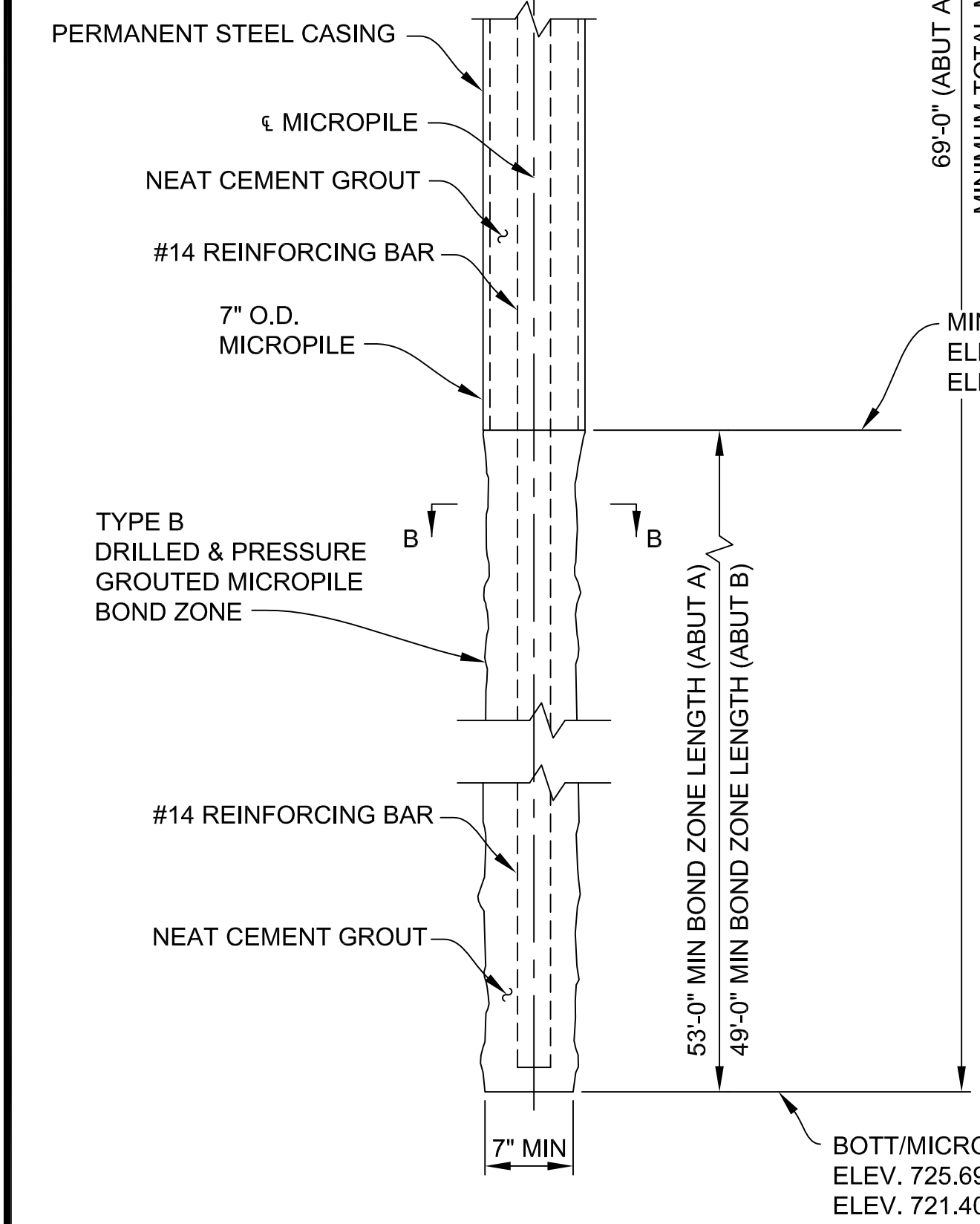
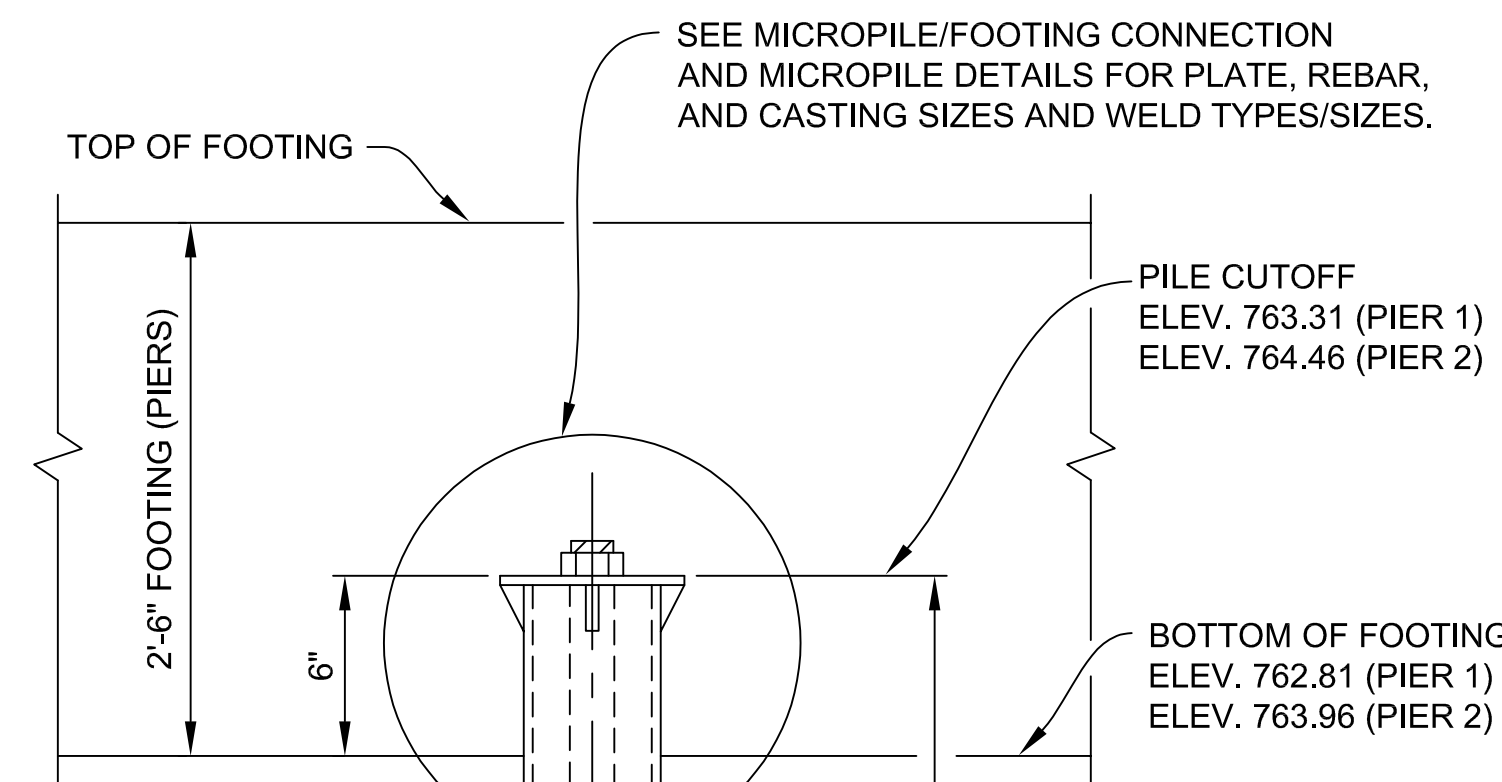
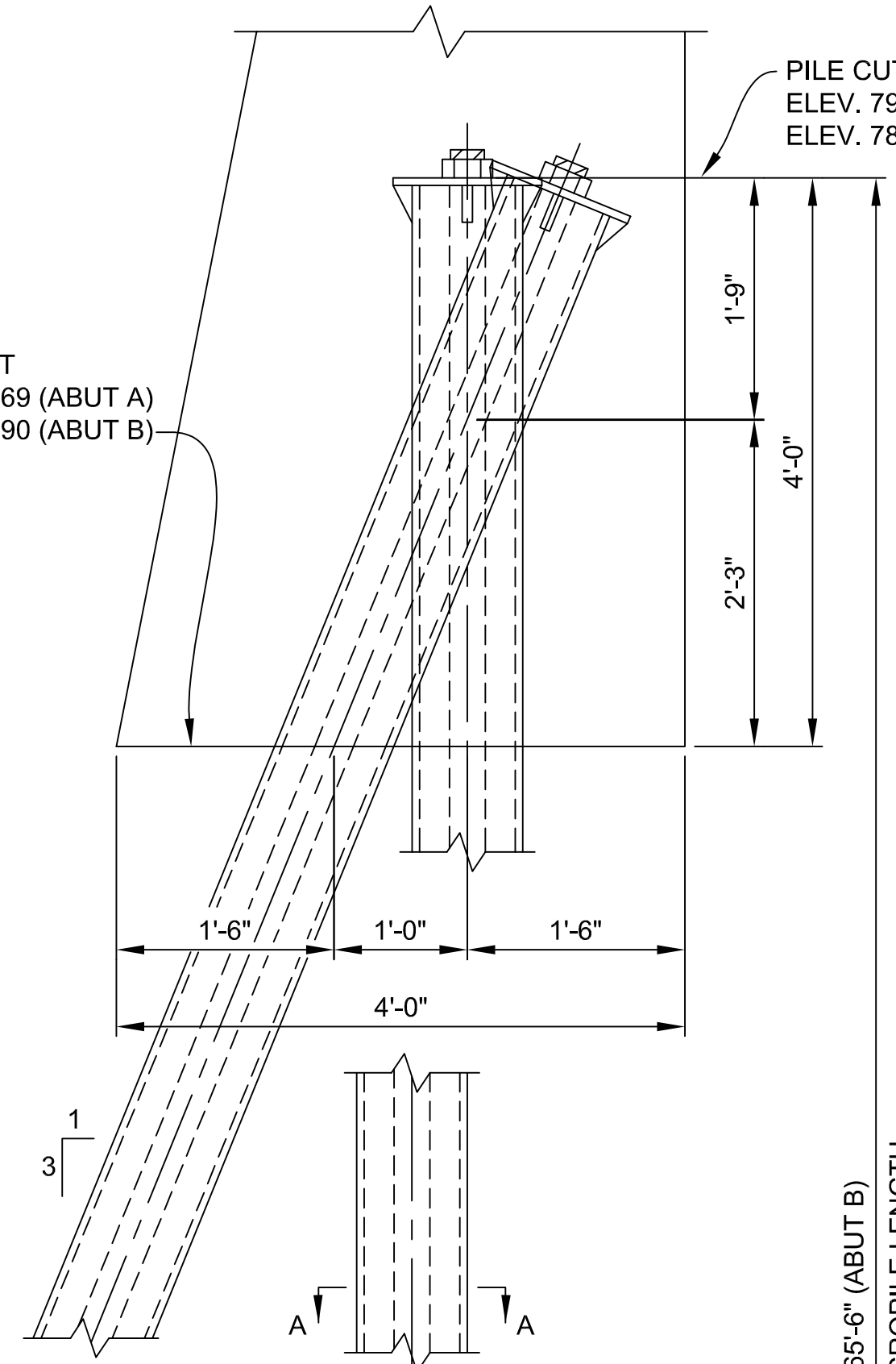
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		PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR							
		EAST MEDICAL CENTER DRIVE							
<table border="1"> <tr> <td>SCALE</td> <td>INCH</td> </tr> <tr> <td>HOR. 3/8"=1'-0"</td> <td>0 1</td> </tr> </table>		SCALE	INCH	HOR. 3/8"=1'-0"	0 1	DRAWING NO.		2021-008-BR17	
		SCALE	INCH						
HOR. 3/8"=1'-0"	0 1								
REV. NO.		DESCRIPTION	DATE	DR. BY	CH. BY				
		ORIGINAL ISSUE	10-6-23	DAF	CLH				
APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734									

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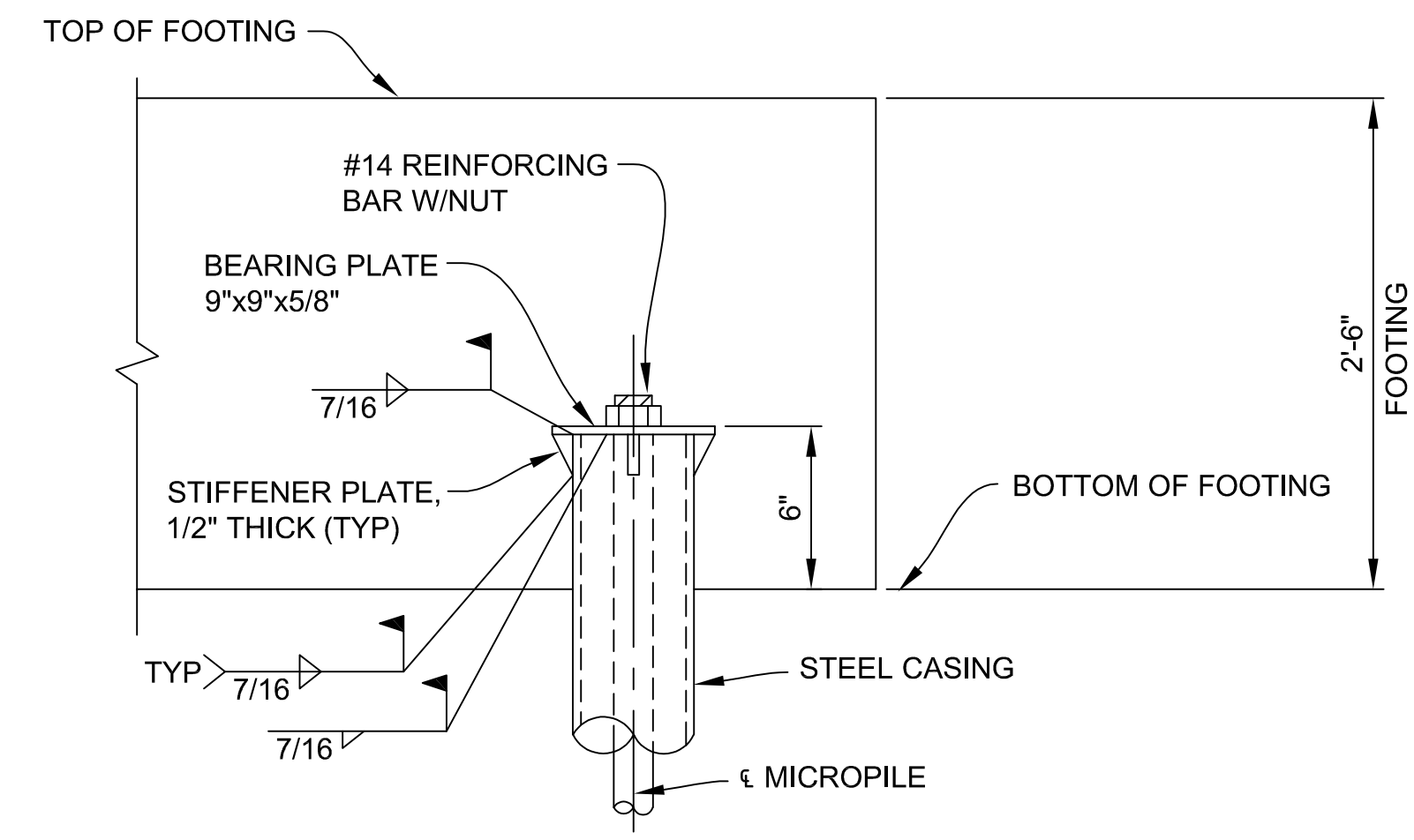
BOTT/ABUT
ELEV. 790.69 (ABUT A)
ELEV. 782.90 (ABUT B)

PILE CUTOFF
ELEV. 794.69 (ABUT A)
ELEV. 786.90 (ABUT B)

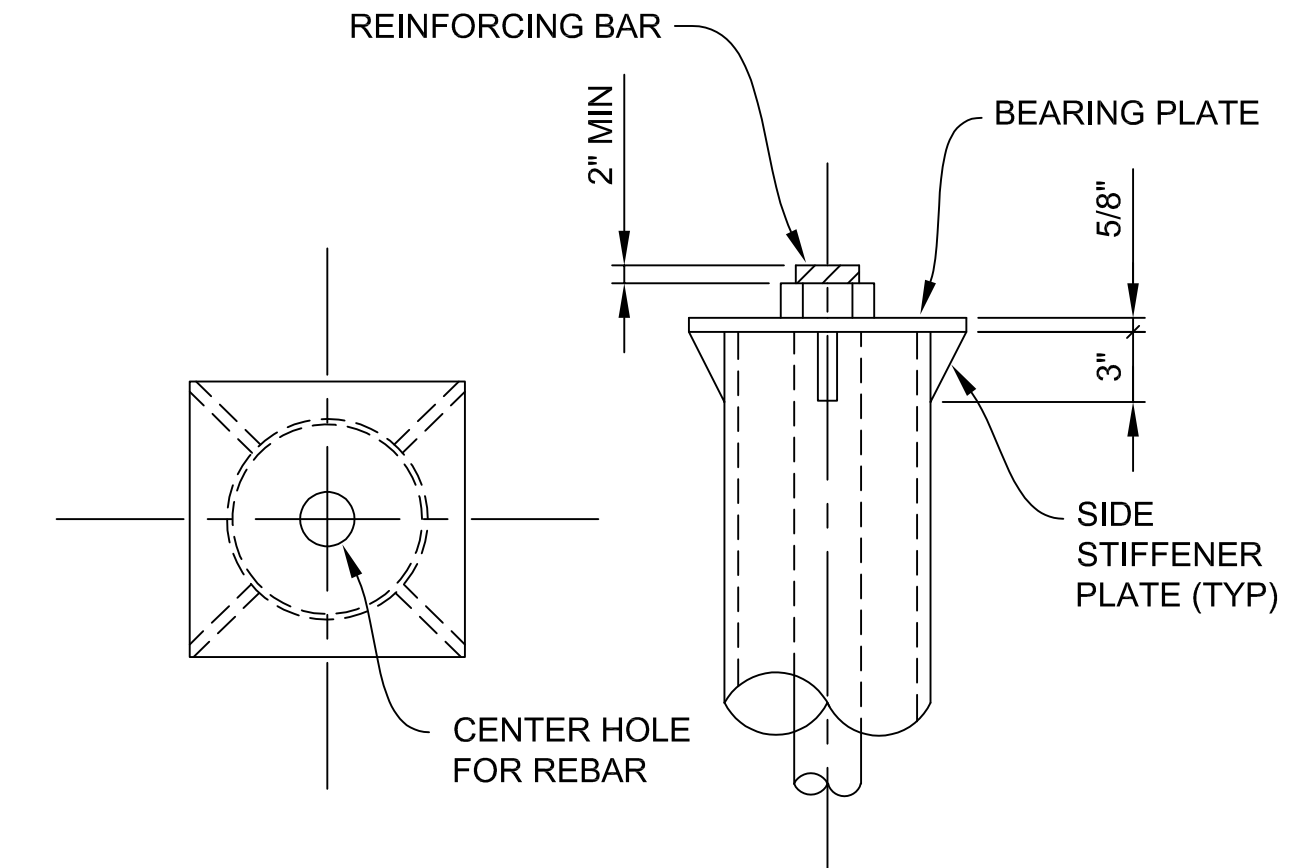


MICROPILE ELEVATION
(ABUTMENTS A & B)

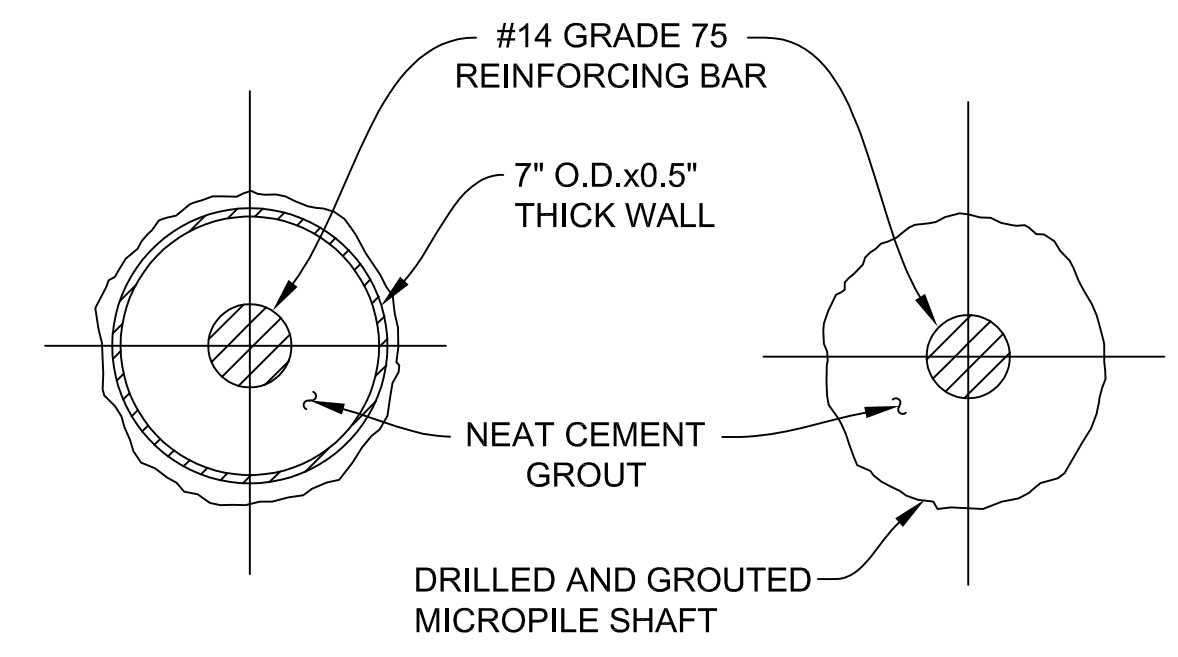
MICROPILE ELEVATION
(PIERS 1 & 2)



MICROPILE/FOOTING CONNECTION DETAIL
(PIER SHOWN)



MICROPILE DETAILS



SECTION A-A **SECTION B-B**

180 KIP (ABUT A), 180 KIP (ABUT B), & 91 KIP (AT PIERS) TYPE B 7" O.D. MICROPILE (SEE MICROPILE ELEVATION)					
LOCATION	PILE TYPE	NUMBER OF PILES	ESTIMATED LENGTH FURNISHED, DRILLED & GROUTED		CUT-OFF ELEV.
			EACH LFT	TOTAL LFT	
ABUT A	VERTICAL	3	69	207	794.69
	BATTERED 3V:1H	3	73	219	794.69
PIER 1	VERTICAL	4	41	164	763.31
PIER 2	VERTICAL	4	41	164	764.46
ABUT B	VERTICAL	3	66	198	786.90
	BATTERED 3V:1H	3	70	210	786.90
TOTAL		20		1162	

NOTES:

- DENOTES BATTERED MICROPILE.
 - DENOTES VERTICAL MICROPILE.
 - ⊕ DENOTES PROOF LOAD TEST MICROPILE, LRFD.
 - ⊗ DENOTES VERIFICATION LOAD TEST MICROPILE, LRFD.
- FACTORED NOMINAL RESISTANCE OF MICROPILE SHALL BE 180 KIP (ABUT A), 180 KIP (ABUT B), & 91 KIP (PIER 1 & 2).
- INSTALL ALL PIPES TO THE PILE TIP ELEVATION SHOWN.
- PILES DESIGNED USING AASHTO LRFD WITH RESISTANCE FACTOR OF 0.7.
- INSTALL PILES TO MEET CONSTRUCTION TOLERANCES ESTABLISHED IN SPECIAL PROVISION.
- ENGINEER TO OBSERVE PILE INSTALLATION TO ENSURE ADEQUATE STRUCTURAL INTEGRITY.
- FURNISH 7" O.D. STEEL CASING (NP-80) WITH A MINIMUM 0.5" WALL THICKNESS WITH A MINIMUM YIELD STRENGTH OF 80 KSI.
- FURNISH #14 WILLIAMS ASTM A-615 GRADE 75 ALL-THREAD BAR (OR EQUIVALENT). DETERMINE LENGTH OF COUPLE BAR SECTIONS BASED ON OVERHEAD CLEARANCES. FINISH COUPLERS AND NUTS MANUFACTURED SPECIFICALLY FOR THE THREADED BAR USED.
- FURNISH ASTM A572 GRADE 50 STEEL BEARING PLATES AND SIDE STIFFENERS.
- SEE SPECIAL PROVISION FOR FURTHER REQUIREMENTS.
- MICROPILES SHALL BE TYPE B. AFTER THE PRIMARY GROUT HAS BEEN TREMIED, PRESSUREGROUT THROUGH THE CASING TO A MINIMUM PRESSURE OF 40 PSI.
- COBBLES AND BOULDERS SHOULD BE ANTICIPATED DURING MICROPILE INSTALLATION. NO MICROPILE SHOULD BE TERMINATED ON A COBBLE OR BOULDER.

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	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

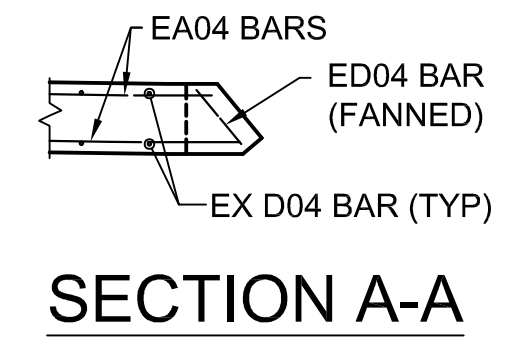
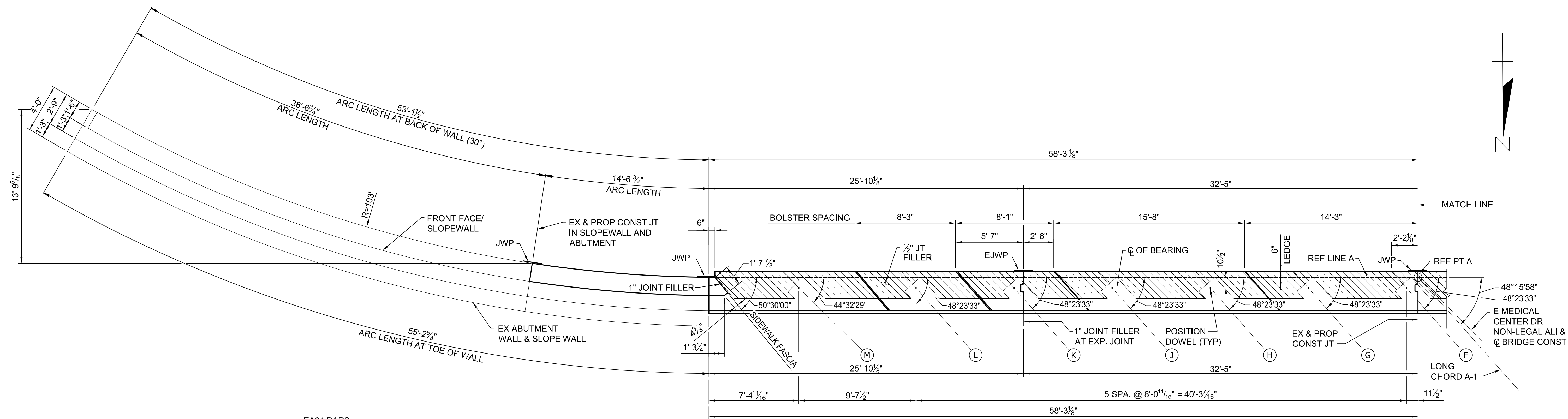
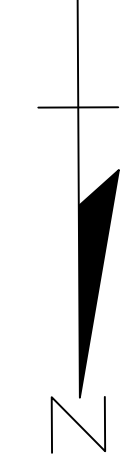
MICROPILE DETAILS

SCALE: HOR. 1/2"=1'-0" 0 INCH 1

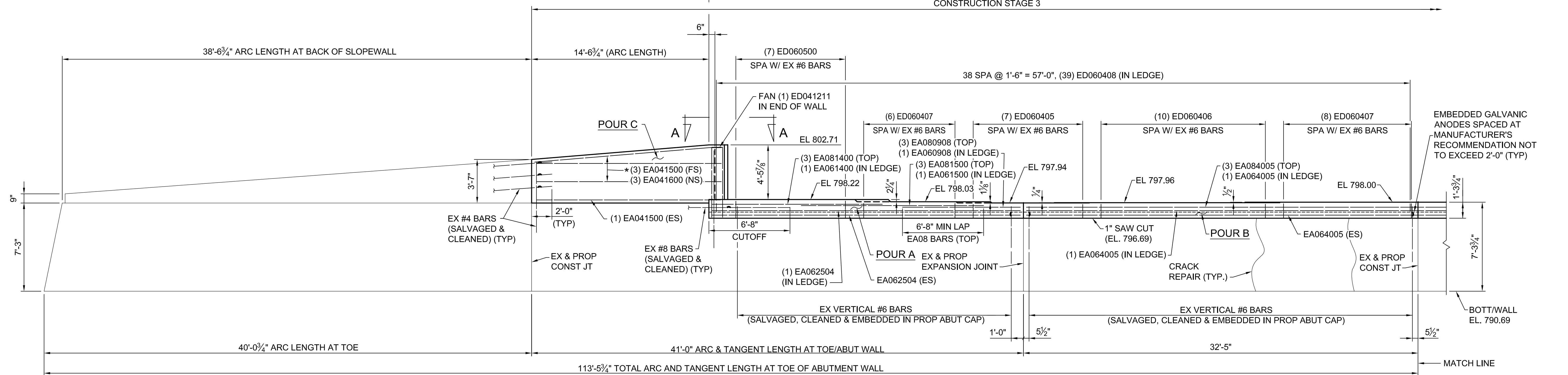
DRAWING NO. **2021-008-BR18**

SHEET NO. 81 OF 155

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



HALF PLAN



ELEVATION

* FIELD BEND HORIZONTAL WALL BARS AS REQUIRED TO FOLLOW CURVE

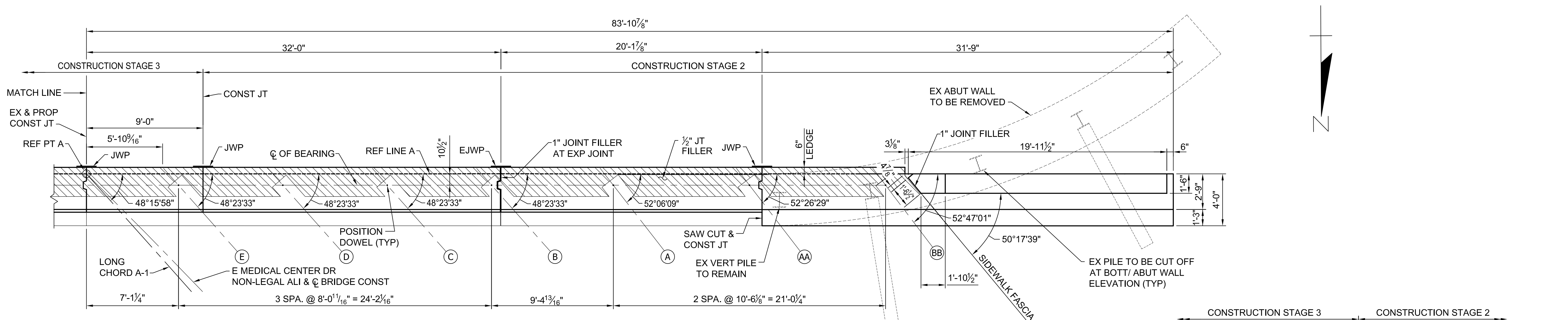
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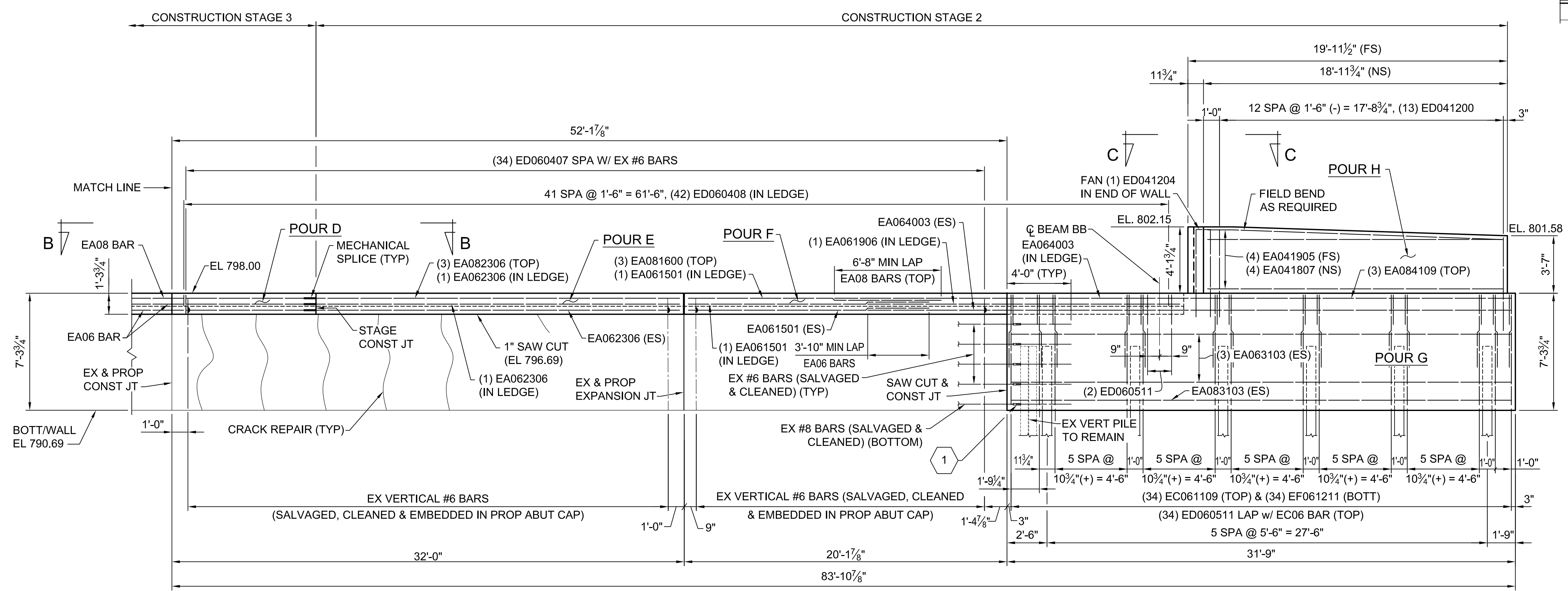
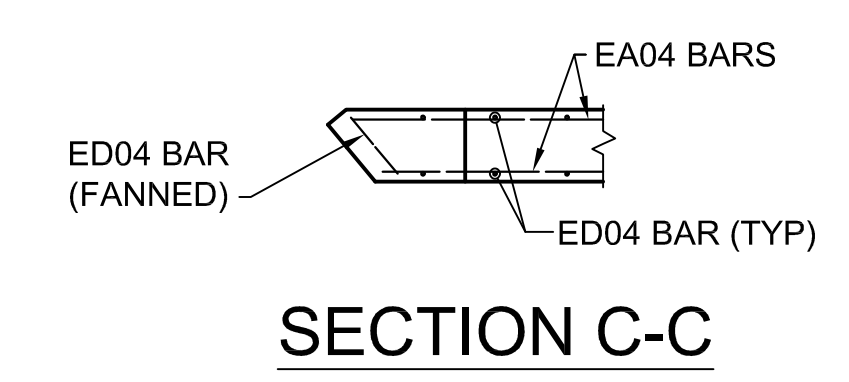
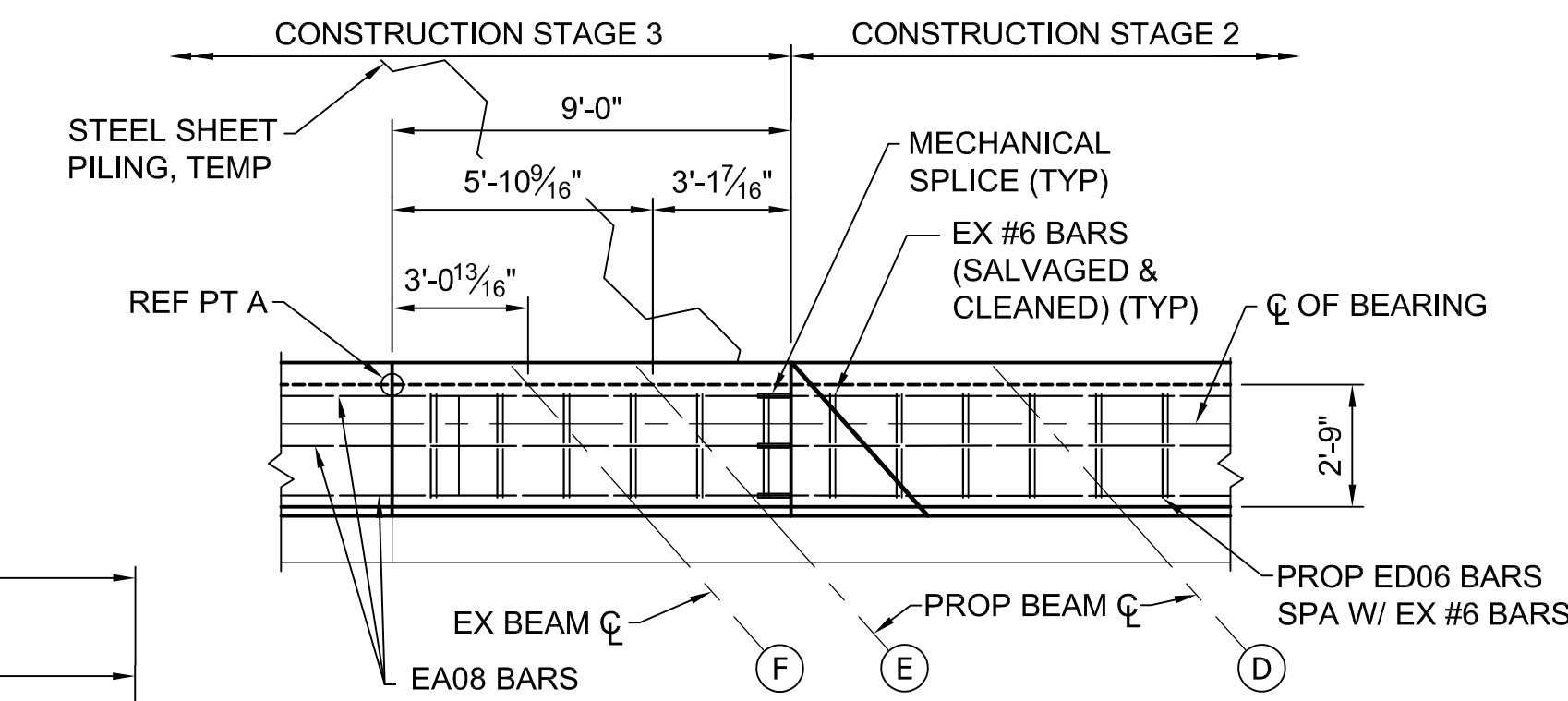
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
SCALE HOR. 1/4"=1'-0"	INCH 0 1
EAST MEDICAL CENTER DRIVE	
ABUTMENT A DETAILS	
DRAWING NO. 2021-008-BR19	
SHEET NO. <u>82</u> OF <u>155</u>	

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EX BATTERED PILE TO BE CUT OFF AT BOTTOM OF ABUT WALL ELEVATION. ADJUST PROP PILE LOCATION & VERTICAL REINFORCEMENT IN WALL AS NEEDED.



1 EMBEDDED GALVANIC ANODES SPACED AT MANUFACTURER'S RECOMMENDATION NOT TO EXCEED 2'-0" (TYP)

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

ABUTMENT A DETAILS

SCALE: HOR. 1/4"=1'-0"

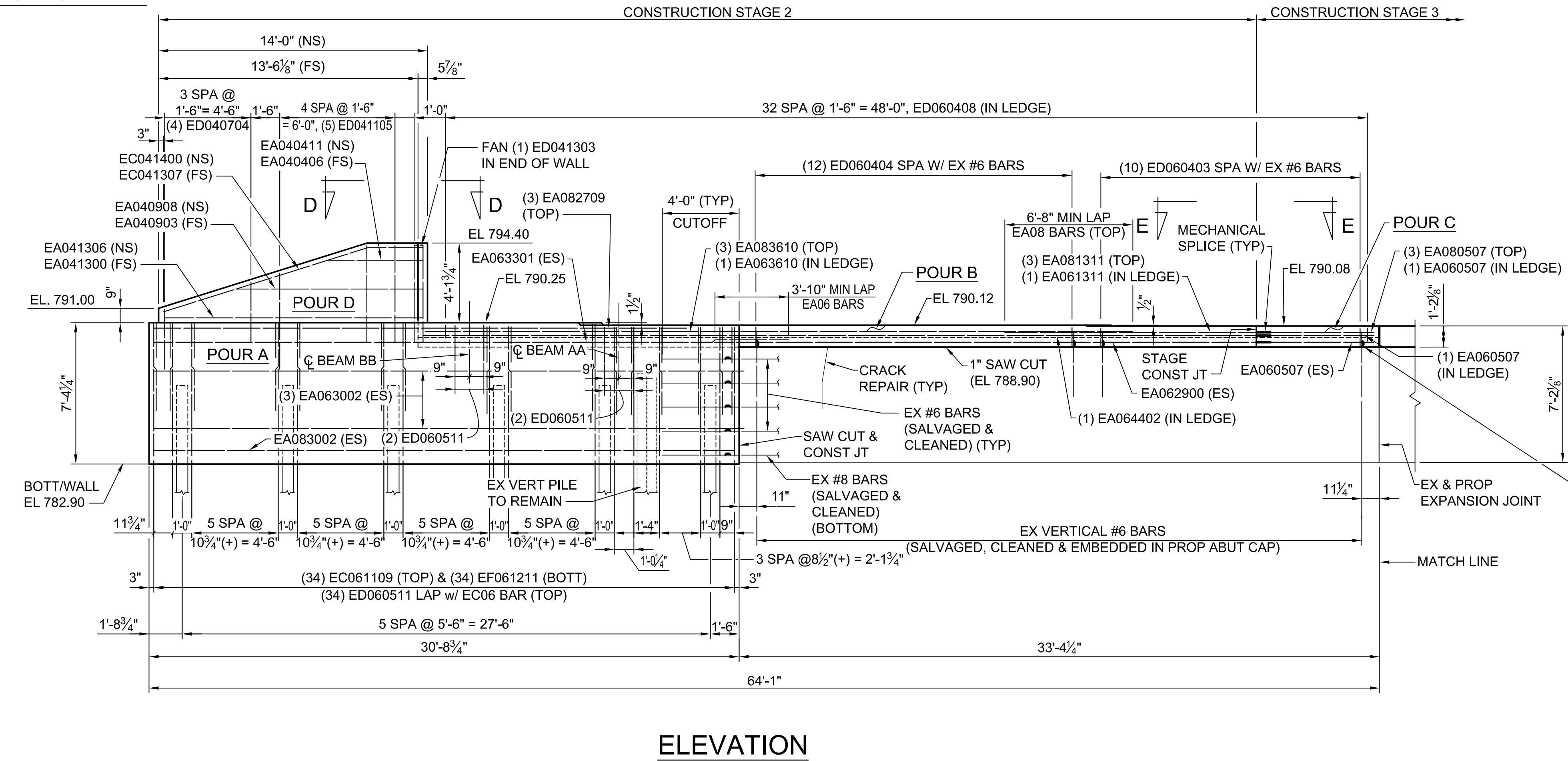
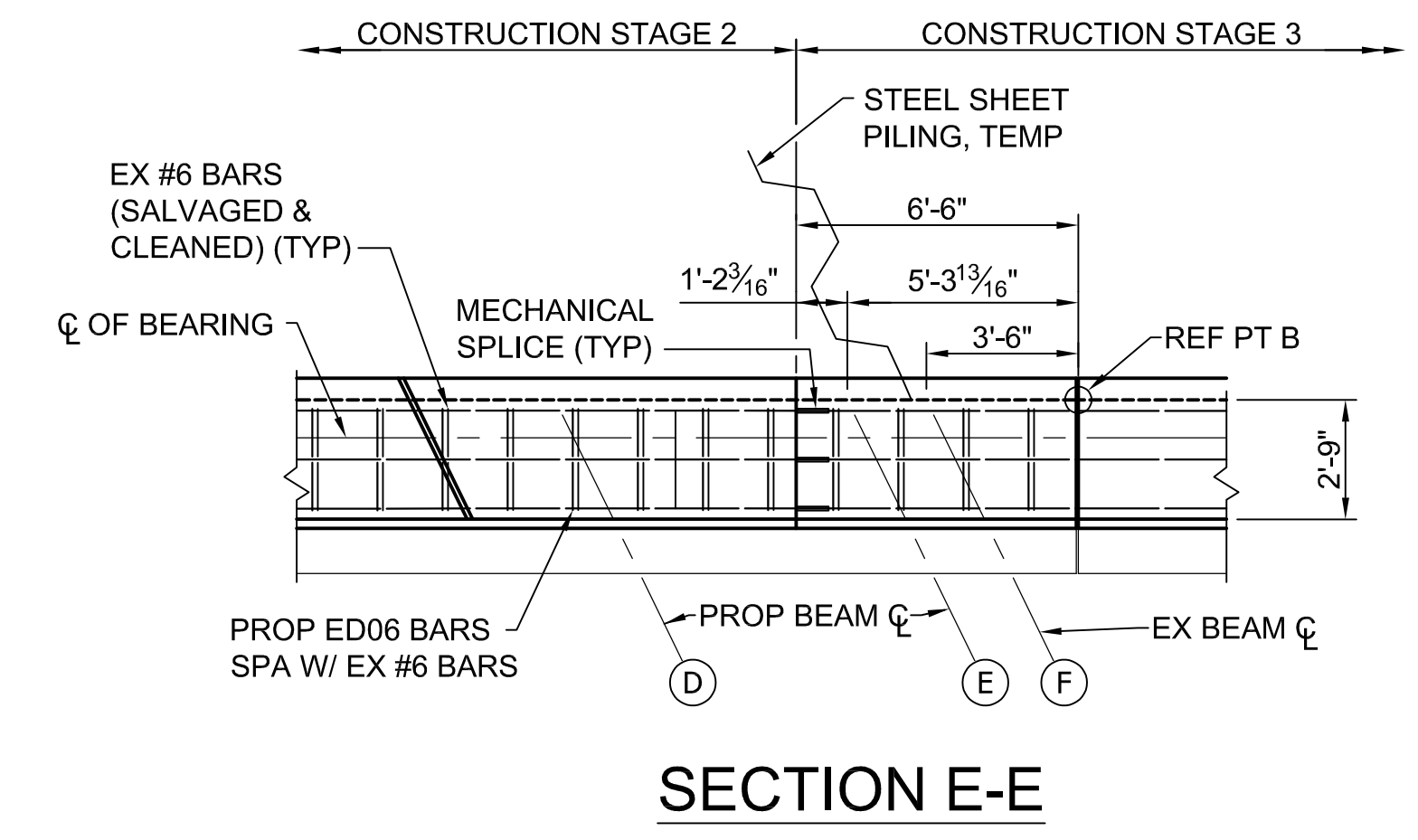
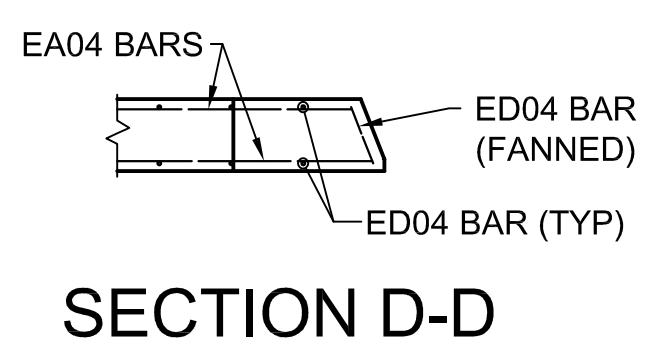
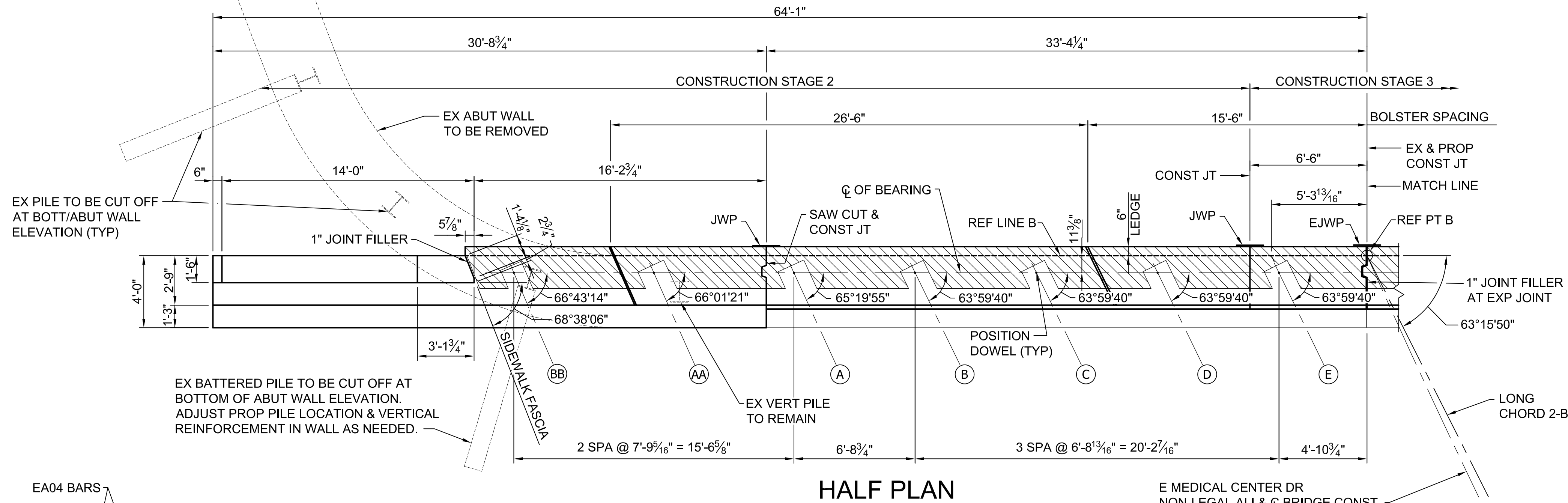
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SHEET NO. 83 OF 155

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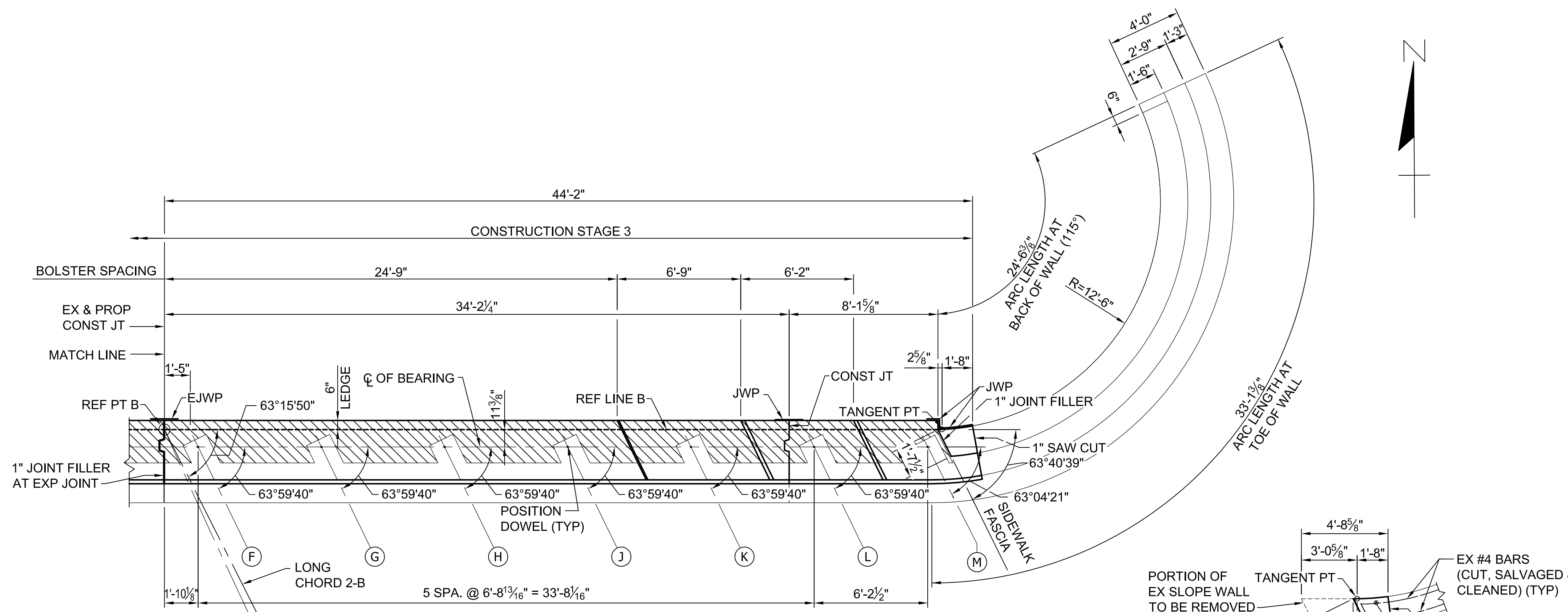
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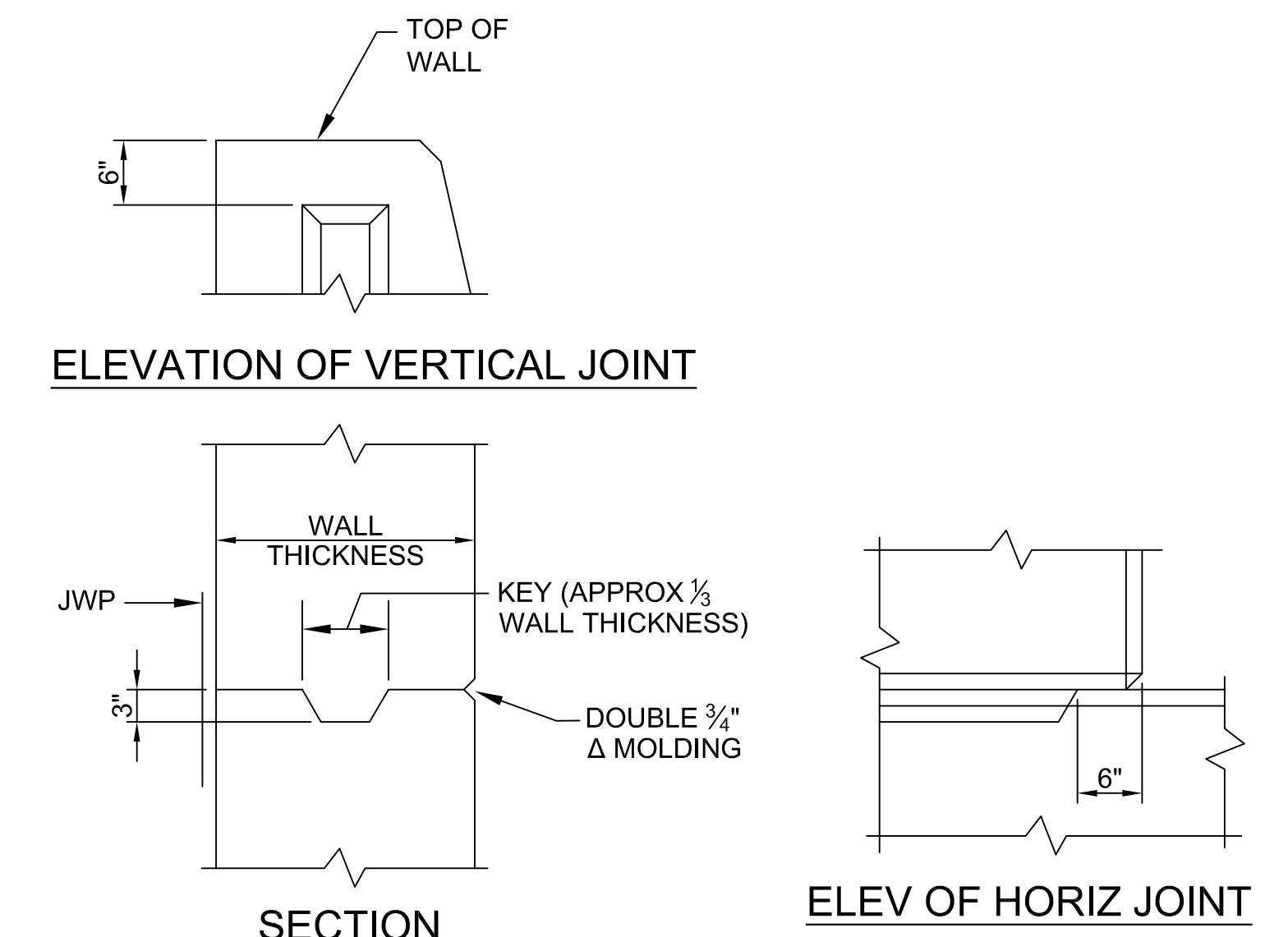
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
ABUTMENT B DETAILS	
SCALE HOR. 1/4"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR21	
SHEET NO. <u>84</u> OF <u>155</u>	

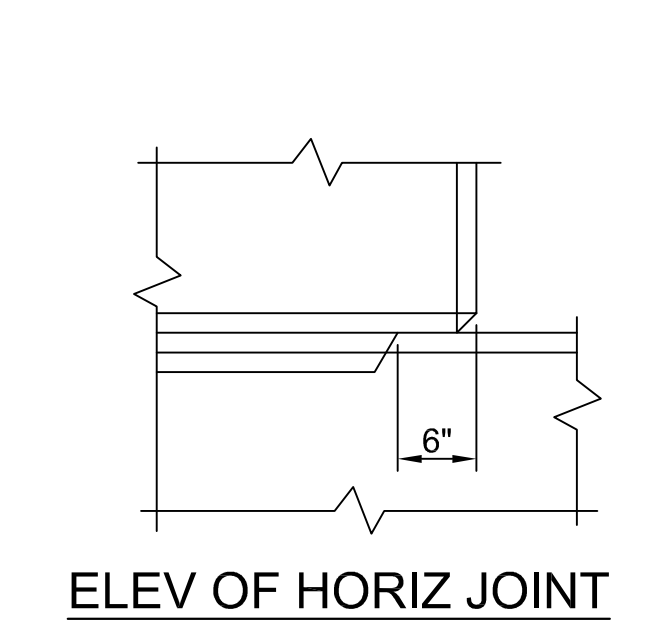
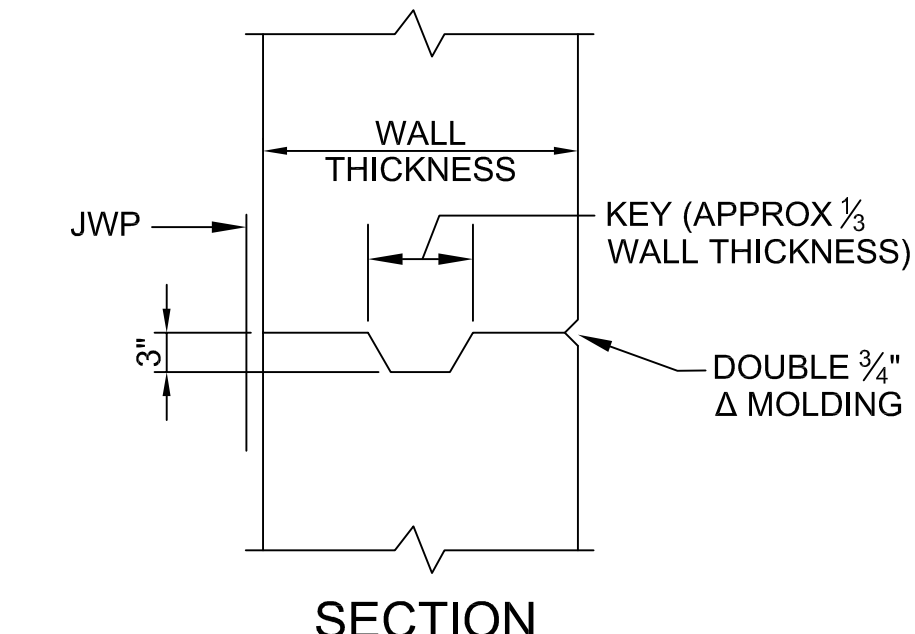
APPROVED BY: _____
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



HALF PLAN



ELEVATION OF VERTICAL JOINT

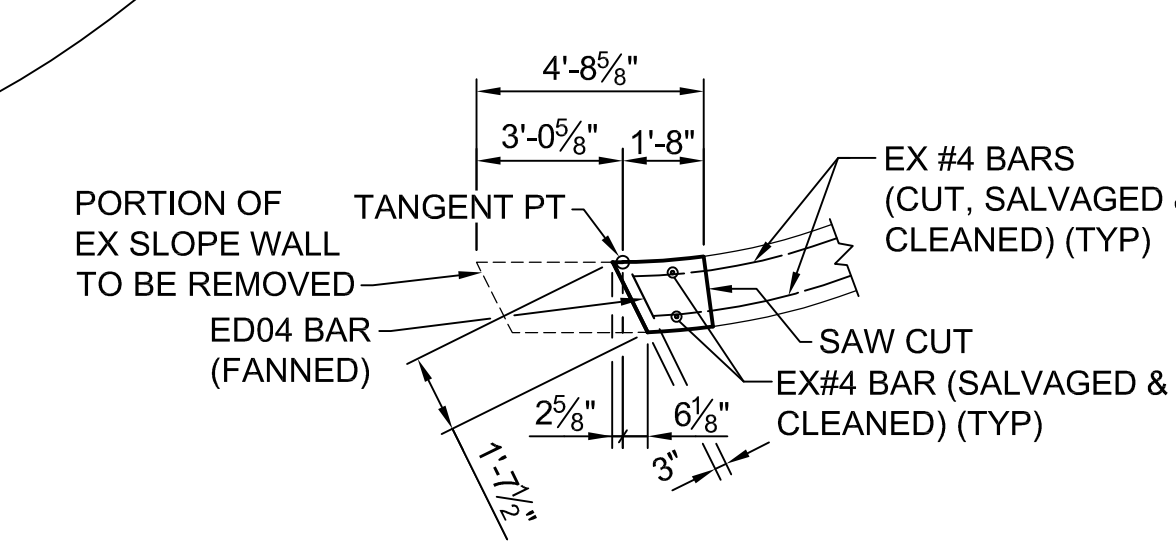


SECTION

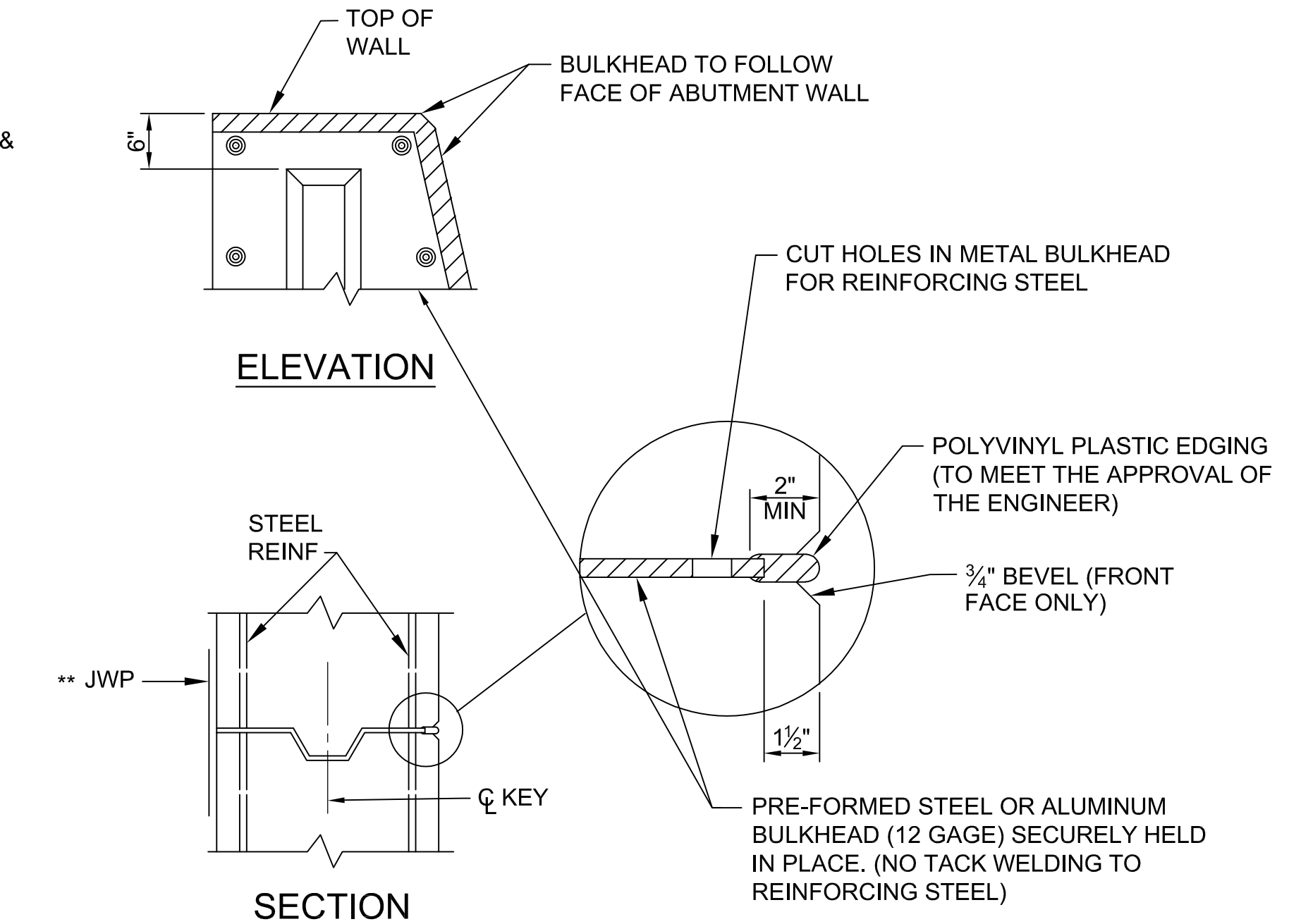
ELEV OF HORIZ JOINT

CONSTRUCTION JOINT DETAILS

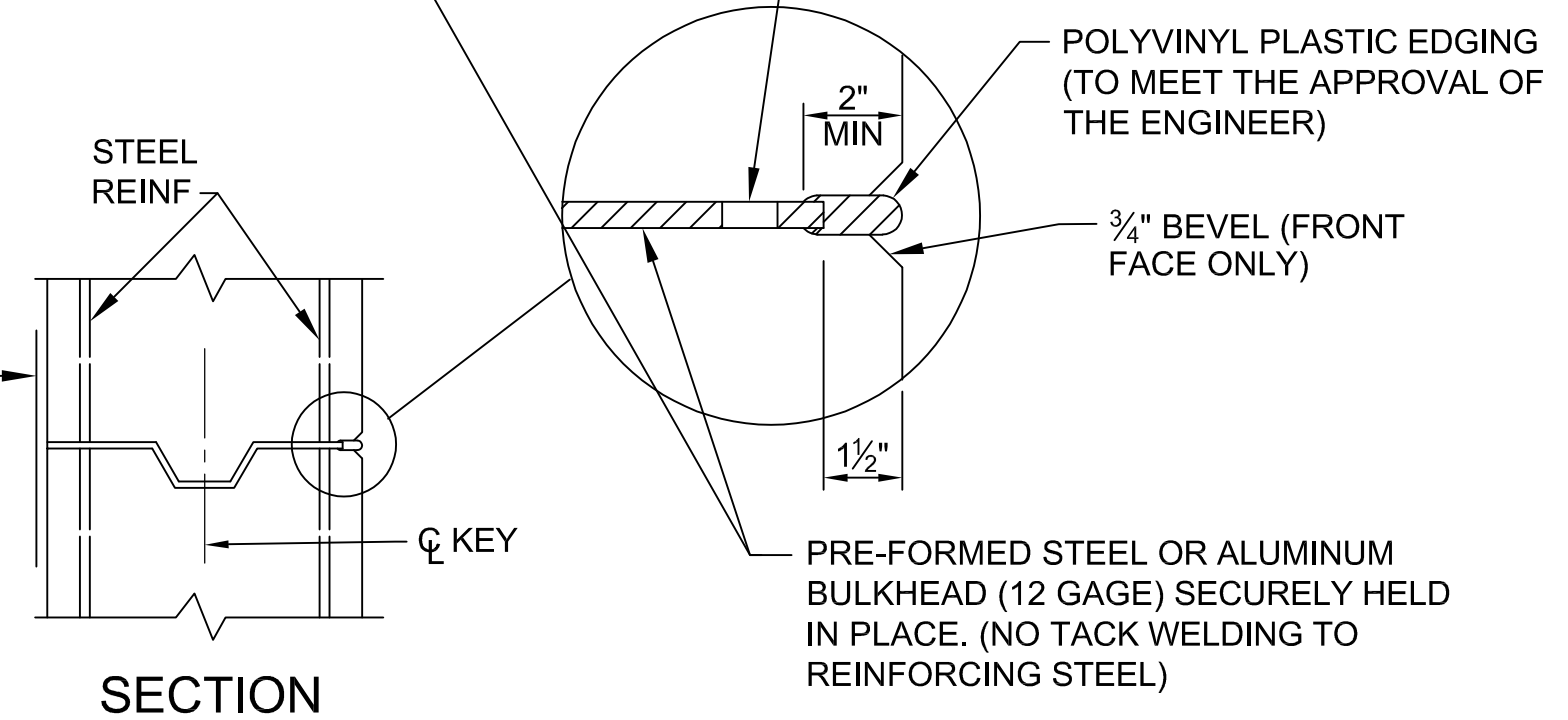
NOTE: WHERE OPTIONAL CONSTRUCTION JOINTS ARE USED, THERE WILL BE NO PAYMENT FOR THE REQUIRED JOINT WATERPROOFING.



SECTION F-F



ELEVATION



SECTION

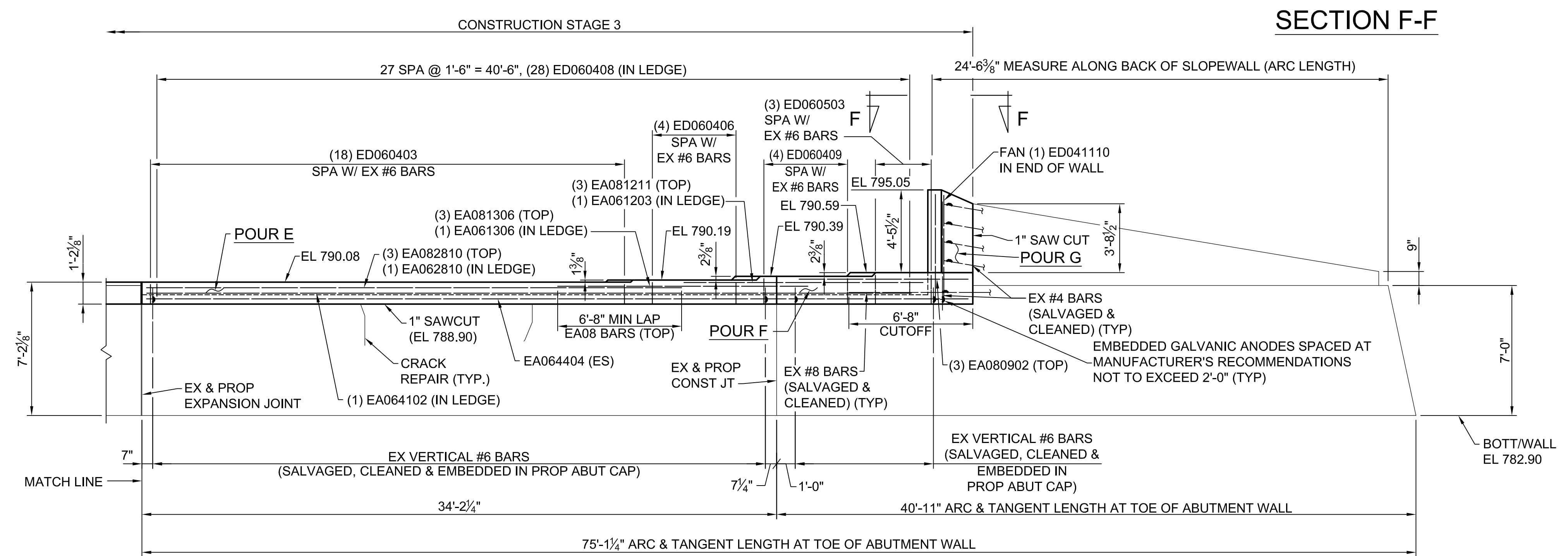
METAL BULKHEAD DETAILS

NOTE: METAL BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT AT CONTRACTOR'S EXPENSE. CARE IS TO BE USED IN CASTING CONCRETE TO PREVENT DISLOCATION OR MISALIGNMENT OF BULKHEAD.

** PREFORMED WATERPROOFING MEMBRANE MAY BE USED AS AN ALTERNATE.

NOTES:

JOINT AND BULKHEAD DETAILS ARE FOR BOTH ABUTMENTS. TRIM EXISTING BARS AS NEEDED TO ACHIEVE 2" MIN COVER.



ELEVATION

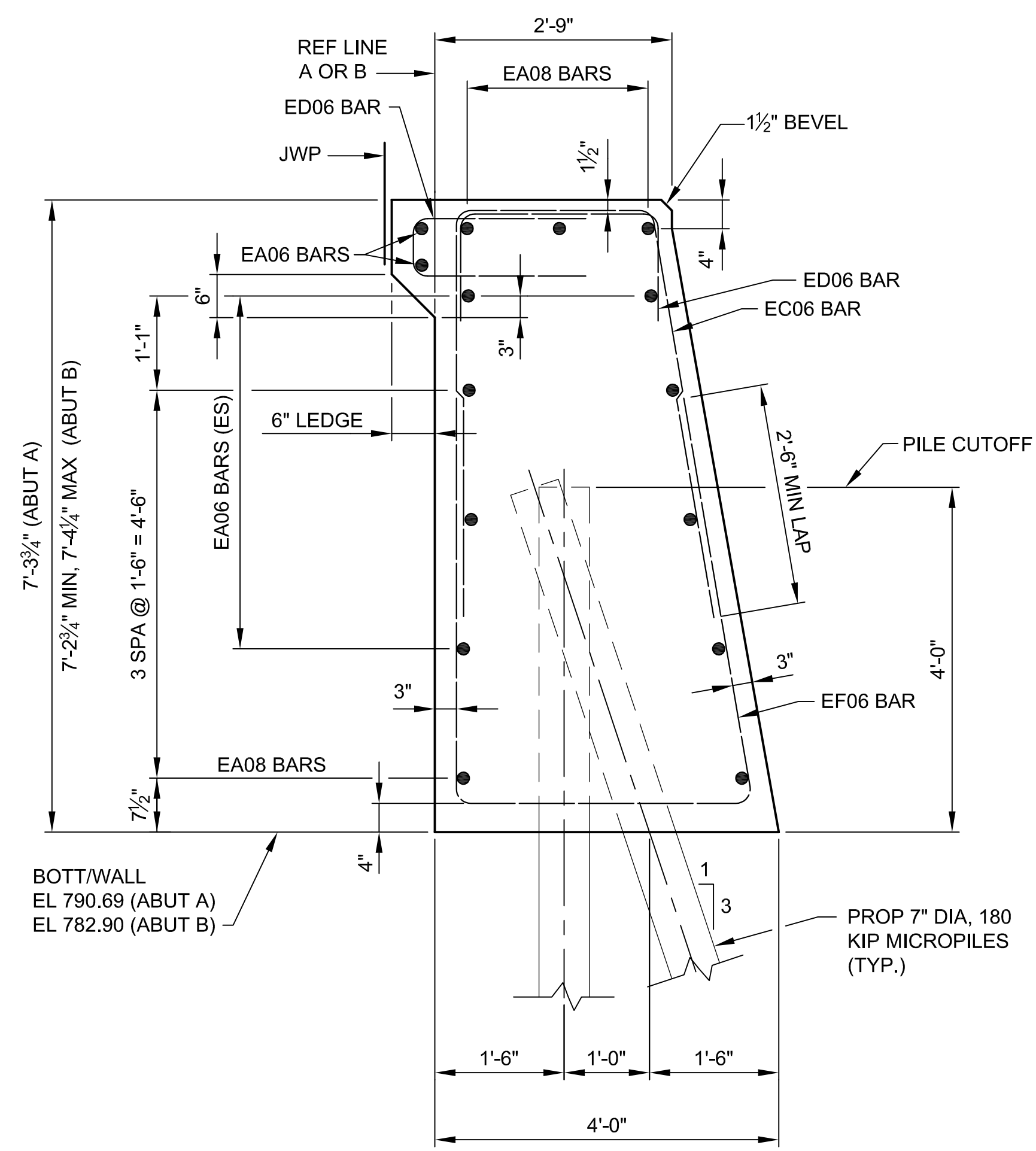
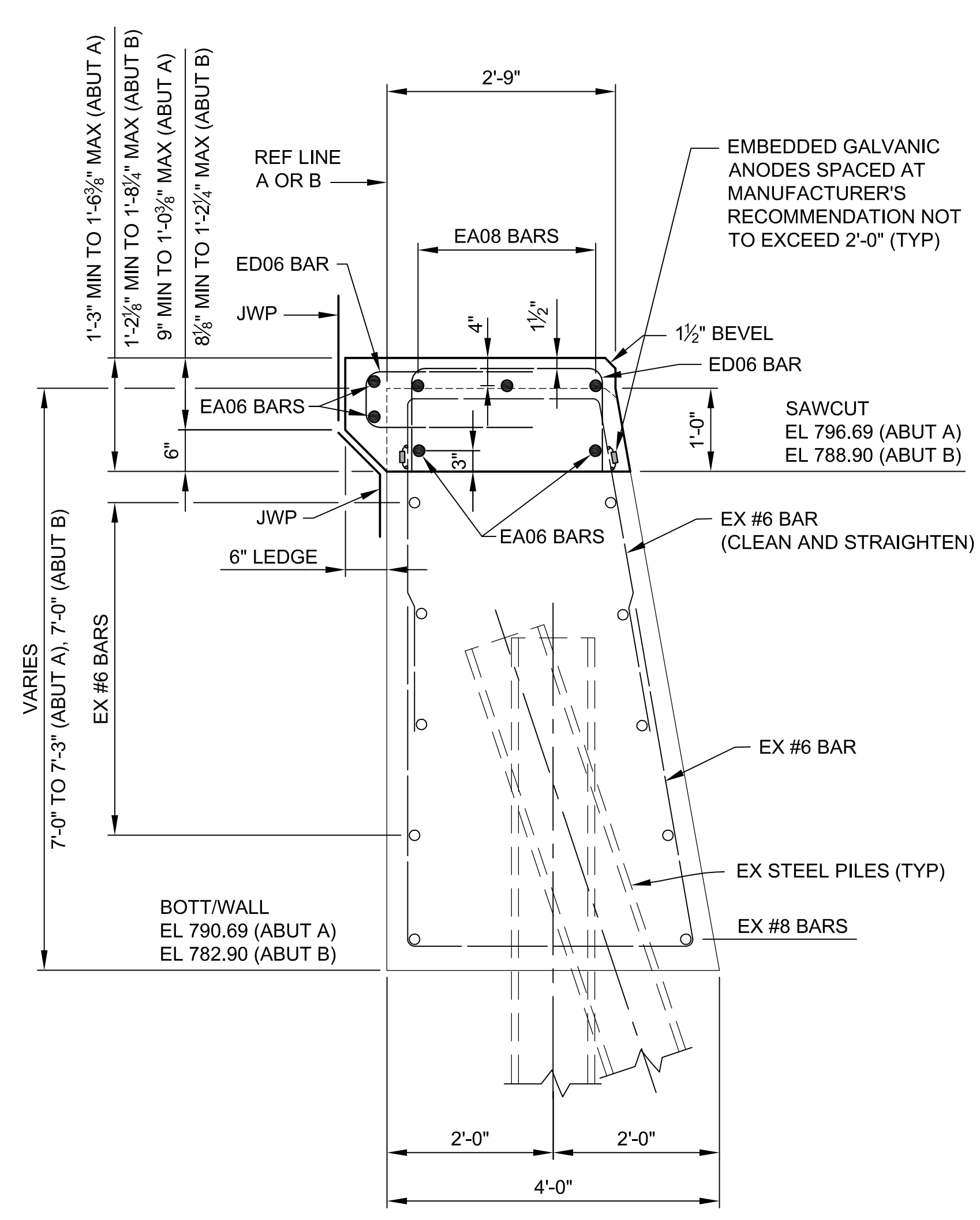
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EAST MEDICAL CENTER DRIVE	
ABUTMENT B DETAILS	
SCALE HOR. 1/4"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR22	
SHEET NO. <u>85</u> OF <u>155</u>	

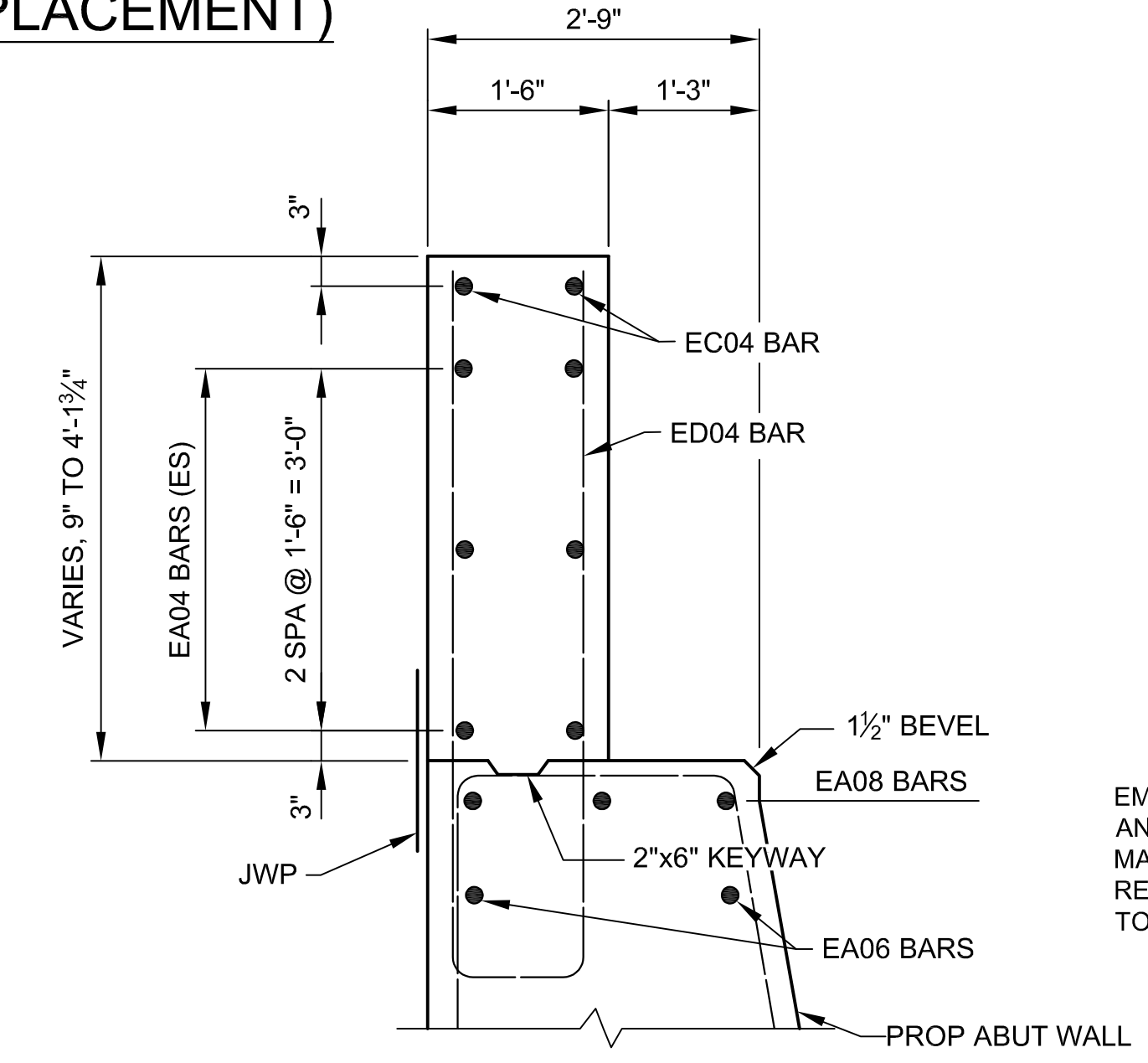
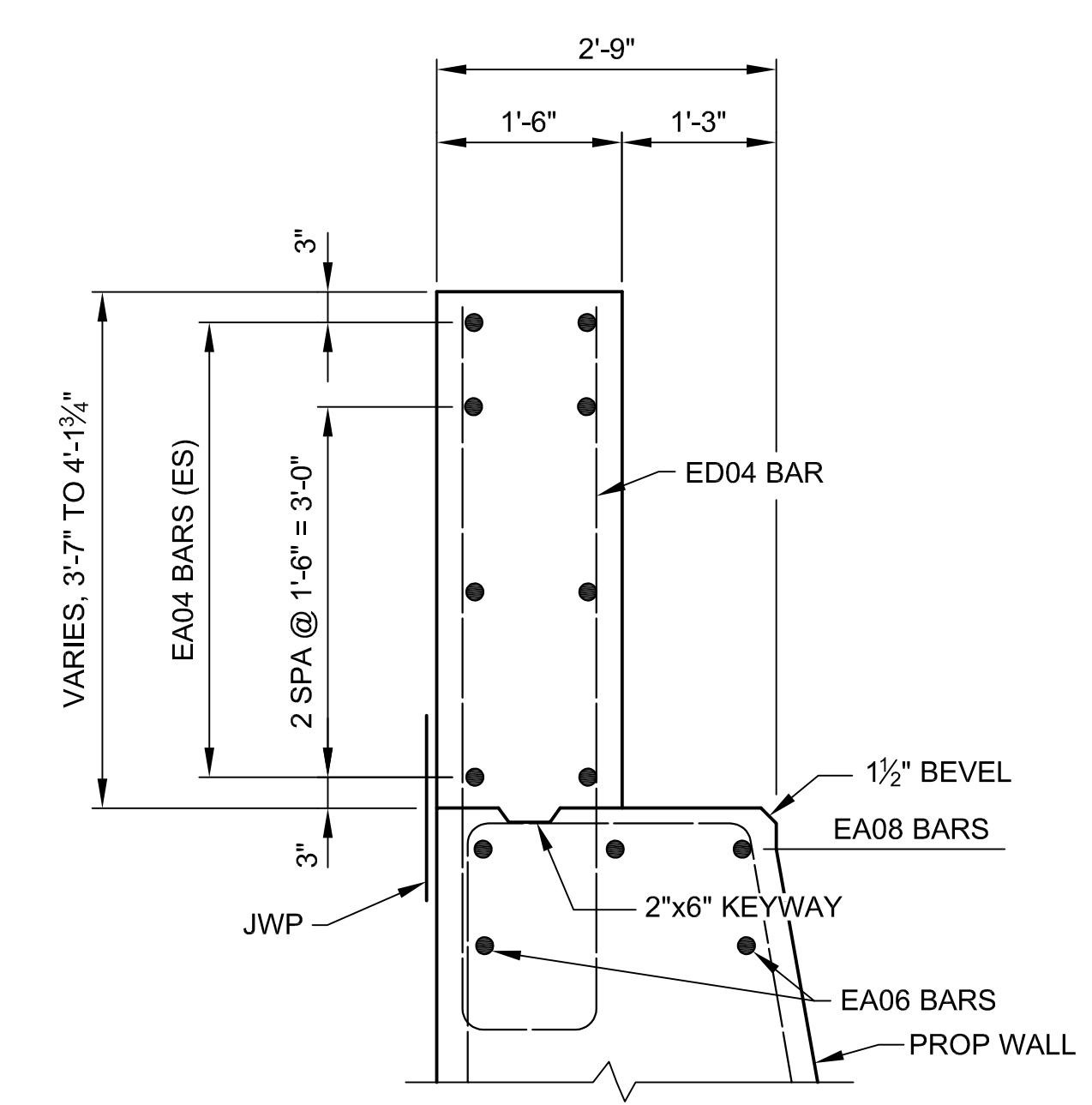
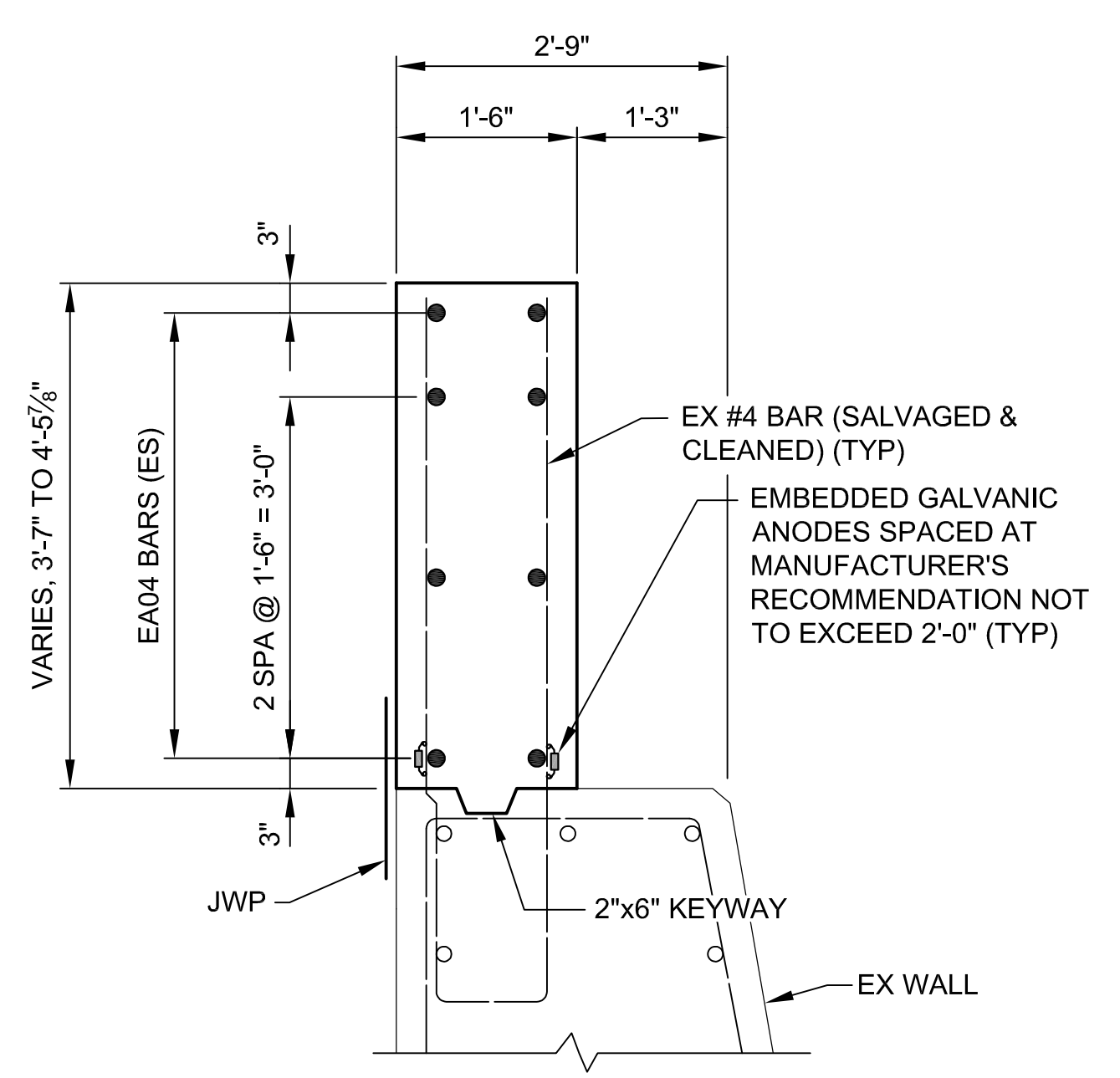
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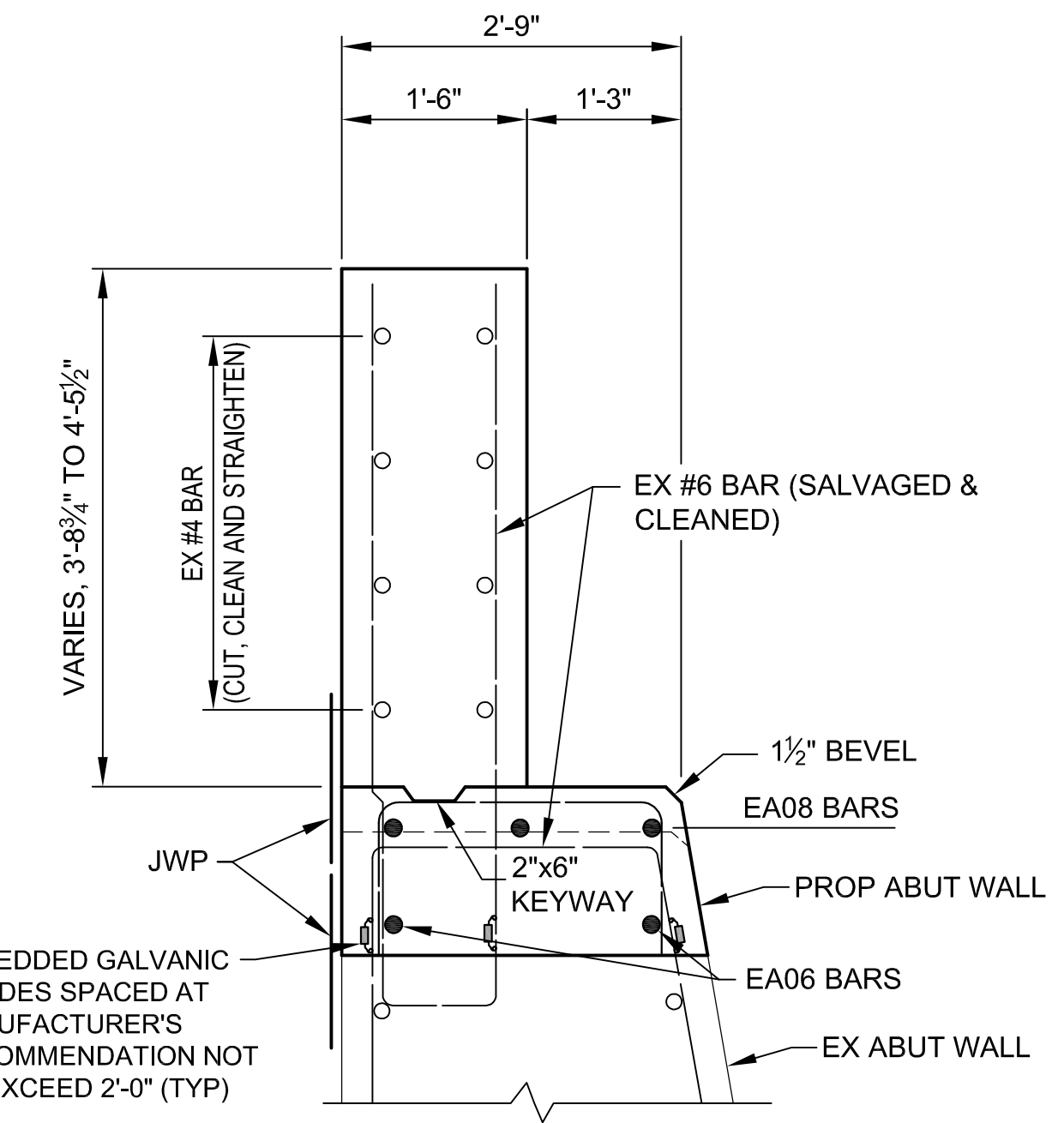


**TYPICAL ABUTMENT SECTION
(FULL REPLACEMENT)**

**TYPICAL ABUTMENT SECTION
(PARTIAL REPLACEMENT)**



**TYPICAL SLOPEWALL SECTION
ABUTMENT B (CONSTRUCTION STAGE 2)**



**TYPICAL SLOPEWALL SECTION
ABUTMENT B (CONSTRUCTION STAGE 3)**

ESTIMATED QUANTITIES THIS SHEET					
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Substructure Conc	Cyd	30	66		96
Water Repellent Treatment, Penetrating	Syd	1			1
Joint Waterproofing	Sft	770			770
Joint Waterproofing, Expansion	Sft	10			10
Hand Chipping, Other Than Deck	Cft	1			1
Patch, Forming	Sft	3			3
Reinforcement, Mechanical Splice	Ea	14			14
Flushing Cracks, Water	Ft	84			84
Structural Crack, Repr	Ft	84			84
Patching Conc, C-L	Cyd	0.2			0.2
Embedded Galvanic Anode	Ea	275			275

NOTES

- NS DENOTES NEAR SIDE.
- FS DENOTES FAR SIDE.
- ES DENOTES EACH SIDE.
- JWP DENOTES JOINT WATERPROOFING.
- EJWP DENOTES EXPANSION JOINT WATERPROOFING.
- REPAIR AREAS/CRACKS SHOWN ARE APPROXIMATIONS BASED ON A BRIDGE INSPECTION THAT TOOK PLACE IN OCTOBER, 2021 AND A FOLLOW-UP INSPECTION IN APRIL, 2023.
- ABUTMENTS SHALL BE SOUNDED PRIOR TO CONSTRUCTION AND ADDITIONAL AREAS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER.
- PENETRATING WATER REPELLENT TREATMENT SHALL BE APPLIED TO THE ABUTMENT REPAIR AREAS AS DIRECTED BY THE ENGINEER.
- INSTALL GALVANIC ANODES ON EXPOSED REBAR ALONG PERIMETER OF REPAIR, SPACED PER MANUFACTURER'S RECOMMENDATIONS (24 INCH MAX).
- A CRACK THAT EXTENDS BELOW THE GROUND LINE SHALL, WITH PRIOR APPROVAL OF THE ENGINEER, BE REPAIRED. ALL EXCAVATION, BACKFILL, WORK, AND MATERIAL REQUIRED SHALL BE INCLUDED IN PAYMENT FOR "STRUCTURAL CRACK, REPR".
- FOR BEVEL AND MOLDING DETAILS, SEE MDOT STANDARD PLAN B-103-SERIES.
- FOR MICROPILE QUANTITIES, LAYOUT, AND NOTES, SEE SHEETS 80 & 81 OF 155.
- THE CONTRACTOR MAY ADHESIVE ANCHOR POSITION DOWELS IN HOLES DRILLED IN THE CONCRETE AT ABUTMENTS.
- LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE CONCRETE BID ITEMS.

SUBSTRUCTURE CONCRETE QUANTITIES (CYD)		
POUR	ABUT A	ABUT B
A	3.8	* 29.9
B	4.4	3.4
C	3.5	0.9
D	1.3	* 2.1
E	3.2	4.4
F	2.8	1.9
G	*29.5	0.4
H	* 4.5	
TOTAL	53	43

* DENOTES CATG 0002 (34 CYD @ ABUT A & 32 CYD @ ABUT B), ALL OTHER POURS INCLUDED IN CATG 0001

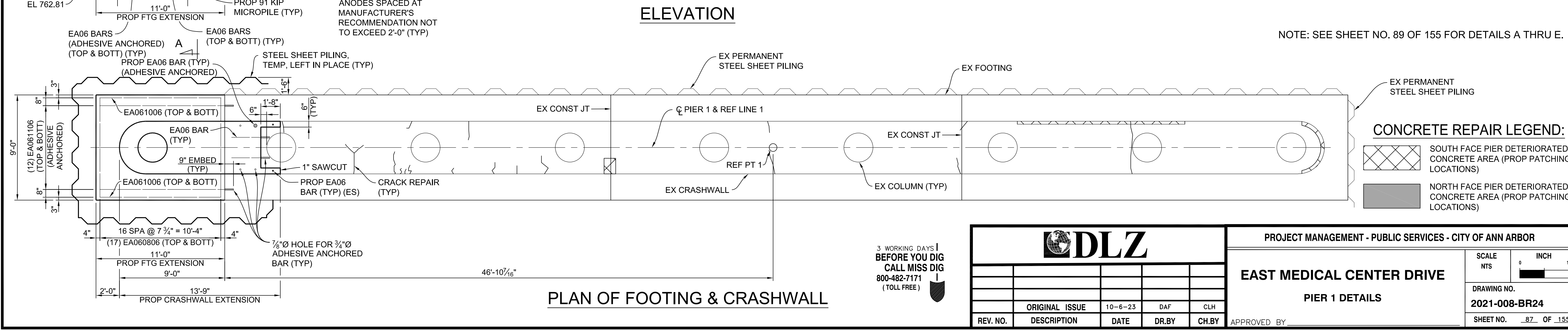
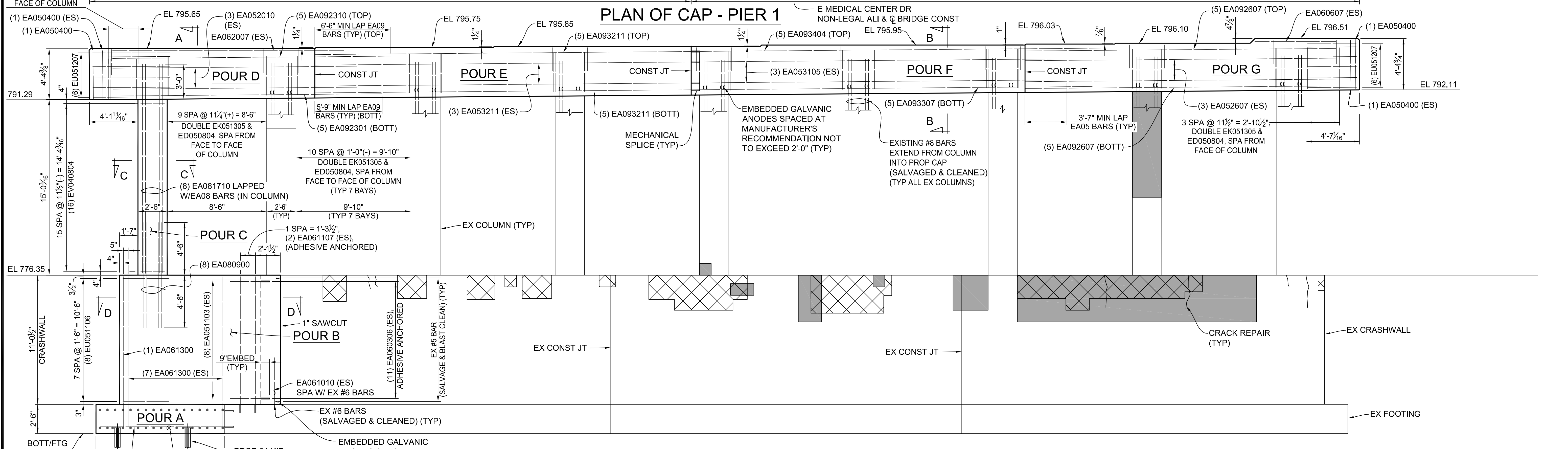
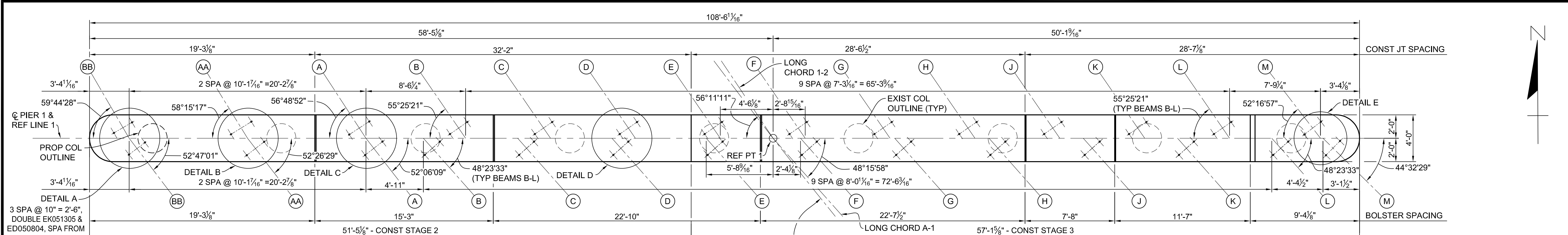
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
ABUTMENT DETAILS	
SCALE HOR. 3/4"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR23	
SHEET NO. <u>86</u> OF <u>155</u>	

CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



NOTE: SEE SHEET NO. 89 OF 155 FOR DETAILS A THRU E.

CONCRETE REPAIR LEGEND:

- SOUTH FACE PIER DETERIORATED CONCRETE AREA (PROP PATCHING LOCATIONS)
- NORTH FACE PIER DETERIORATED CONCRETE AREA (PROP PATCHING LOCATIONS)

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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

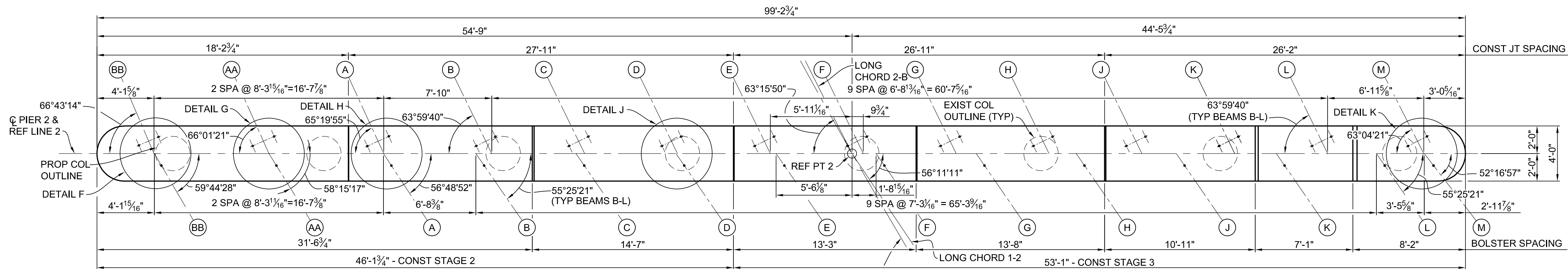
PIER 1 DETAILS

SCALE	INCH
NTS	0 1
DRAWING NO.	
2021-008-BR24	
SHEET NO. <u>87</u> OF <u>155</u>	

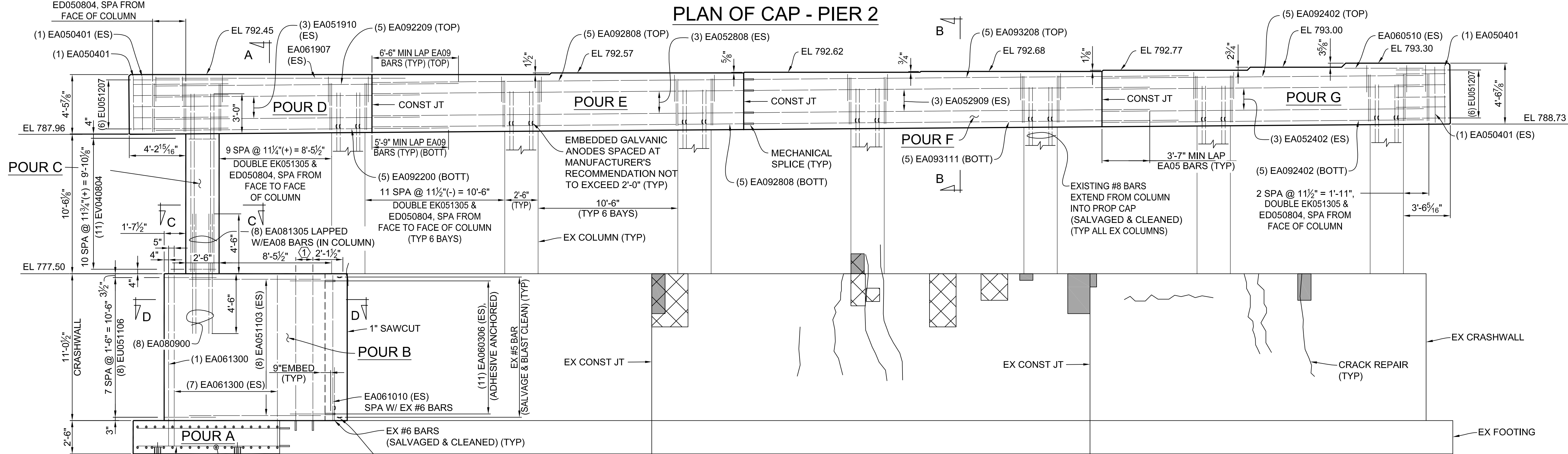
APPROVED BY _____

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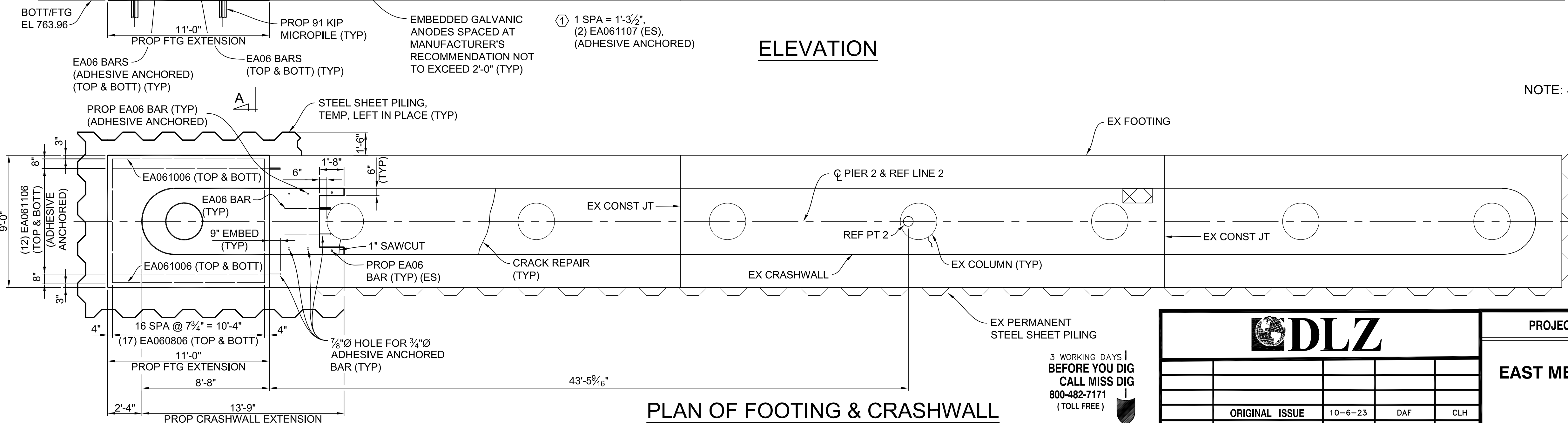


PLAN OF CAP - PIER 2



ELEVATION

NOTE: SEE SHEET NO. 89 OF 155 FOR DETAILS F THRU K.



PLAN OF FOOTING & CRASHWALL

CONCRETE REPAIR LEGEND:

- SOUTH FACE PIER DETERIORATED CONCRETE AREA (PROP PATCHING LOCATIONS)
- NORTH FACE PIER DETERIORATED CONCRETE AREA (PROP PATCHING LOCATIONS)

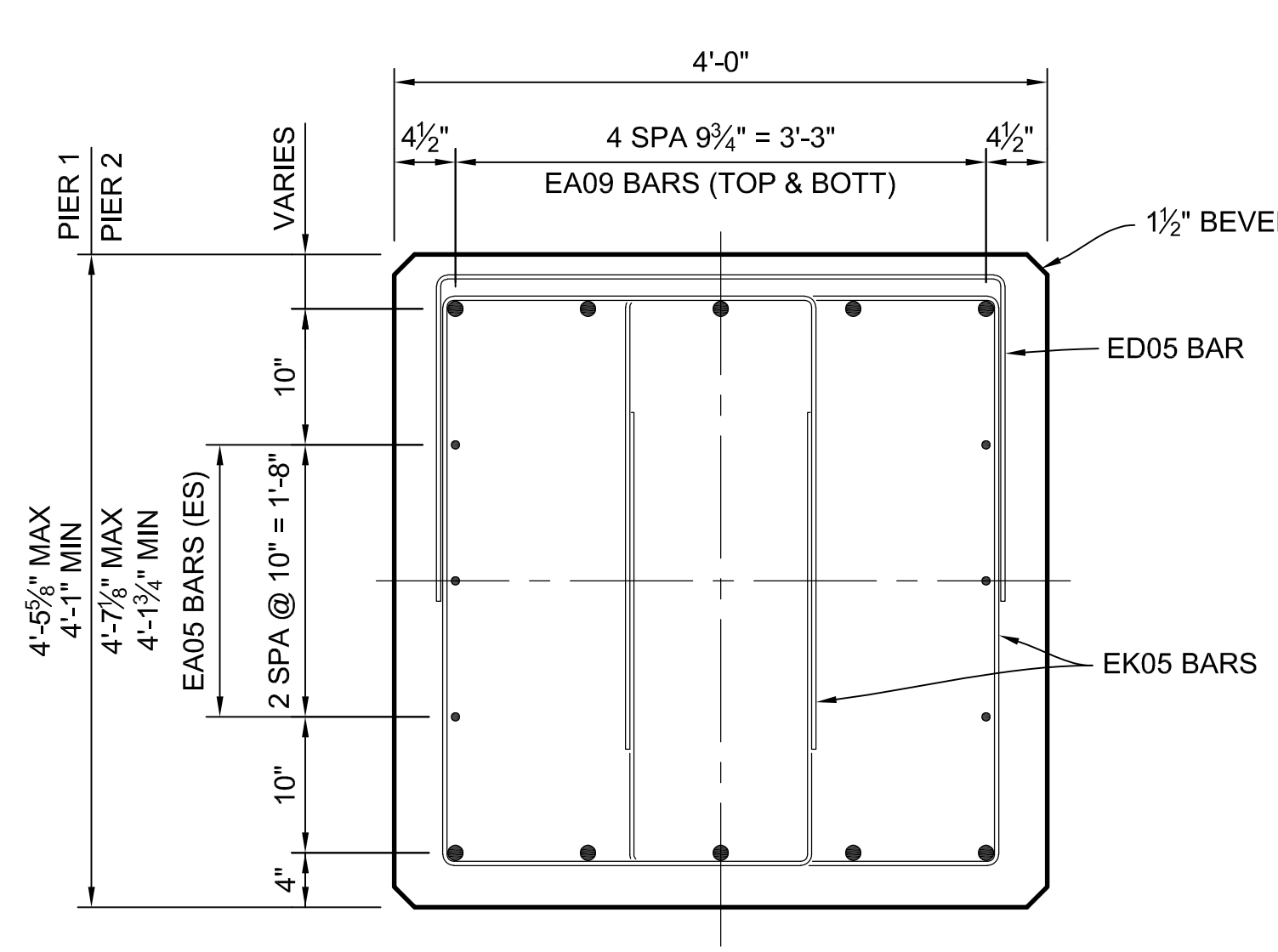
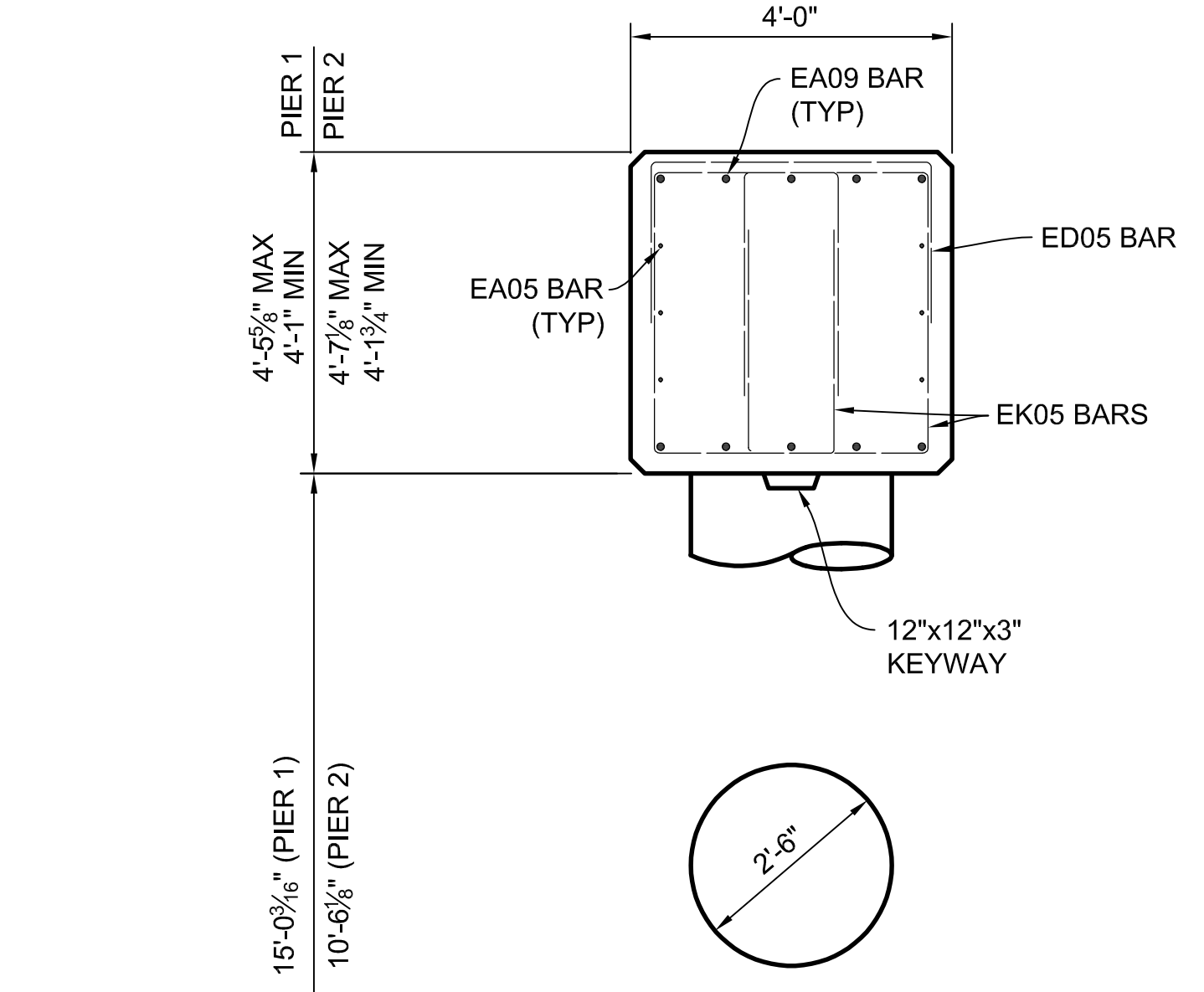
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
PIER 2 DETAILS	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-BR25	
SHEET NO. <u>88</u> OF <u>155</u>	

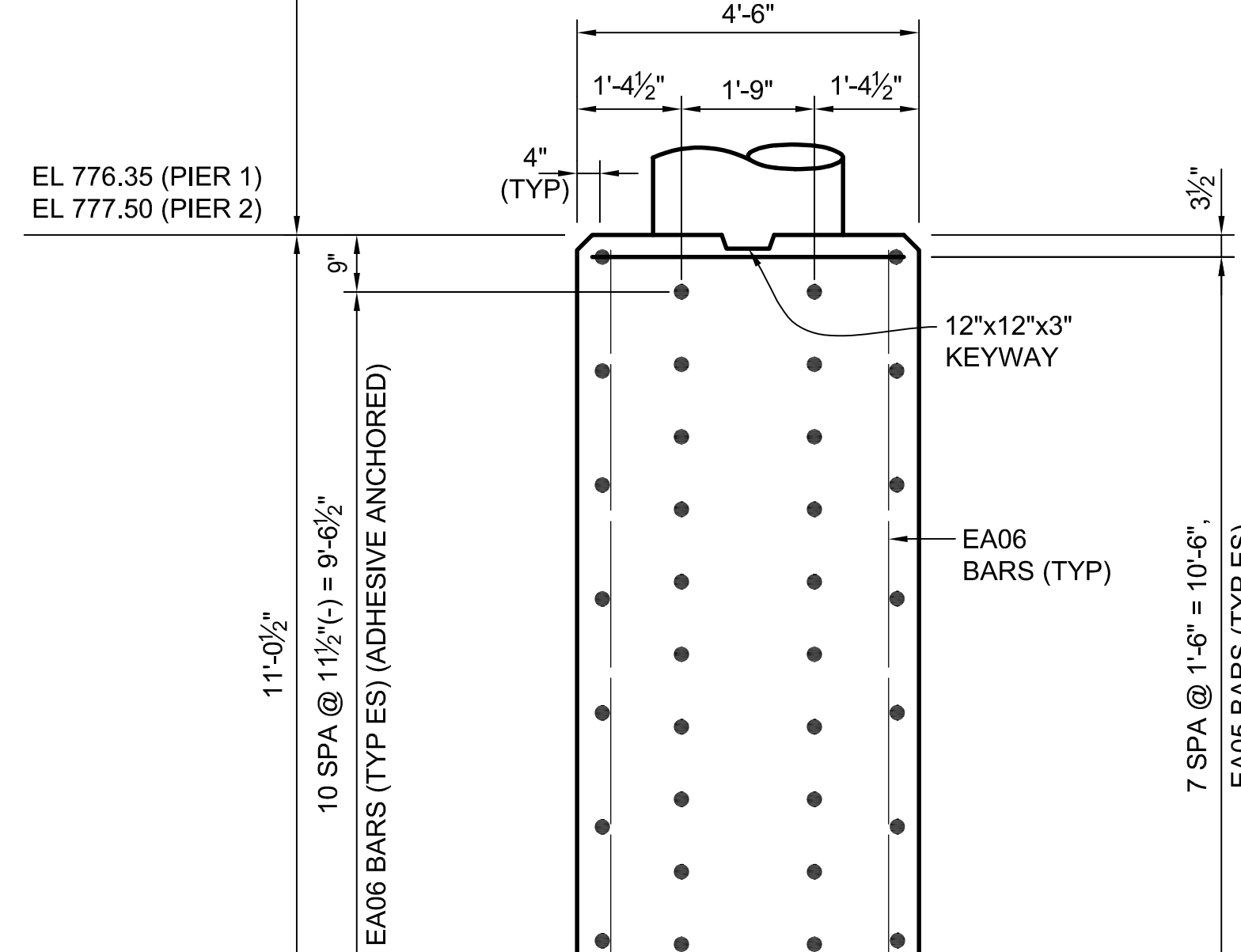
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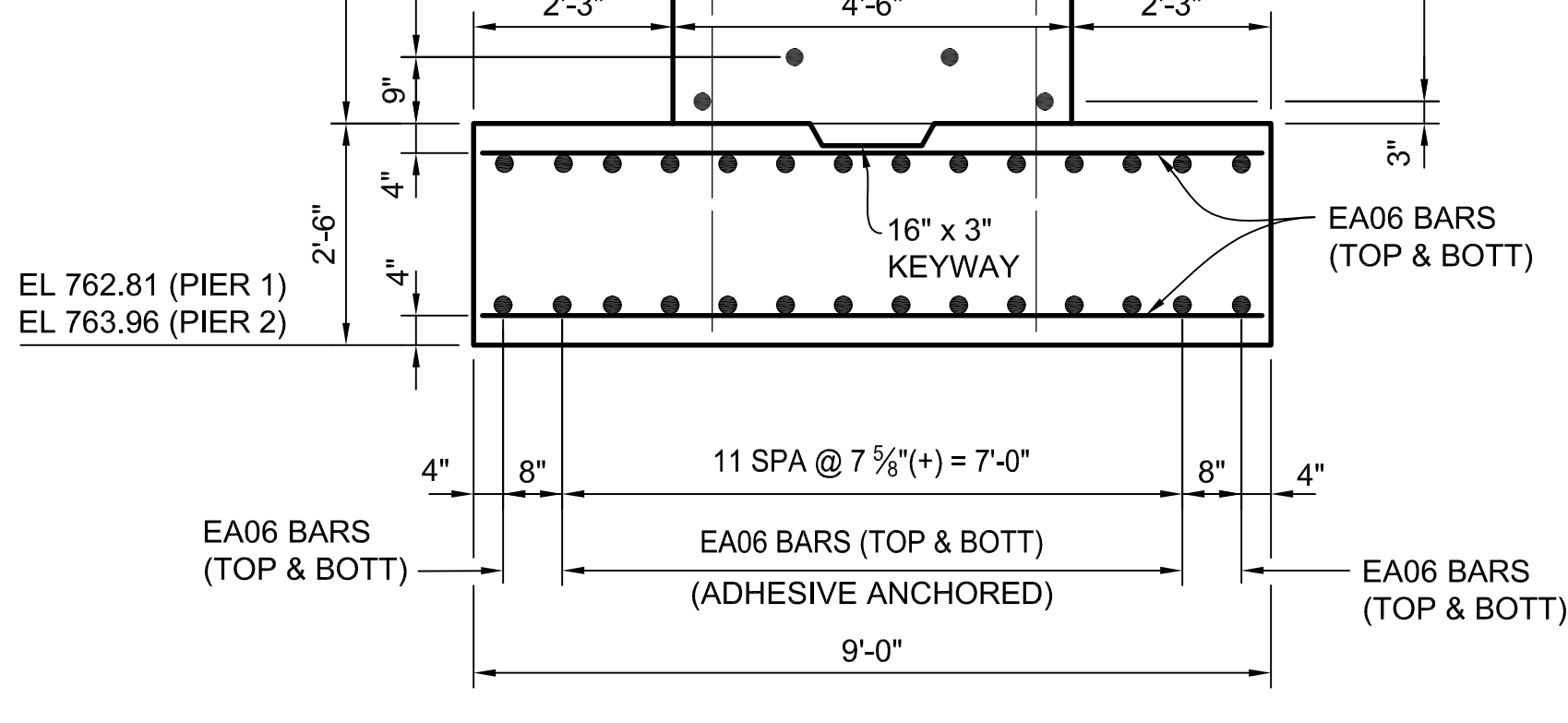
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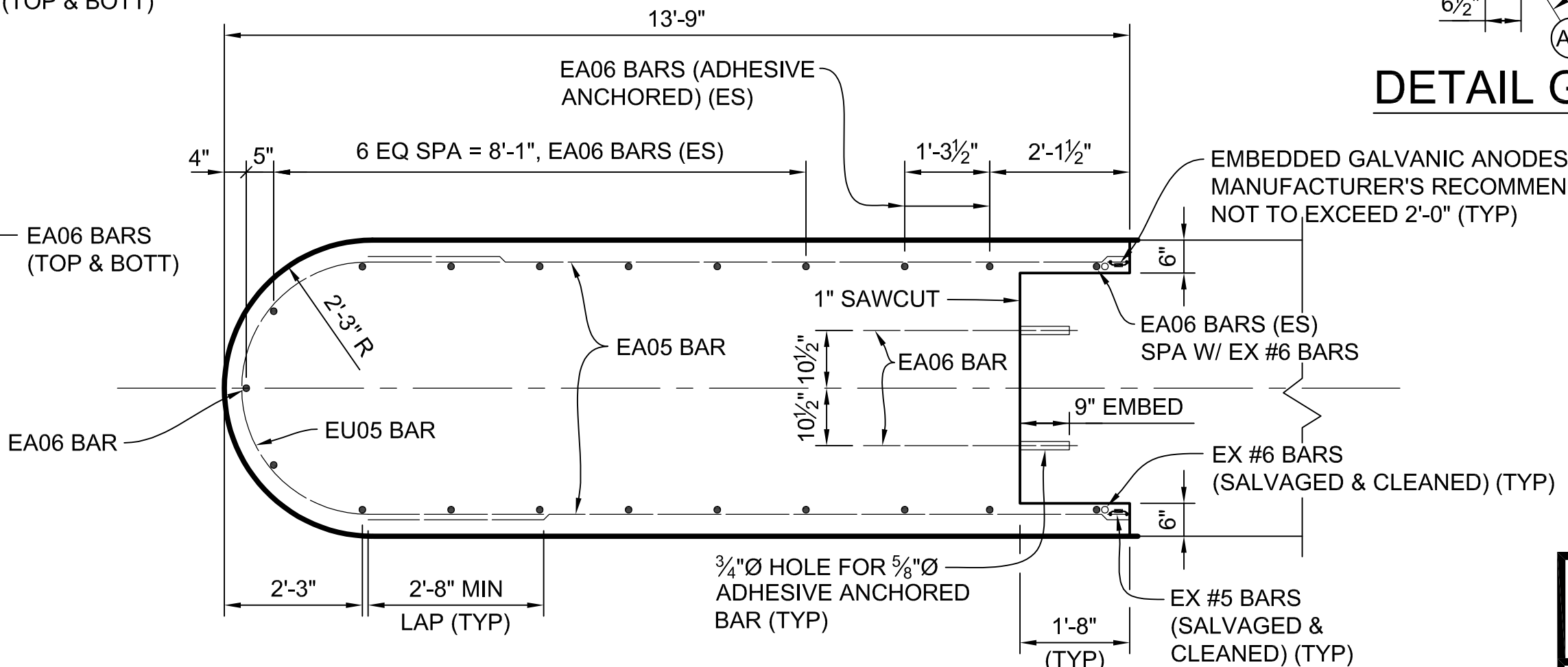
SECTION B-B



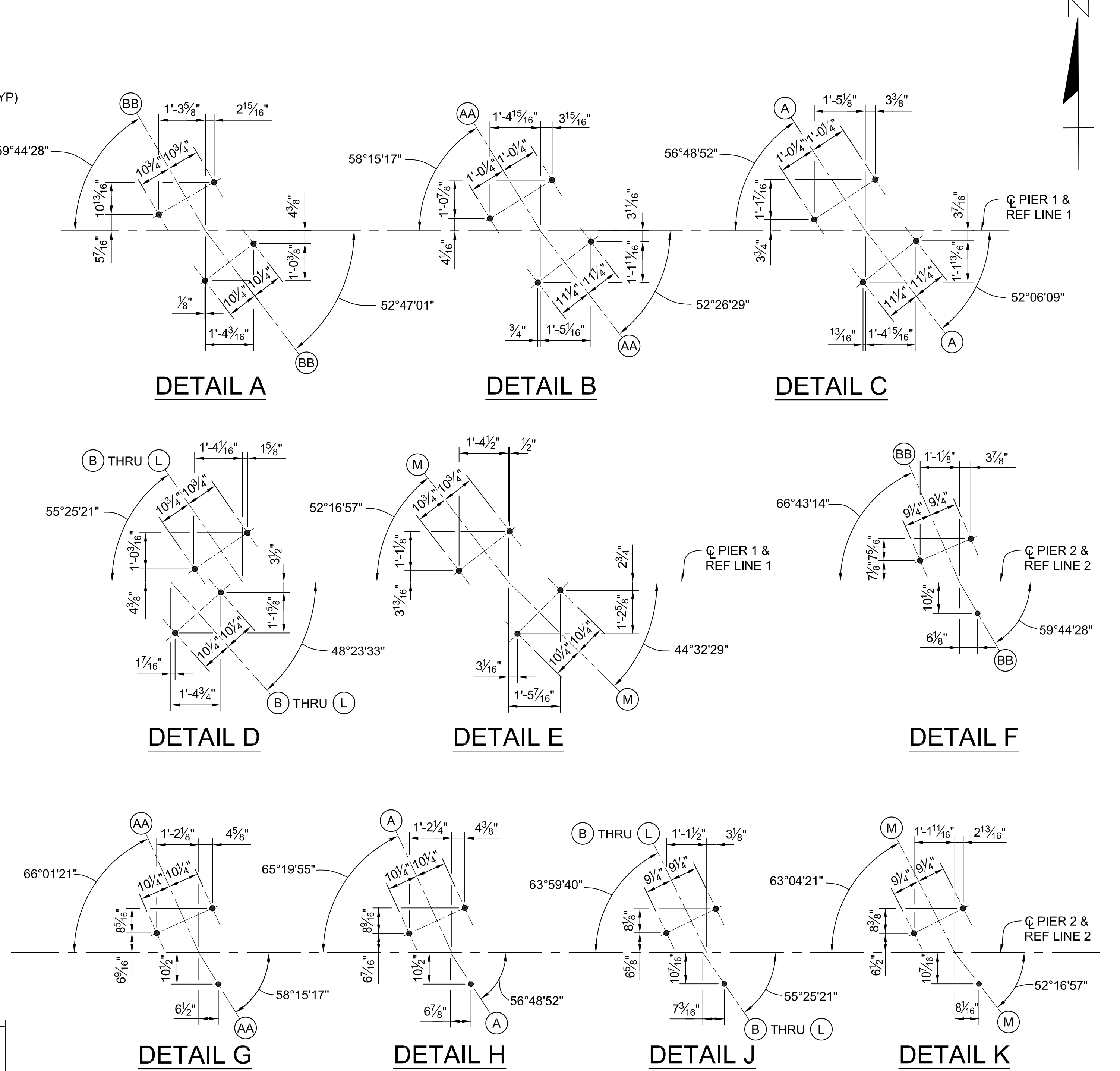
SECTION C-C



SECTION A-A
(MICROPILES NOT SHOWN)



SECTION D-D



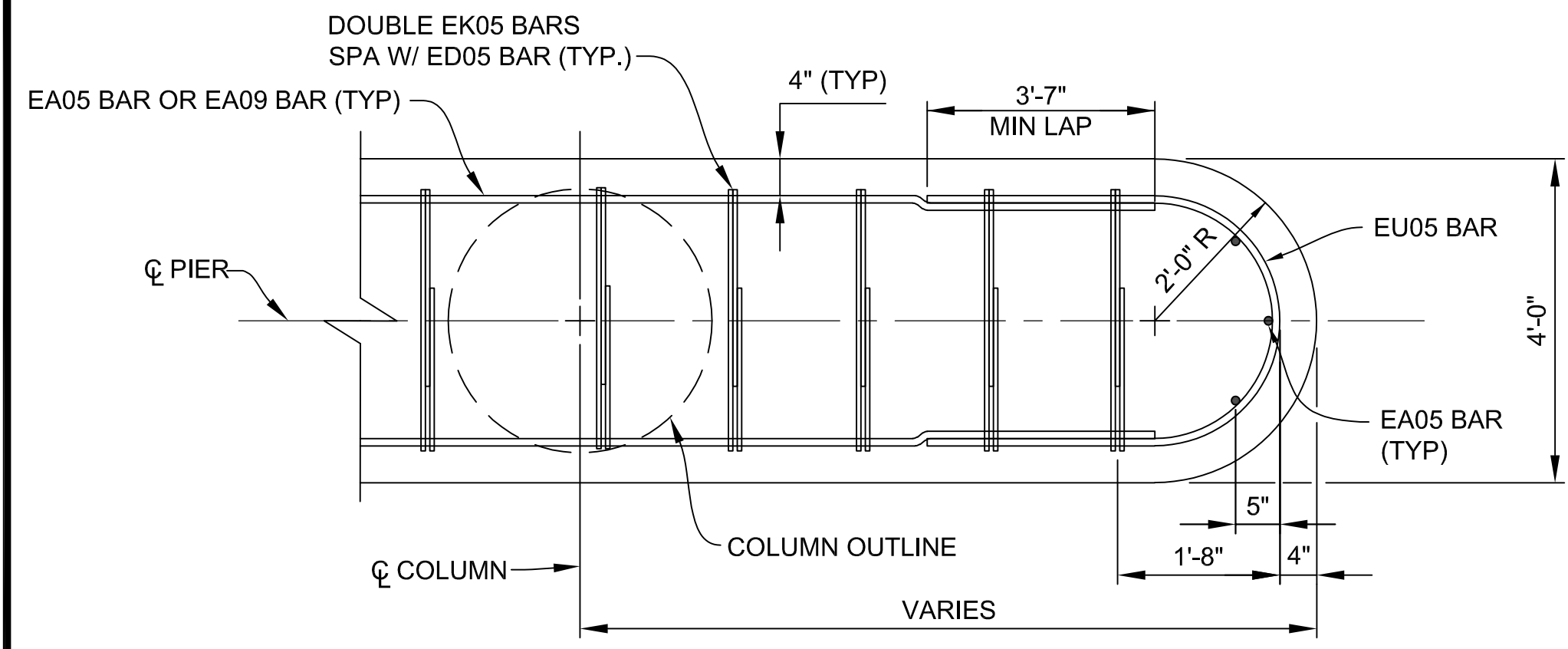
NOTE:
SEE PLAN OF PIER CAP FOR PIERS 1 & 2 FOR DETAIL LOCATIONS.

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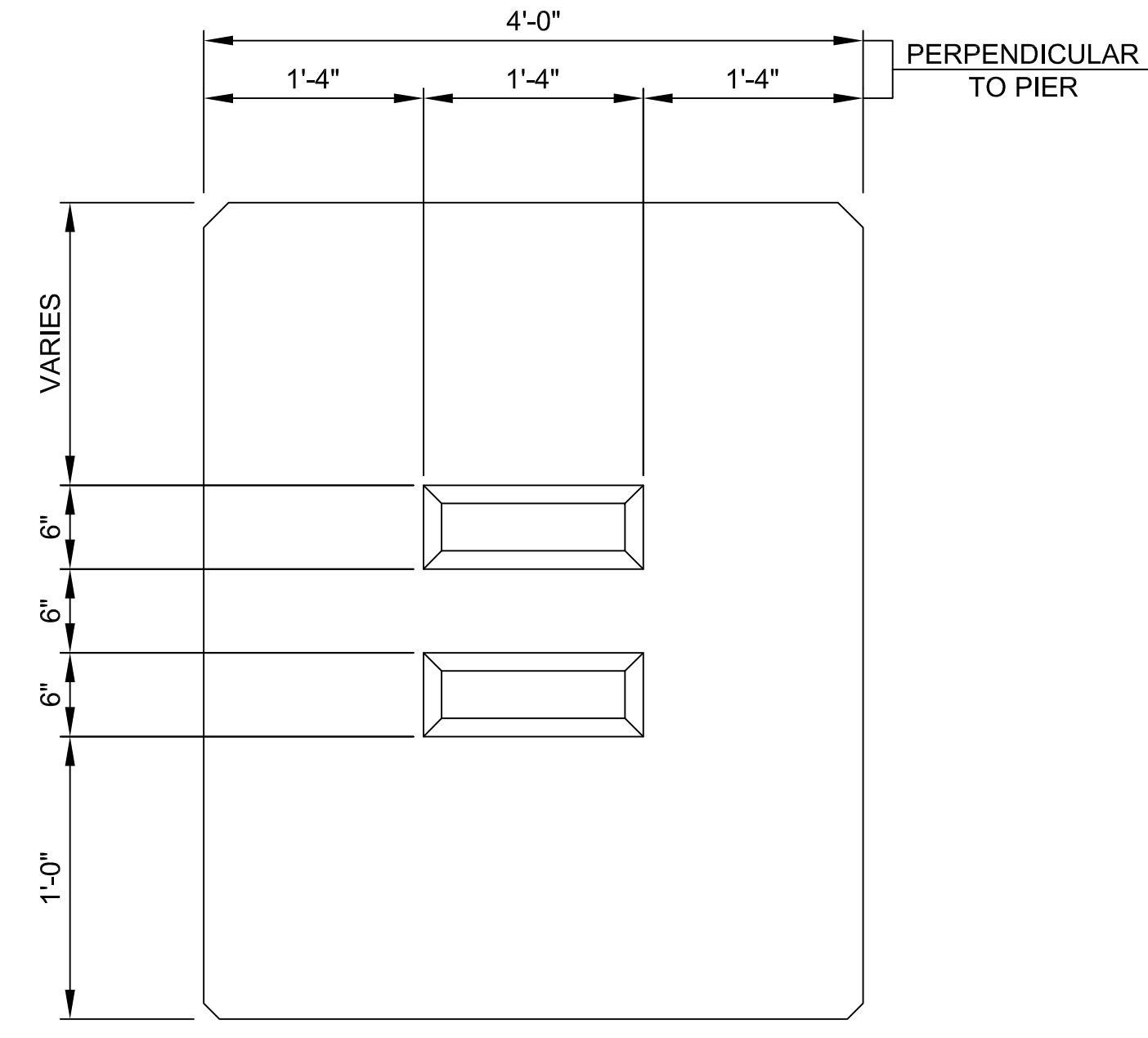
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
PIER DETAILS	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-BR26	
SHEET NO. <u>89</u> OF <u>155</u>	

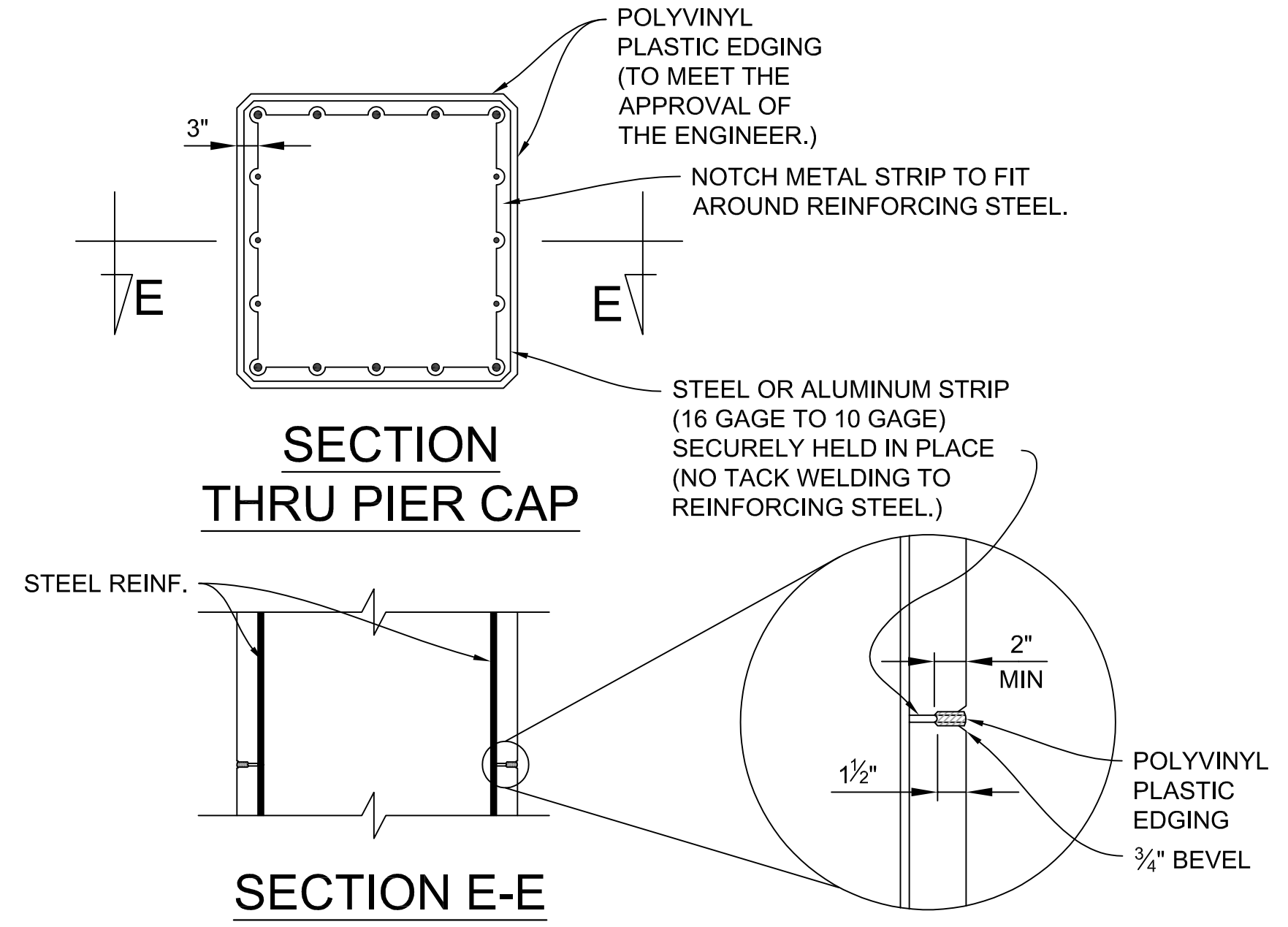
APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



TYPICAL CAP END-SECTION

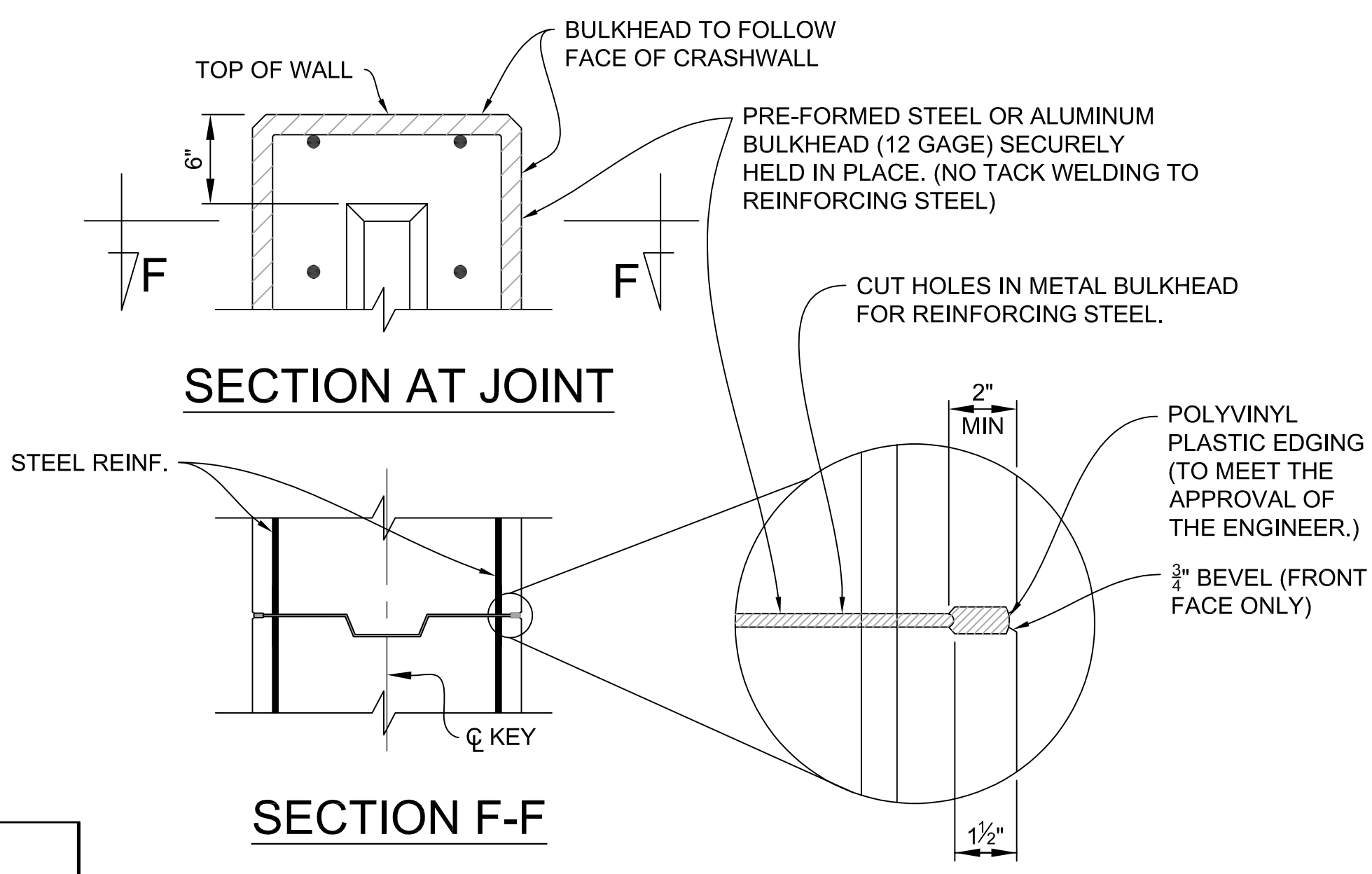


SHEAR KEY DETAIL



PIER CAP PARTIAL METAL BULKHEAD DETAILS

NOTES: PARTIAL METAL BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT AT CONTRACTOR'S EXPENSE. CARE IS TO BE USED IN CASTING CONCRETE TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.



CRASHWALL METAL BULKHEAD DETAILS

NOTES: METAL BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT AT CONTRACTOR'S EXPENSE. CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SUBSTRUCTURE CONCRETE QUANTITIES (CYD)		
POUR	PIER 1	PIER 2
* A	9.5	9.5
* B	22.5	22.5
* C	3.0	2.0
D	12.0	12.0
E	20.4	18.0
F	17.6	17.0
G	18.0	17.0
TOTAL	103	98

* DENOTES CATG 0002 (35 CYD @ PIER 1 & 34 CYD @ PIER 2), ALL OTHER POURS INCLUDED IN CATG 0001

NOTES:

REPAIR AREAS/CRACKS SHOWN ARE APPROXIMATIONS BASED ON A BRIDGE INSPECTION THAT TOOK PLACE IN OCTOBER, 2021 AND A FOLLOW-UP INSPECTION IN APRIL, 2023.

PIER COLUMNS AND CRASHWALLS SHALL BE SOUNDED PRIOR TO CONSTRUCTION AND ADDITIONAL AREAS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER.

PENETRATING WATER REPELLENT TREATMENT SHALL BE APPLIED TO THE PIER REPAIR AREAS AS DIRECTED BY THE ENGINEER.

INSTALL GALVANIC ANODES ON EXPOSED REBAR ALONG PERIMETER OF REPAIR, SPACED PER MANUFACTURER'S RECOMMENDATIONS (24 INCH MAX).

A CRACK THAT EXTENDS BELOW THE GROUND LINE SHALL, WITH PRIOR APPROVAL OF THE ENGINEER, BE REPAIRED. ALL EXCAVATION, BACKFILL, WORK, AND MATERIAL REQUIRED SHALL BE INCLUDED IN PAYMENT FOR "STRUCTURAL CRACK, REPR".

APPLY SUBSTRUCTURE HORIZONTAL SURFACE SEALER TO THE TOP HORIZONTAL SURFACE OF PIERS 1 & 2 AFTER THE ELASTOMERIC BEARINGS HAVE BEEN PLACED IN FINAL POSITION ON THE STRUCTURE. CLEAN ACCIDENTALLY COATED VERTICAL SURFACES AT THE CONTRACTOR'S EXPENSE.

APPLY LOW TEMPERATURE PROTECTION OF CONCRETE ACCORDING TO SECTION 706.03J OF THE MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE IS INCLUDED IN THE RELATED ITEMS OF WORK.

FOR MICROPILE QUANTITIES, LAYOUT AND NOTES, SEE SHEETS 80 AND 81 OF 155.

ADJUST BAR SPACING IN FOOTINGS AS NECESSARY TO AVOID MICROPILES.

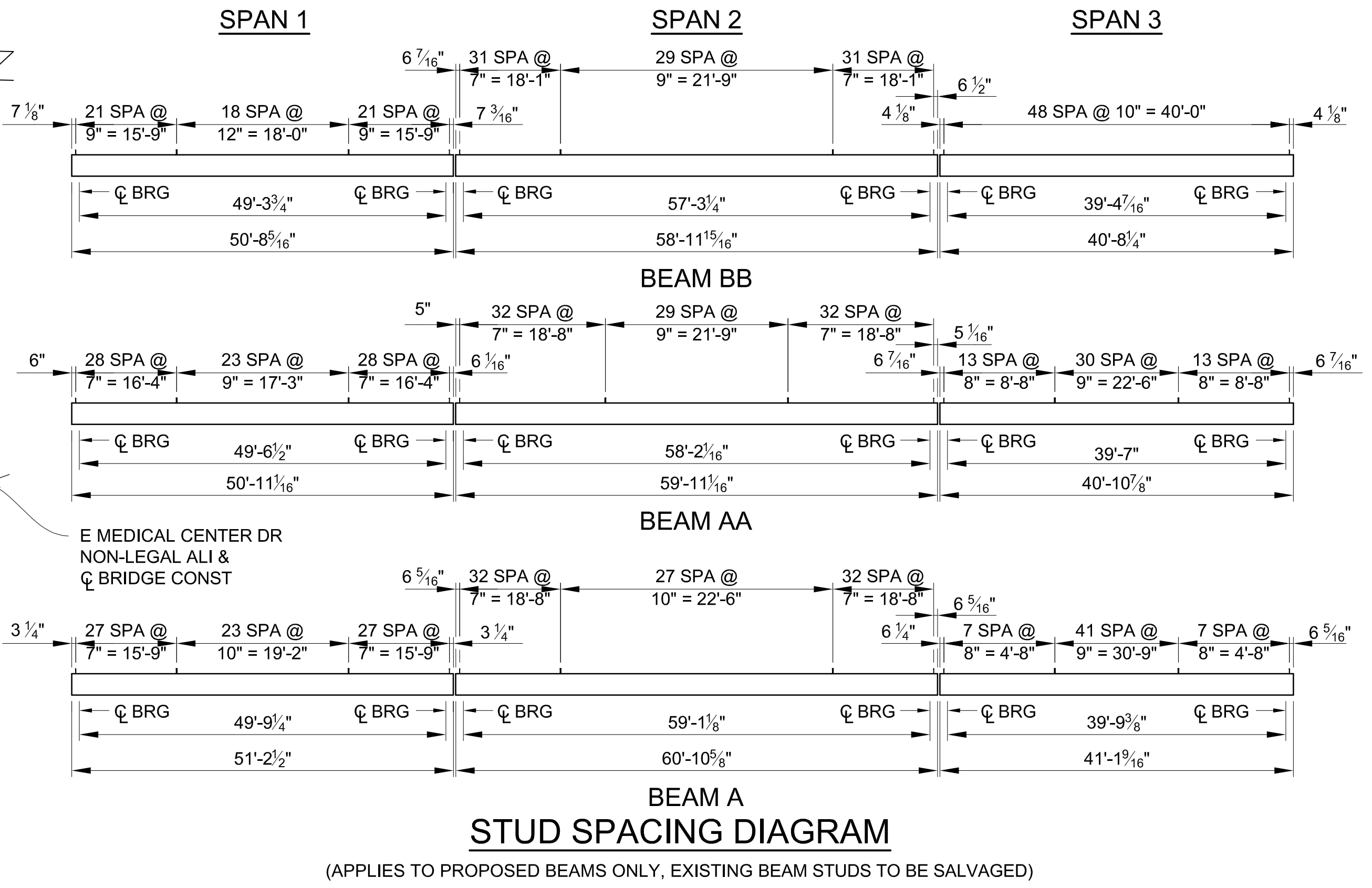
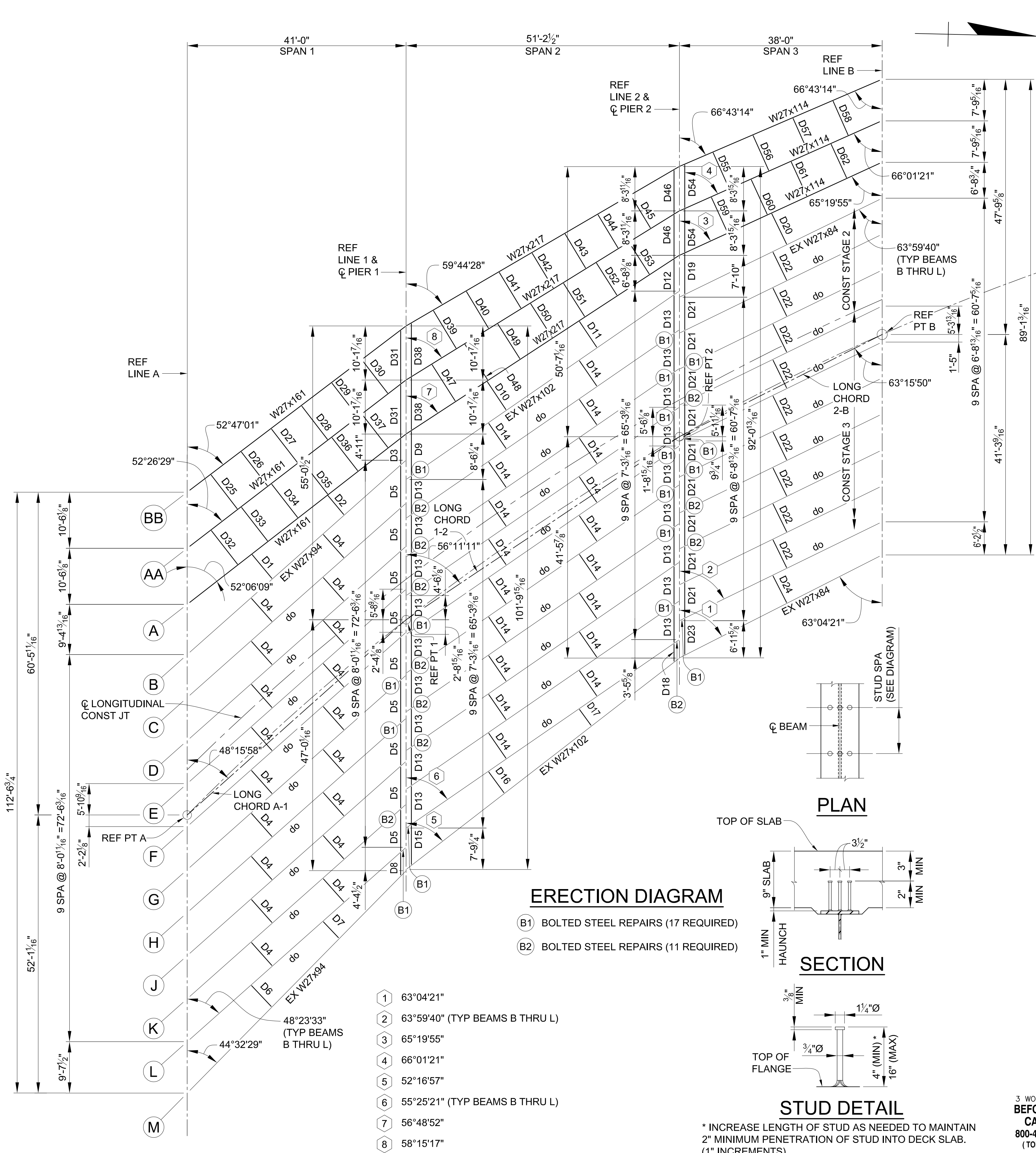
ESTIMATED QUANTITIES THIS SHEET					
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Substructure Conc	Cyd	132	69		201
Water Repellent Treatment, Penetrating	Syd	58			58
Substructure Horizontal Surface Sealer (STR 11065)	Syd	93			93
Hand Chipping, Other Than Deck	Cft	129			129
Patch, Forming	Sft	517			517
Adhesive Anchoring of Horizontal Bar, 3/4 inch	Ea		92		92
Adhesive Anchoring of Vertical Bar, 3/4 inch	Ea		8		8
Reinforcement, Mechanical Splice	Ea	32			32
Flushing Cracks, Water	Ft	66			66
Structural Crack, Repr	Ft	66			66
Patching Conc, C-L	Cyd	4.8			4.8
Embedded Galvanic Anode	Ea	280			280

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DLZ					PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR				
					EAST MEDICAL CENTER DRIVE				
					PIER DETAILS				
					SCALE	INCH			
					NTS	0 1			
					DRAWING NO.				
					2021-008-BR27				
					SHEET NO. 90 OF 155				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY				
		10-6-23	DAF	CLH					

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(APPLIES TO PROPOSED BEAMS ONLY, EXISTING BEAM STUDS TO BE SALVAGED)

ESTIMATED QUANTITIES THIS SHEET					
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Shear Developers (STR 11065)	LSUM		0.75		0.75
Structural Steel, Mixed, Erect	Lb	43,047	16,272		59,319
Structural Steel, Mixed, Furn and Fab	Lb	43,047	16,272		59,319
Structural Steel, Rolled Shape, Erect	Lb		77,700		77,700
Structural Steel, Rolled Shape, Furn and Fab	Lb		77,700		77,700
Structural Steel, Galvanizing (STR 11065)	LSUM	1			1
Beam Plate, Seal Perimeter	Ft	2,220			2,220

NOTES:

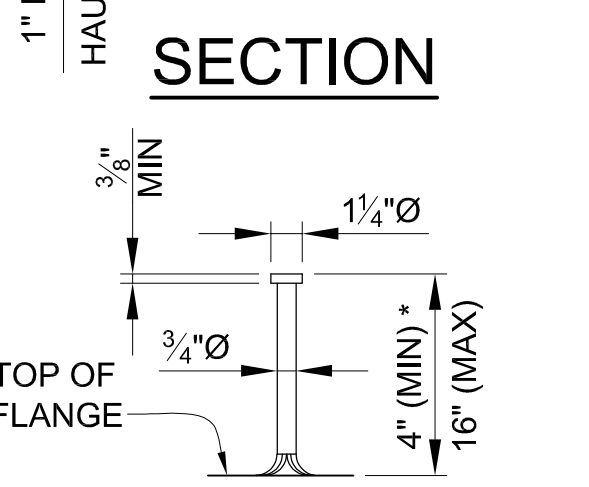
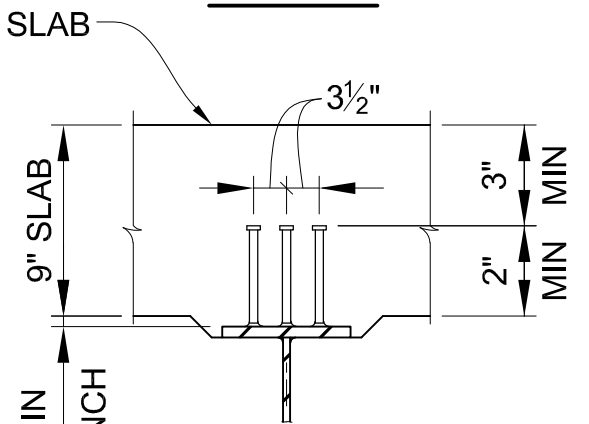
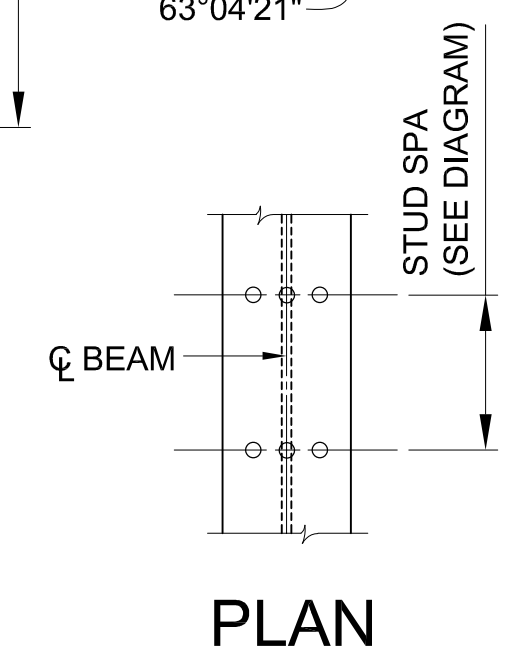
- ES DENOTES EACH SIDE.
- NS DENOTES NEAR SIDE.
- FS DENOTES FAR SIDE.
- CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO STEEL FABRICATION.
- CONNECTIONS SHALL BE BOLTED WITH 3/4" Ø HIGH STRENGTH BOLTS.
- ANCHOR BOLT LENGTHS SHOWN ARE MINIMUM. BOLTS LONGER THAN THOSE SHOWN MAY BE FURNISHED AT NO ADDITIONAL COST.
- EXISTING AND PROPOSED STRUCTURAL STEEL SHALL BE GALVANIZED ACCORDING TO SECTION 716.03.B.4 OF THE MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50 OR AASHTO M270, GRADE 50W. AASHTO M270, GRADE 36 STEEL MAY BE USED IN LIEU OF THIS STEEL FOR SOLE PLATES AND DIAPHRAGMS.
- THIS BRIDGE IS COATED WITH A ZINC BASED COATING SYSTEM. THE STRUCTURAL STEEL HAS BEEN BLAST CLEANED PRIOR TO COATING. THE ADDITIONAL EFFORT TO CLEAN THE STRUCTURAL STEEL WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCLUDED IN THE BID ITEMS.
- THE ENGINEER WILL INSPECT THE STRUCTURAL STEEL PARTS THAT HAVE BEEN BLAST CLEANED FOR EVIDENCE OF CRACKS OR LOSS OF SECTION DUE TO CORROSION OF MORE THAN 15 PERCENT. THE ENGINEER WILL REPORT DETERIORATION IN WRITING TO THE CITY OF ANN ARBOR.
- APPLY SEALANT AROUND THE CONNECTION OF NEW STRUCTURAL STEEL MEMBER TO EXISTING STRUCTURAL STEEL MEMBER.
- THE PAYMENT FOR PROPOSED SOLE PLATES, DIAPHRAGMS, CONNECTION PLATES, STEEL SUPPORT ANGLES FOR CONDUIT HANGER ASSEMBLIES, AND BOLTED BEAM END REPAIRS SHALL BE INCLUDED IN THE PAY ITEMS "STRUCTURAL STEEL, MIXED, ERRECT" AND "STRUCTURAL STEEL, MIXED, FURN AND FAB".
- THE PAYMENT FOR PROPOSED BEAMS SHALL BE INCLUDED IN THE PAY ITEMS "STRUCTURAL STEEL, ROLLED SHAPE, ERRECT" AND "STRUCTURAL STEEL, ROLLED SHAPE, FURN AND FAB".
- THE PAYMENT FOR THE CONDUIT HANGER ASSEMBLY WILL BE INCLUDED IN THE PAY ITEM "CONDUIT, SCHEDULE 80, 4 INCH, STRUCTURE".

ERECTION DIAGRAM

- (B1) BOLTED STEEL REPAIRS (17 REQUIRED)
- (B2) BOLTED STEEL REPAIRS (11 REQUIRED)

- 1 63°04'21"
- 2 63°59'40" (TYP BEAMS B THRU L)
- 3 65°19'55"
- 4 66°01'21"
- 5 52°16'57"
- 6 55°25'21" (TYP BEAMS B THRU L)
- 7 56°48'52"
- 8 58°15'17"

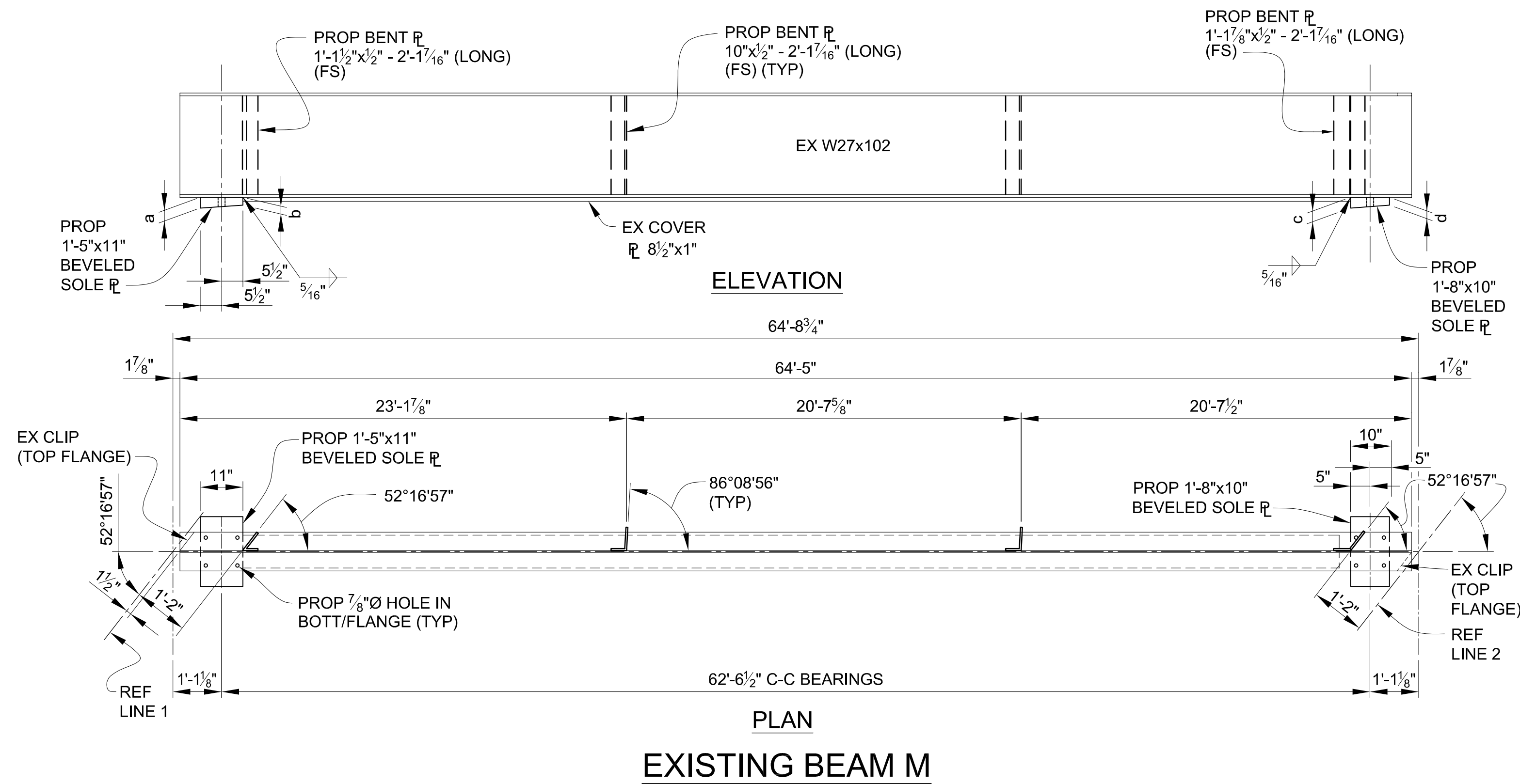
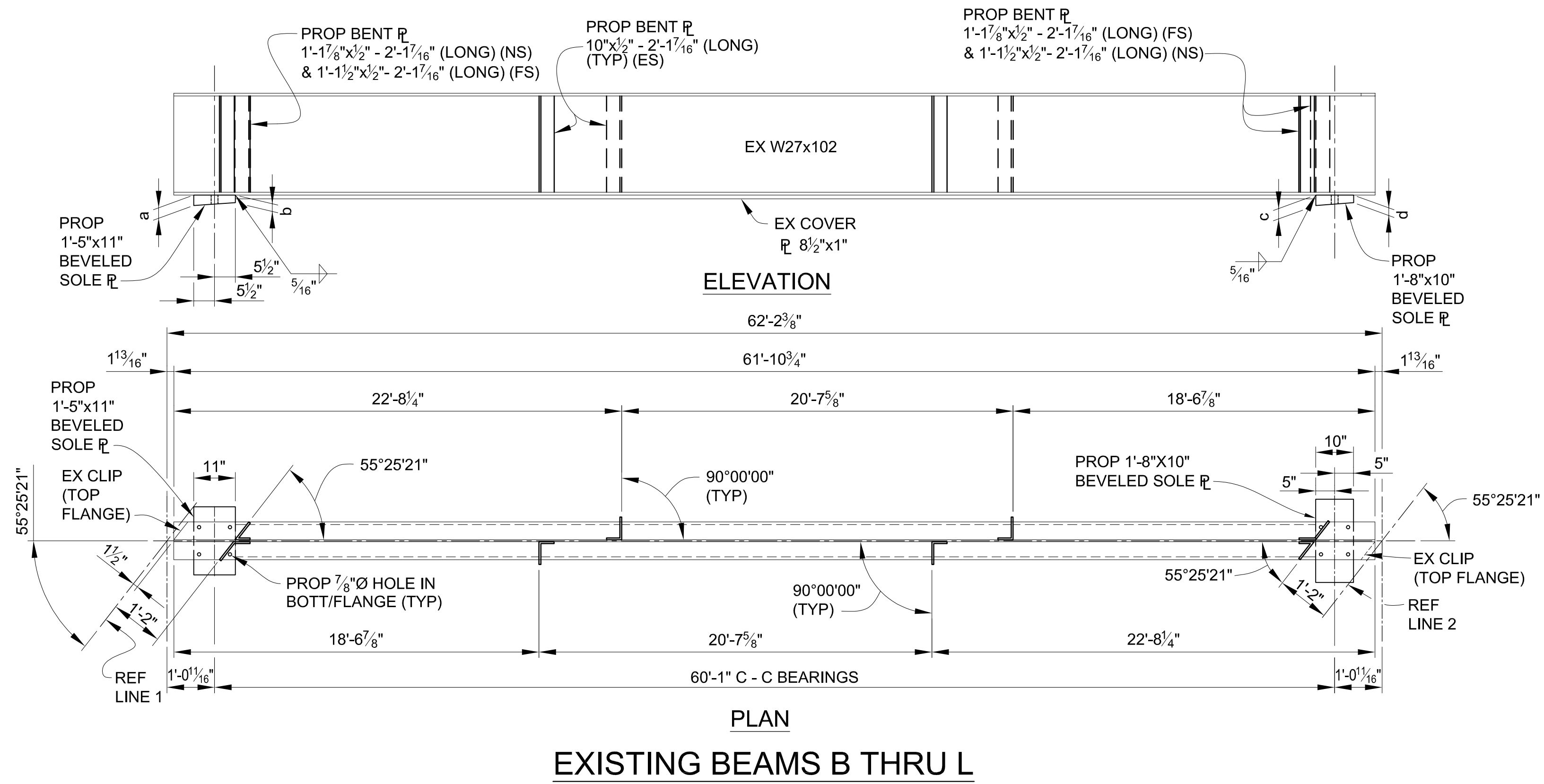
* INCREASE LENGTH OF STUD AS NEEDED TO MAINTAIN 2" MINIMUM PENETRATION OF STUD INTO DECK SLAB. (1" INCREMENTS)



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REV. NO.	DESCRIPTION	DATE	DR. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
STRUCTURAL STEEL DETAILS	
ERECTION DIAGRAM	
SCALE HOR. 3/32" = 1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR28	
SHEET NO. <u> 91 </u> OF <u> 155 </u>	



SPAN 2 - SOLE PLATE TABULATED DIMENSIONS

BEAM	REF LINE 1		REF LINE 2	
	a	b	c	d
B	2 7/8"	2 1/4"	3 1/16"	3 1/8"
C	2 5/8"	2"	2 3/16"	2"
D	2 5/8"	2"	3 1/8"	2 9/16"
E	2 5/8"	2"	3"	2 7/16"
F	2 9/16"	2"	2 3/4"	2 3/16"
G	2 9/16"	2"	3"	2 1/2"
H	2 9/16"	2"	3 3/4"	3 1/4"
J	2 9/16"	2"	2 1 1/16"	2 3/16"
K	2 9/16"	2"	2 1/2"	2"
L	3 5/8"	3 1/8"	2 7/8"	2 3/8"
M	2 1/2"	2"	4"	3 9/16"

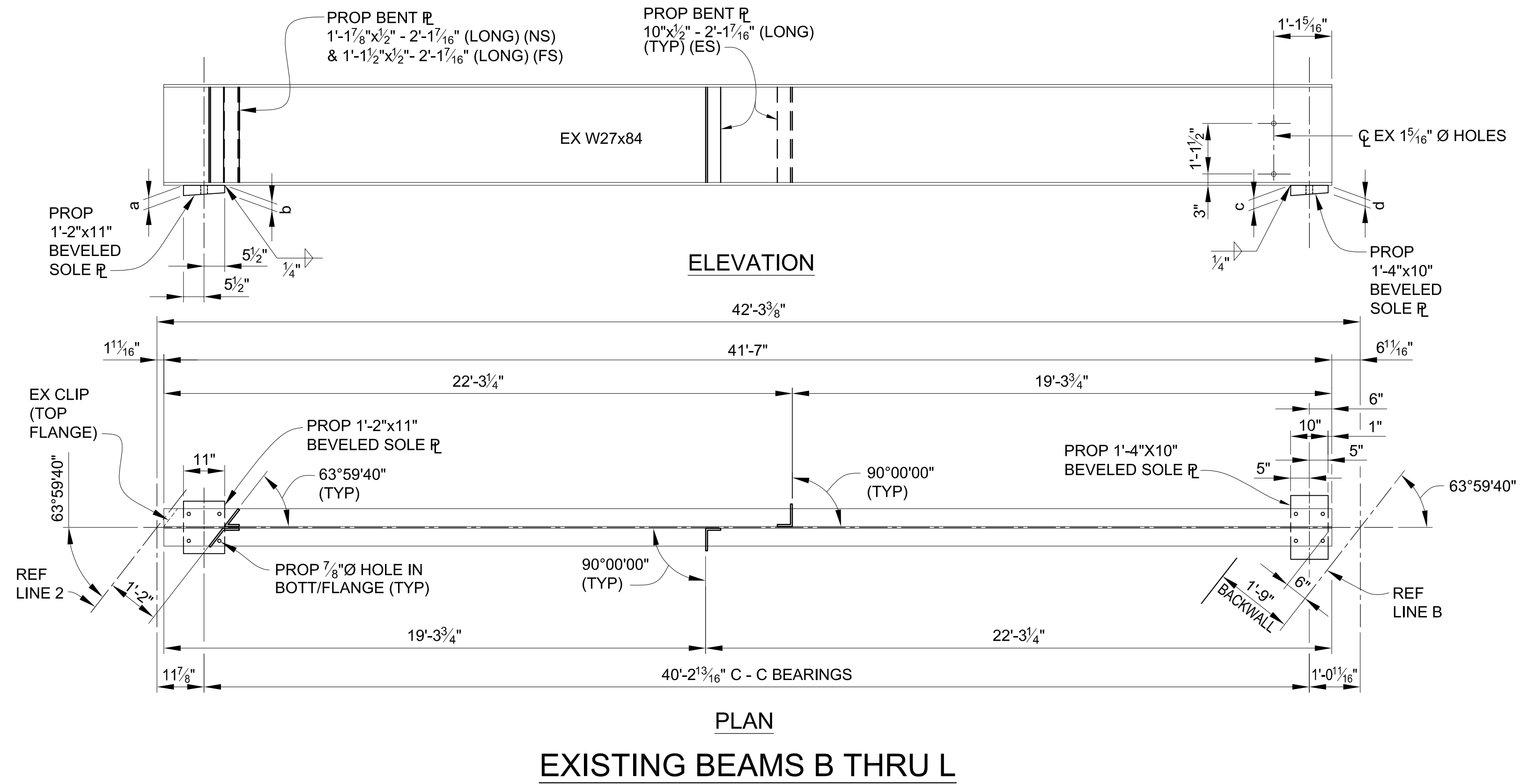
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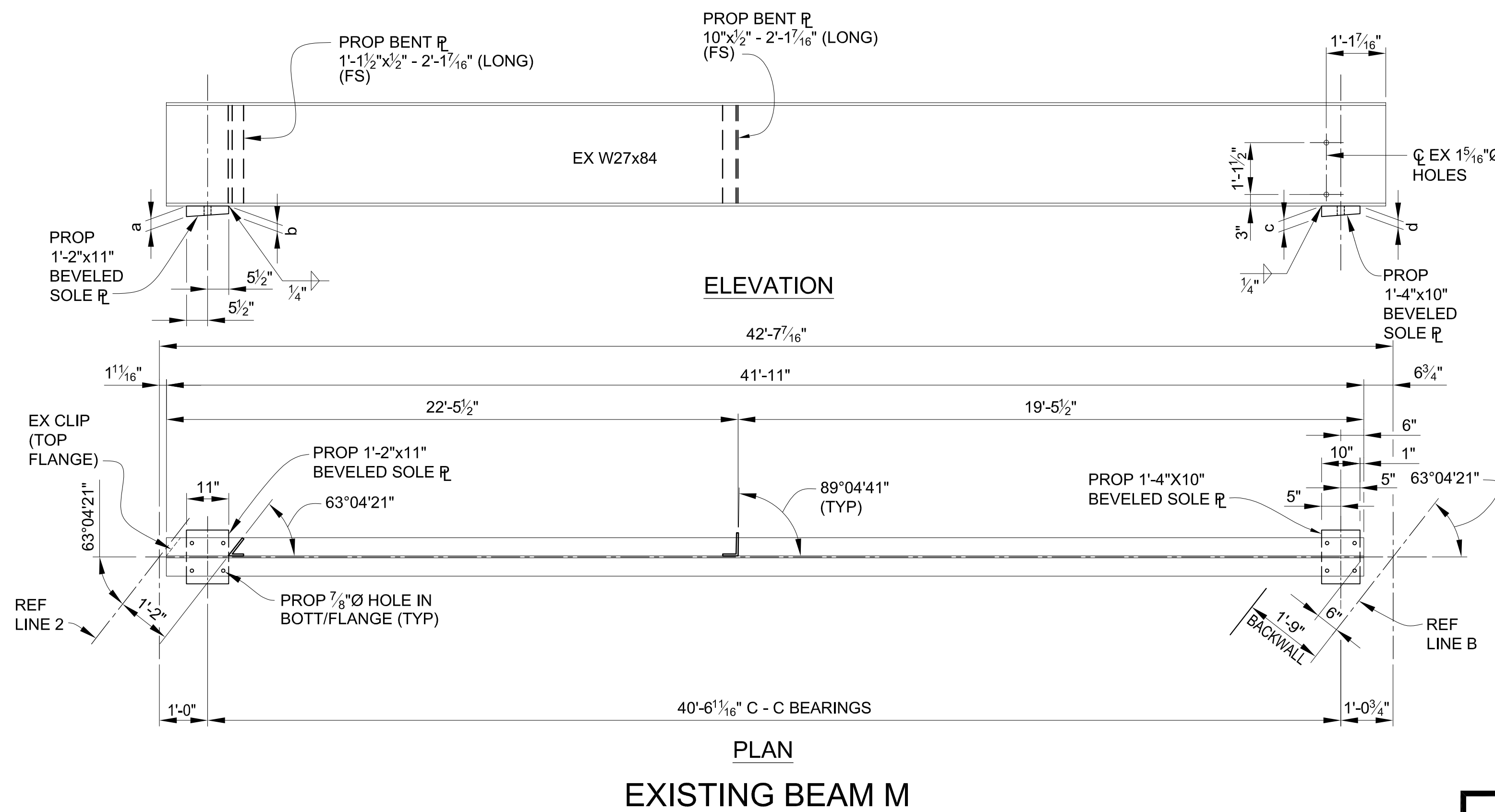
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
EAST MEDICAL CENTER DRIVE			
STRUCTURAL STEEL DETAILS EXISTING BEAMS - SPAN 2			
SCALE	HOR. 3/32"=1'-0"	INCH	1
DRAWING NO.	2021-008-BR30		
SHEET NO.	93	OF	155

APPROVED BY: _____
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EXISTING BEAMS B THRU L



EXISTING BEAM M

SPAN 3 - SOLE PLATE TABULATED DIMENSIONS				
BEAM	REF LINE 2		REF LINE B	
	a	b	c	d
B	3/16"	2 3/4"	3/8"	2 1/2"
C	2 1/16"	2"	2 5/8"	2"
D	2 5/16"	2 1/4"	3 7/16"	2 3/16"
E	2 1/16"	2"	3/8"	2 1/2"
F	2 5/16"	2 1/4"	2 7/8"	2 1/4"
G	2 1/16"	2"	2 3/4"	2 1/8"
H	3 5/16"	2 5/8"	2 5/8"	2"
J	2 1/16"	2"	2 5/8"	2"
K	3 1/2"	2 3/16"	2 5/8"	2"
L	2 1/16"	2"	2 5/8"	2"
M	2 1/16"	2"	2 5/8"	2"

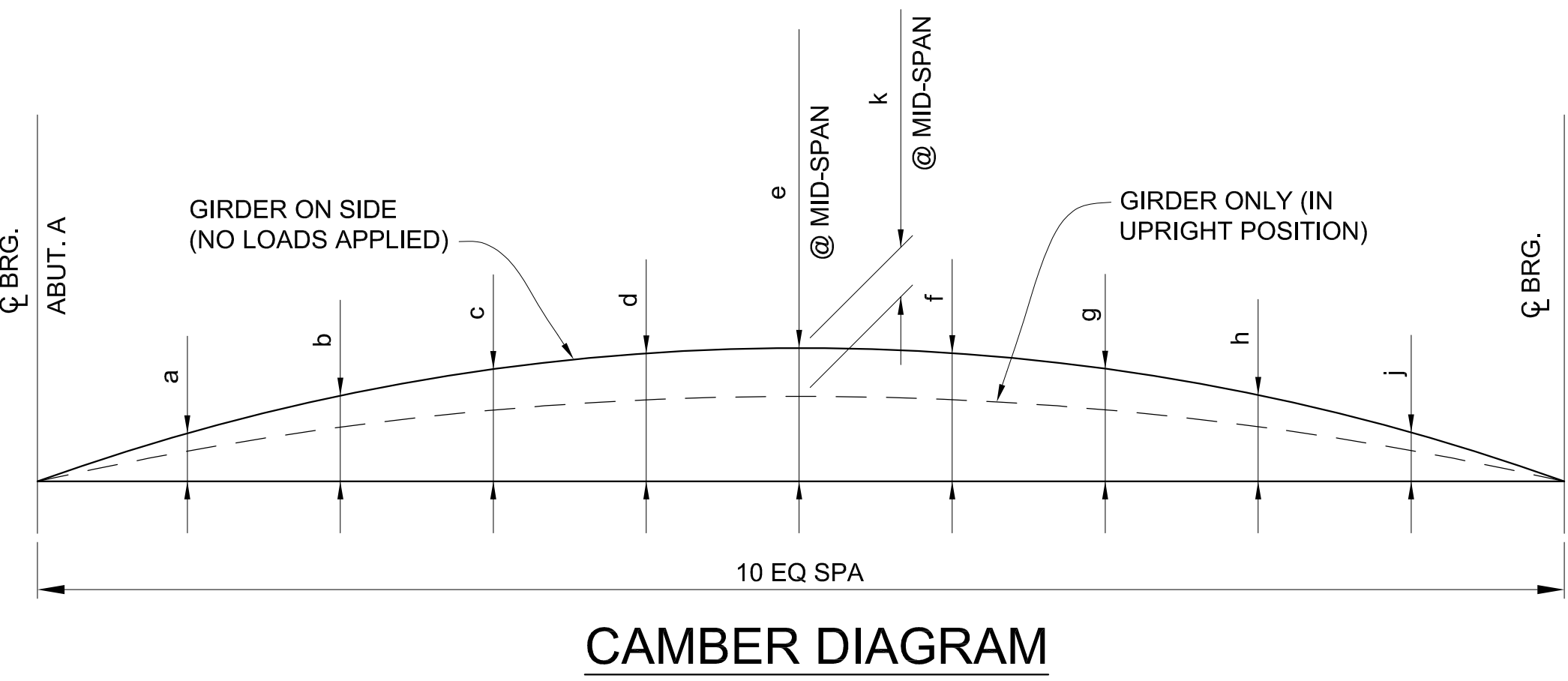
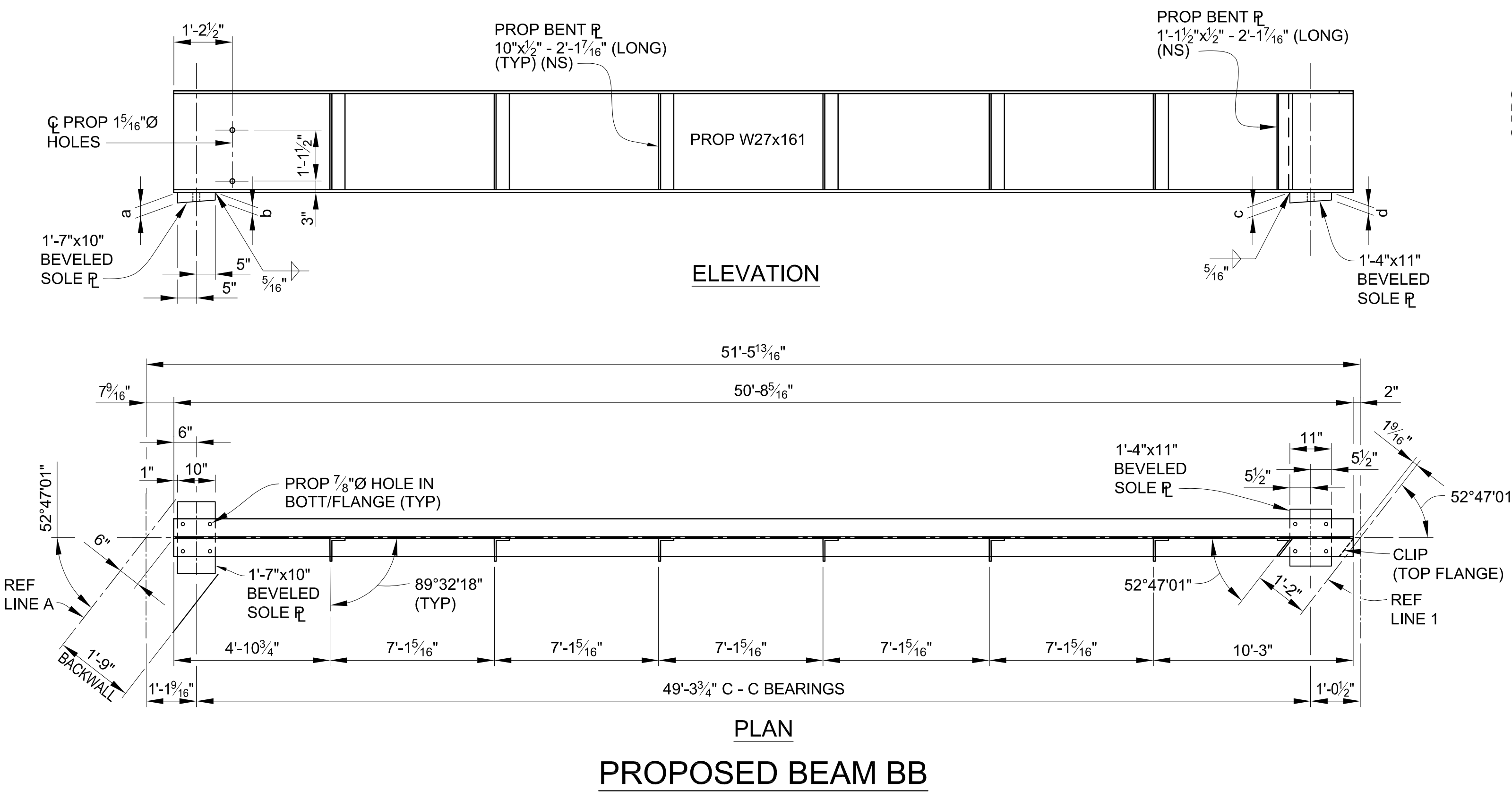
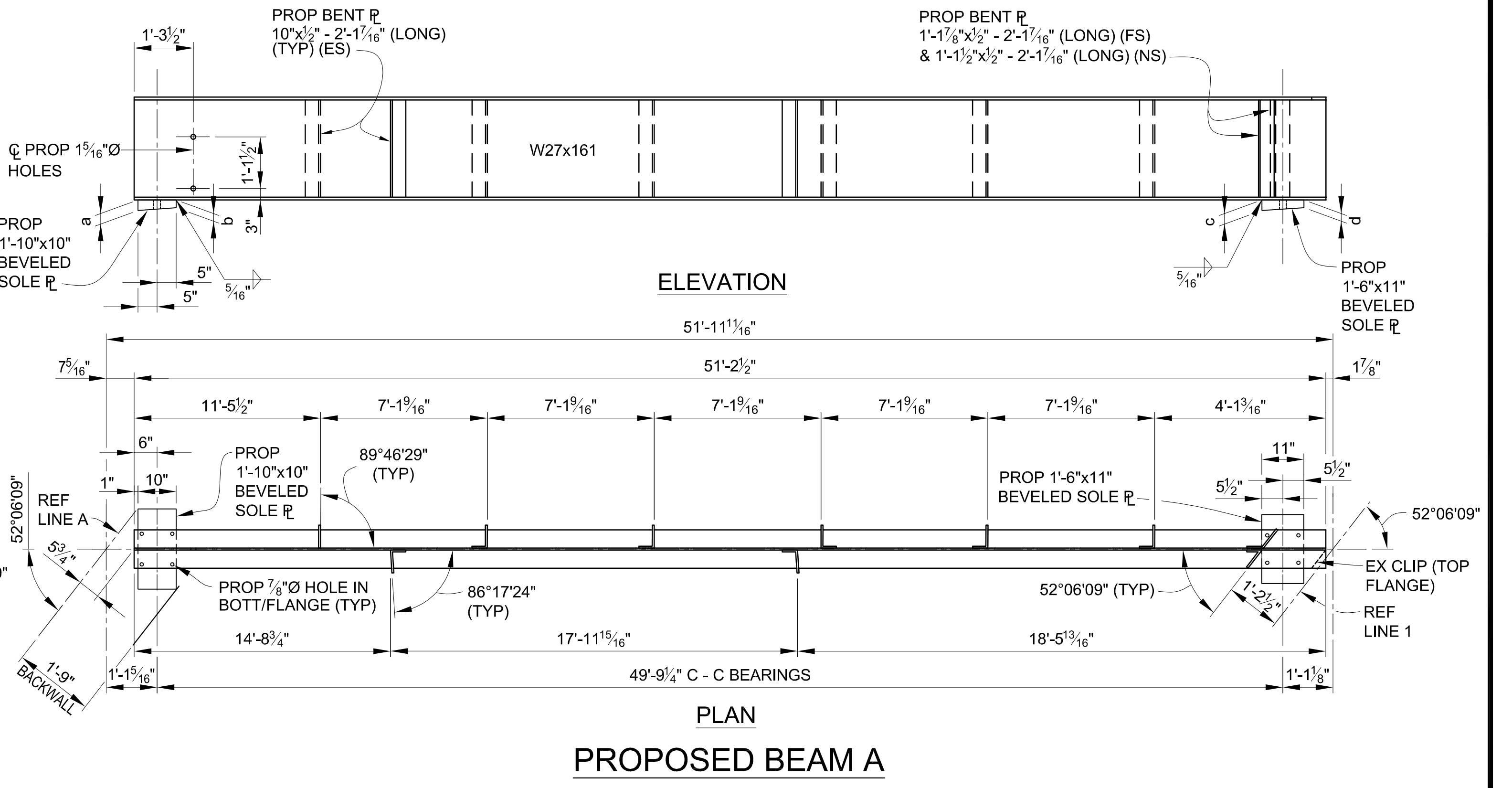
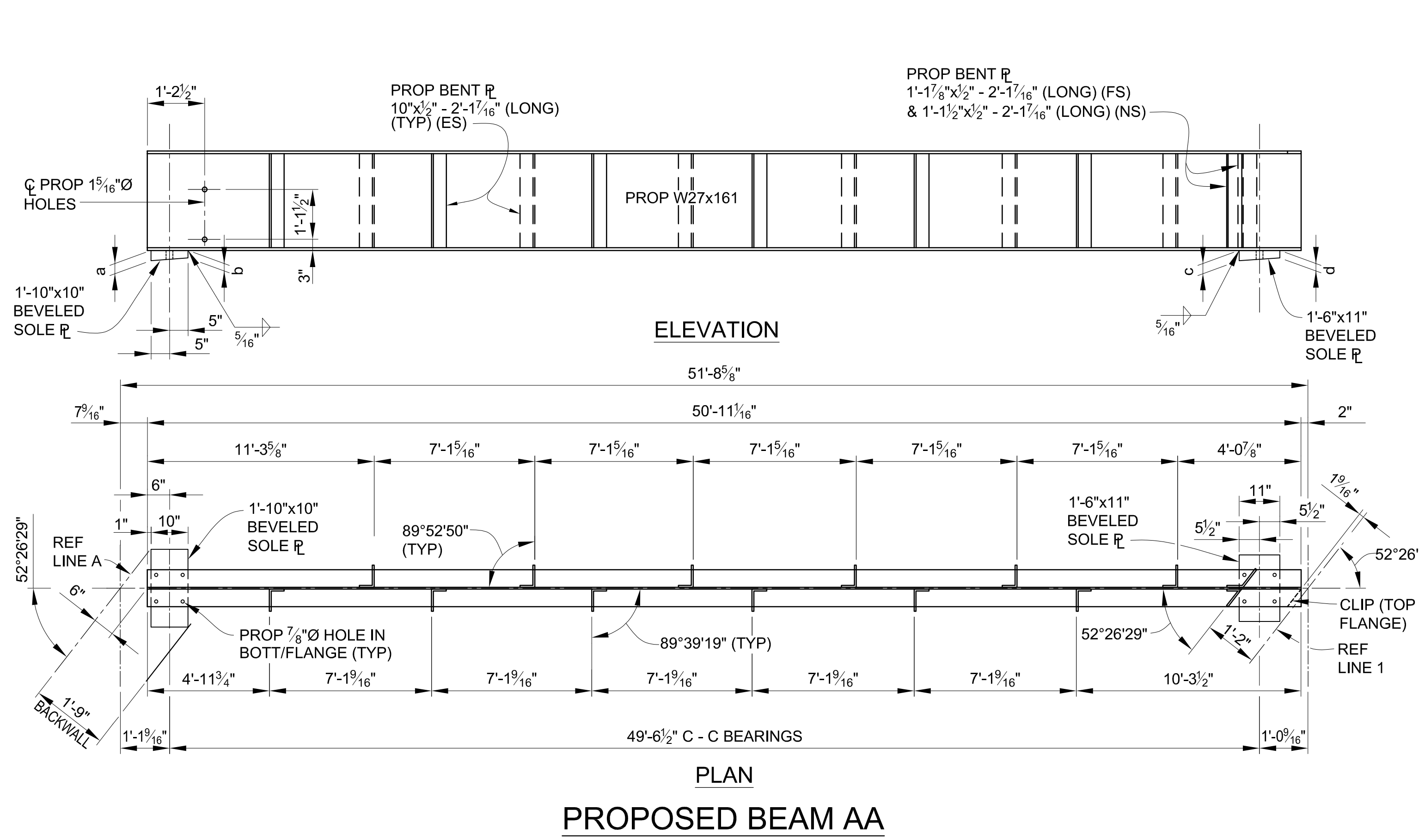
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	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
STRUCTURAL STEEL DETAILS	
EXISTING BEAMS - SPAN 3	
SCALE HOR. 3/32"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR31	
SHEET NO. <u>94</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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		CAMBER (IN)		
		BEAM A	BEAM AA	BEAM BB
SPAN 1	a	0.29	0.34	0.26
	b	0.55	0.65	0.49
	c	0.75	0.88	0.68
	d	0.88	1.04	0.79
	e	0.93	1.09	0.83
	f	0.88	1.04	0.79
	g	0.75	0.88	0.68
	h	0.55	0.65	0.49
	j	0.29	0.34	0.26
	k	0.24	0.30	0.19

SPAN 1 - SOLE PLATE TABULATED DIMENSIONS				
BEAM	REF LINE A		REF LINE 1	
	a	b	c	d
AA	2 7/16"	2"	4 3/4"	4 1/4"
BB	2 1/2"	2"	4 1/16"	4 3/16"
A	2 7/16"	2"	4 1/16"	4 3/16"

3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

DLZ

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

STRUCTURAL STEEL DETAILS
PROPOSED BEAMS SPAN 1

APPROVED BY: _____

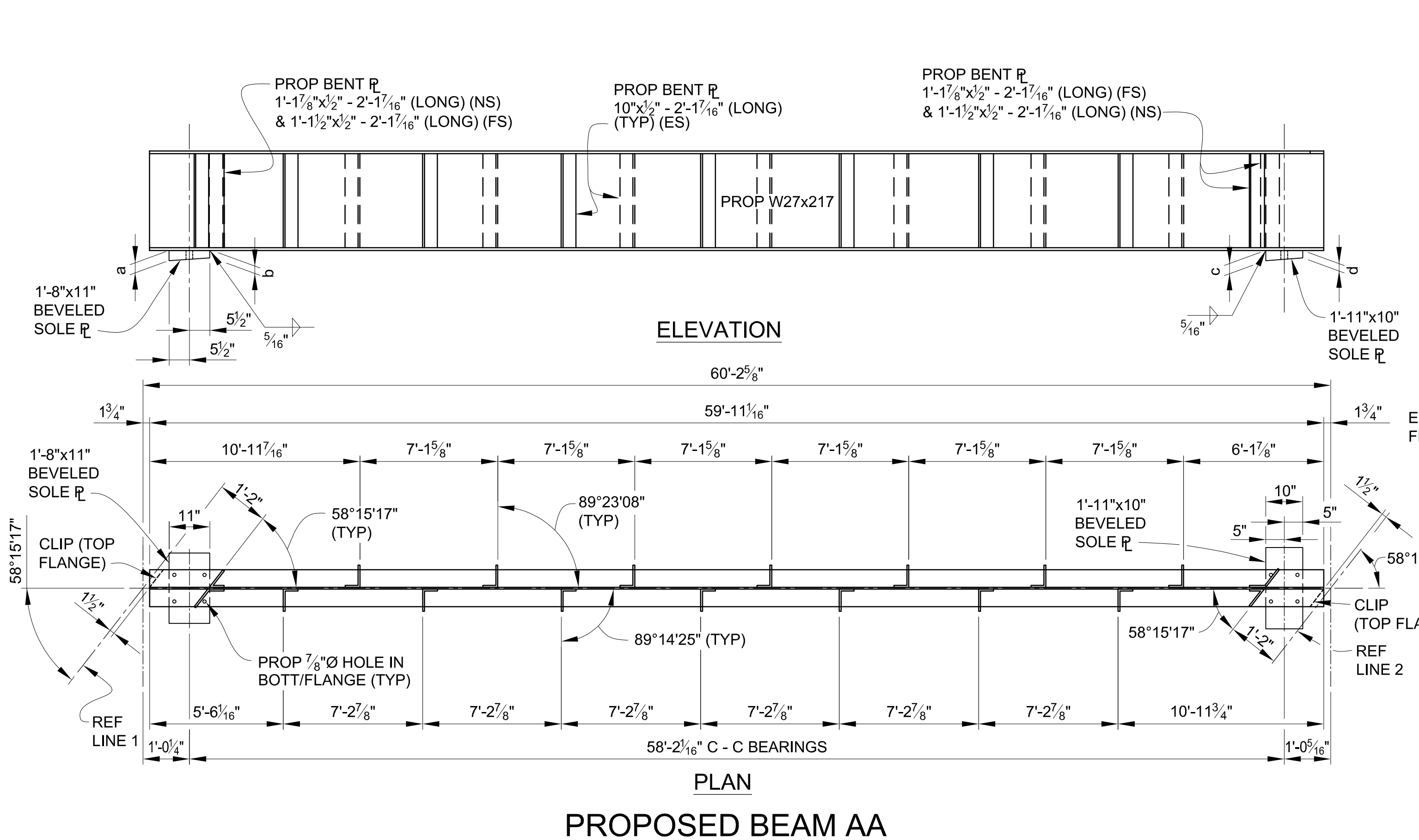
SCALE: HOR. 3/32" = 1'-0"

DRAWING NO. 2021-008-BR32

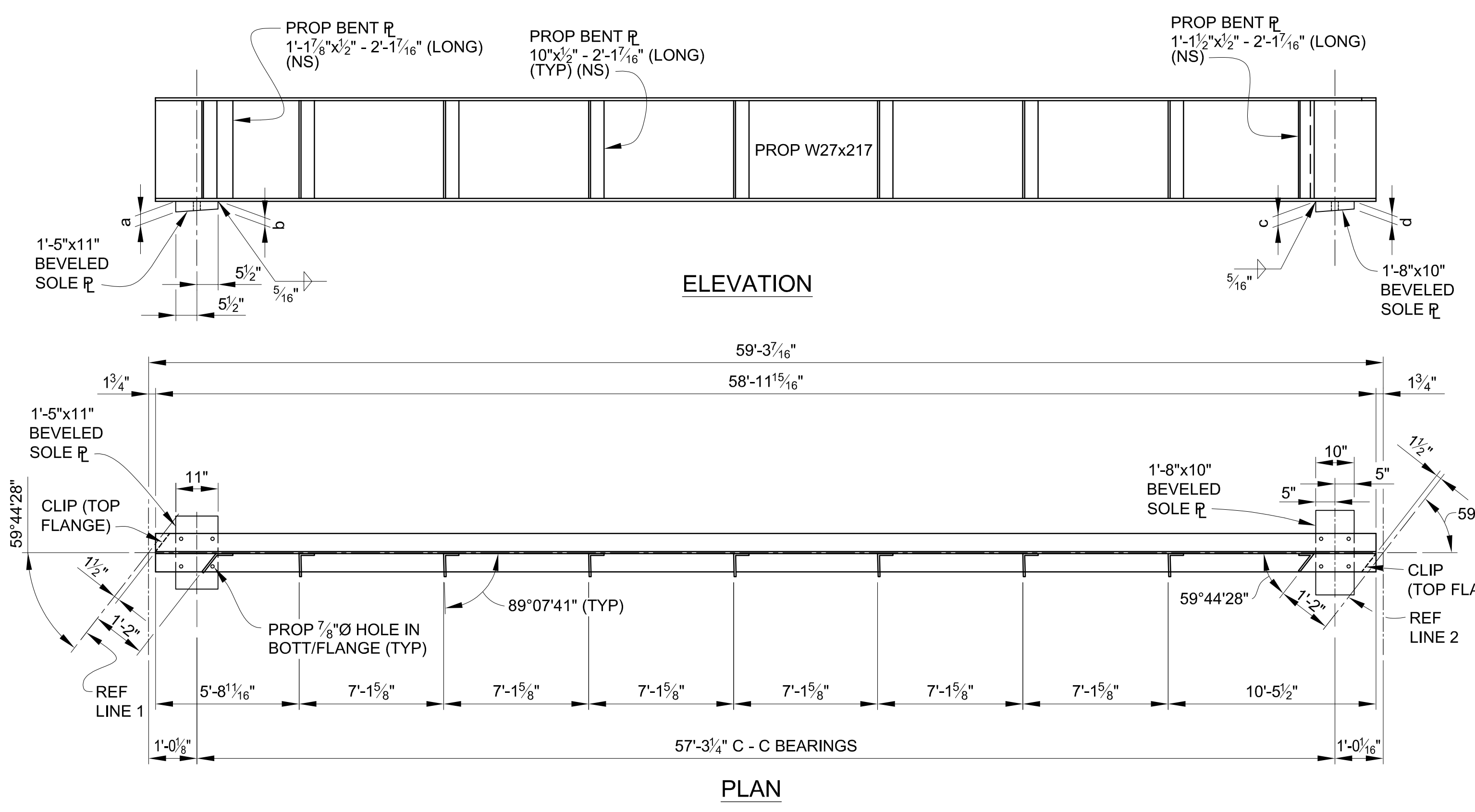
SHEET NO. 95 OF 155

CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

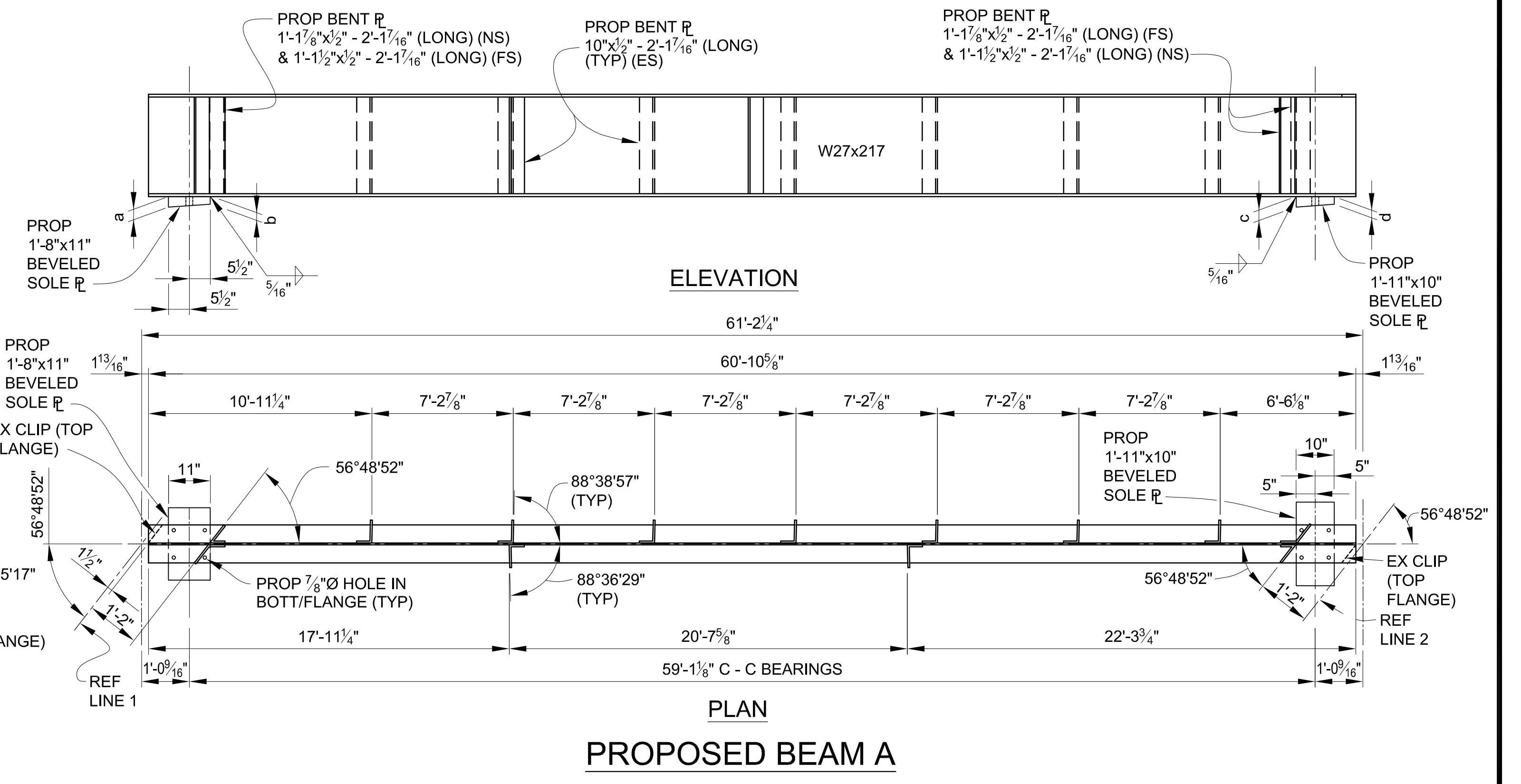
rp.com\pan-files\Files\Projects\2021\2141736300 AA - EMCD Bridge\01_ConstrDocs\CAD\EMCD_bmwf_006



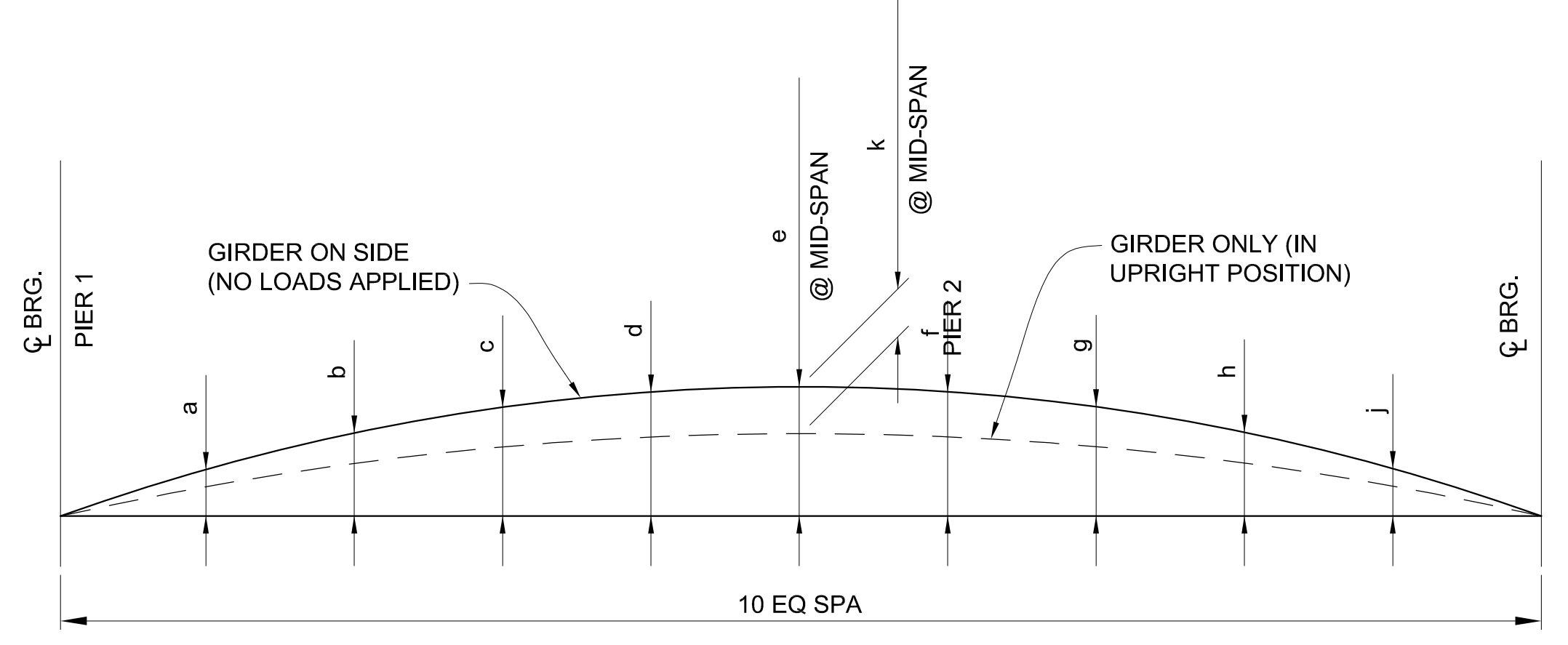
PROPOSED BEAM AA



PROPOSED BEAM BB



PROPOSED BEAM A



CAMBER DIAGRAM

SPAN 2	CAMBER (IN)		
	BEAM A	BEAM AA	BEAM BB
a	0.44	0.48	0.38
b	0.83	0.91	0.71
c	1.14	1.25	0.97
d	1.33	1.47	1.14
e	1.39	1.54	1.20
f	1.33	1.47	1.14
g	1.14	1.25	0.97
h	0.83	0.91	0.71
j	0.44	0.48	0.38
k	0.40	0.46	0.30

SPAN 2 - SOLE PLATE TABULATED DIMENSIONS

BEAM	REF LINE 1		REF LINE 2	
	a	b	c	d
AA	2 1/16"	2"	2 5/8"	2"
BB	2 1/16"	2"	2 5/8"	2"
A	2 5/8"	2"	2 9/16"	2"

DLZ

3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

STRUCTURAL STEEL DETAILS
PROPOSED BEAMS SPAN 2

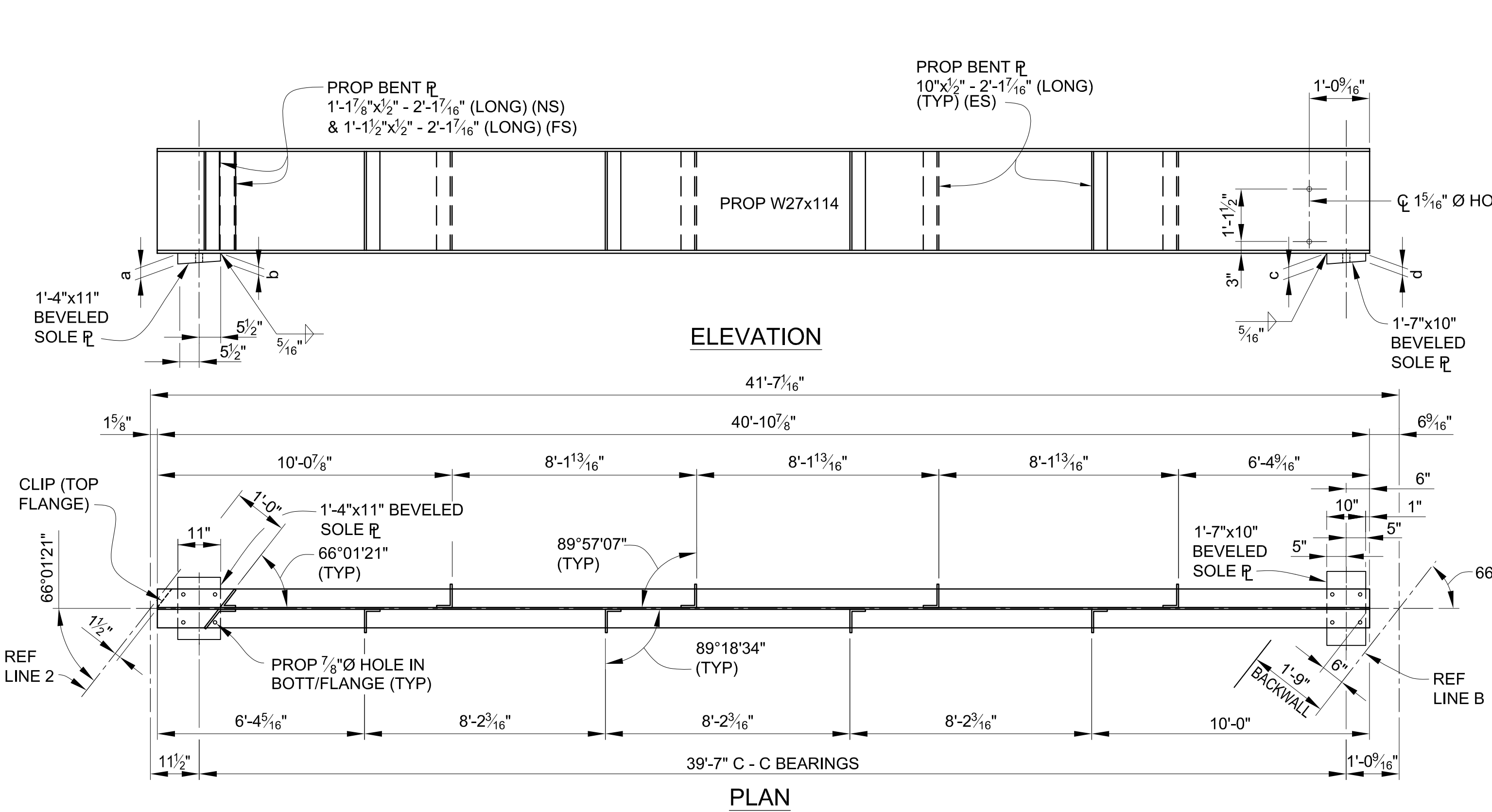
APPROVED BY: _____

SCALE: HOR. 3/32" = 1'-0"

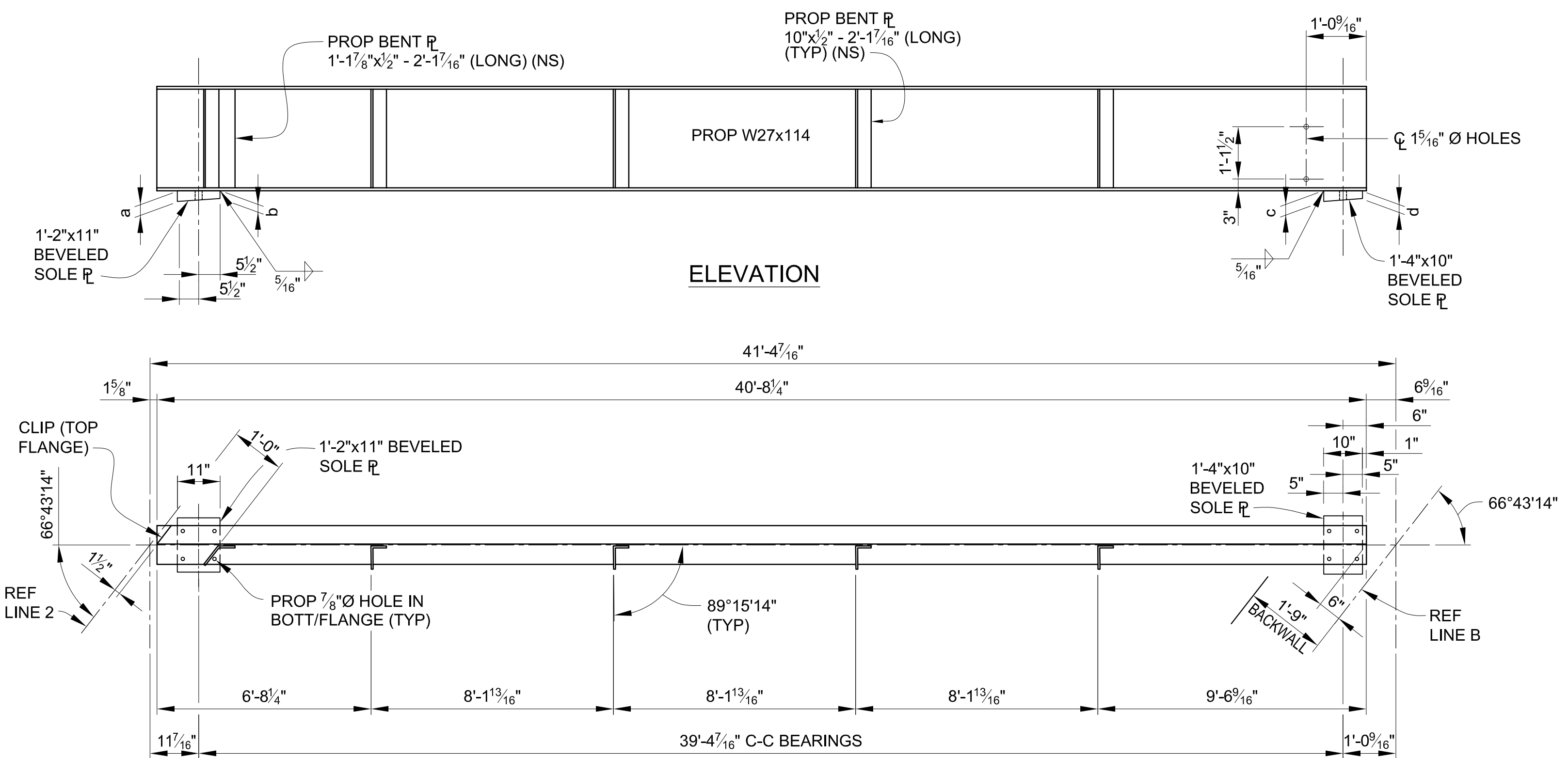
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SHEET NO. 96 OF 155

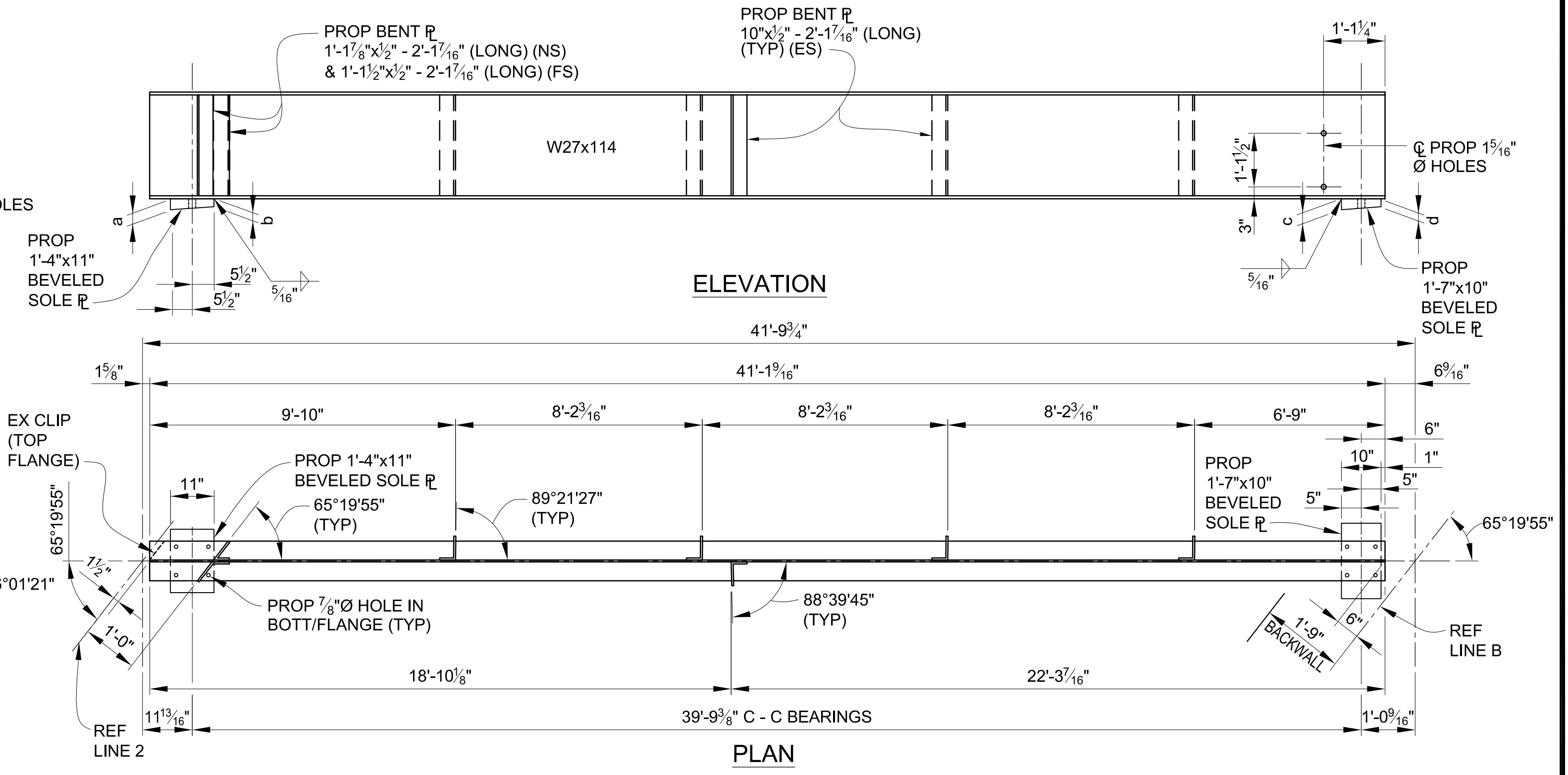
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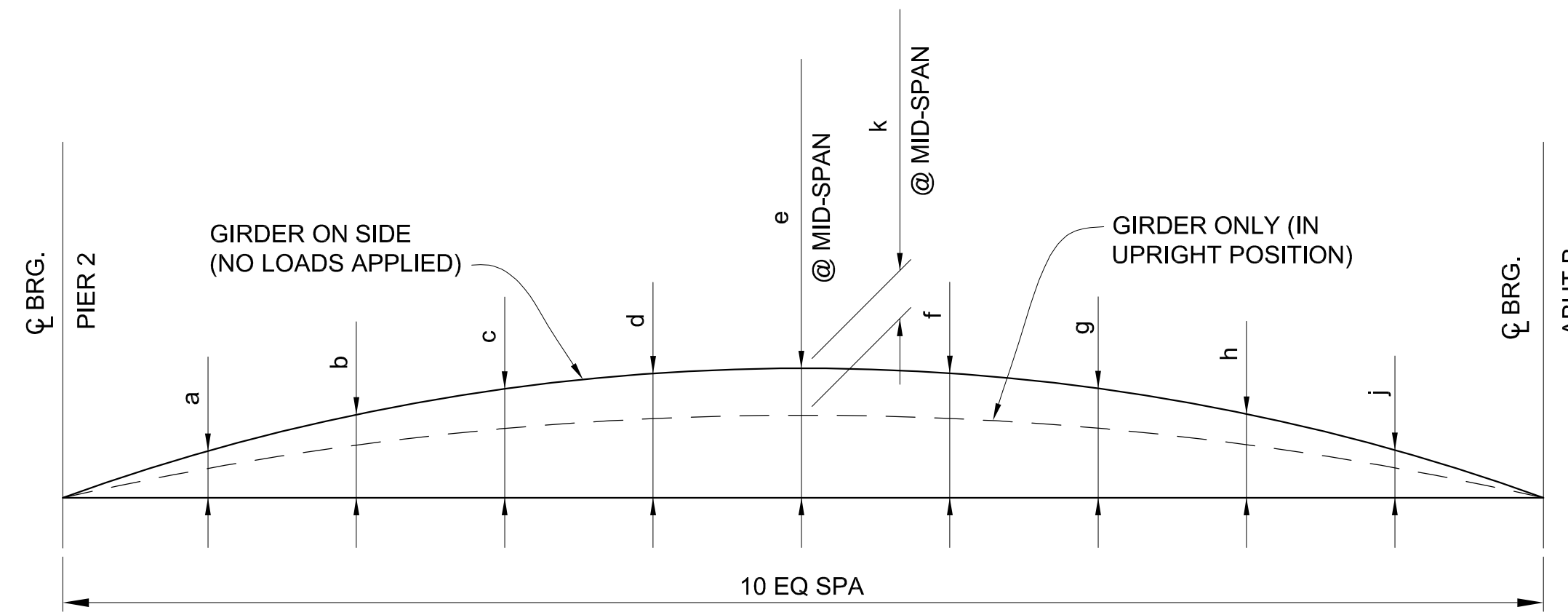
PROPOSED BEAM AA



PROPOSED BEAM BB



PROPOSED BEAM A



CAMBER DIAGRAM

SPAN 3	CAMBER (IN)		
	BEAM A	BEAM AA	BEAM BB
a	0.19	0.19	0.15
b	0.36	0.36	0.29
c	0.49	0.50	0.39
d	0.58	0.58	0.46
e	0.61	0.61	0.48
f	0.58	0.58	0.46
g	0.49	0.50	0.39
h	0.36	0.36	0.29
j	0.19	0.19	0.15
k	0.14	0.16	0.09

SPAN 3 - SOLE PLATE TABULATED DIMENSIONS

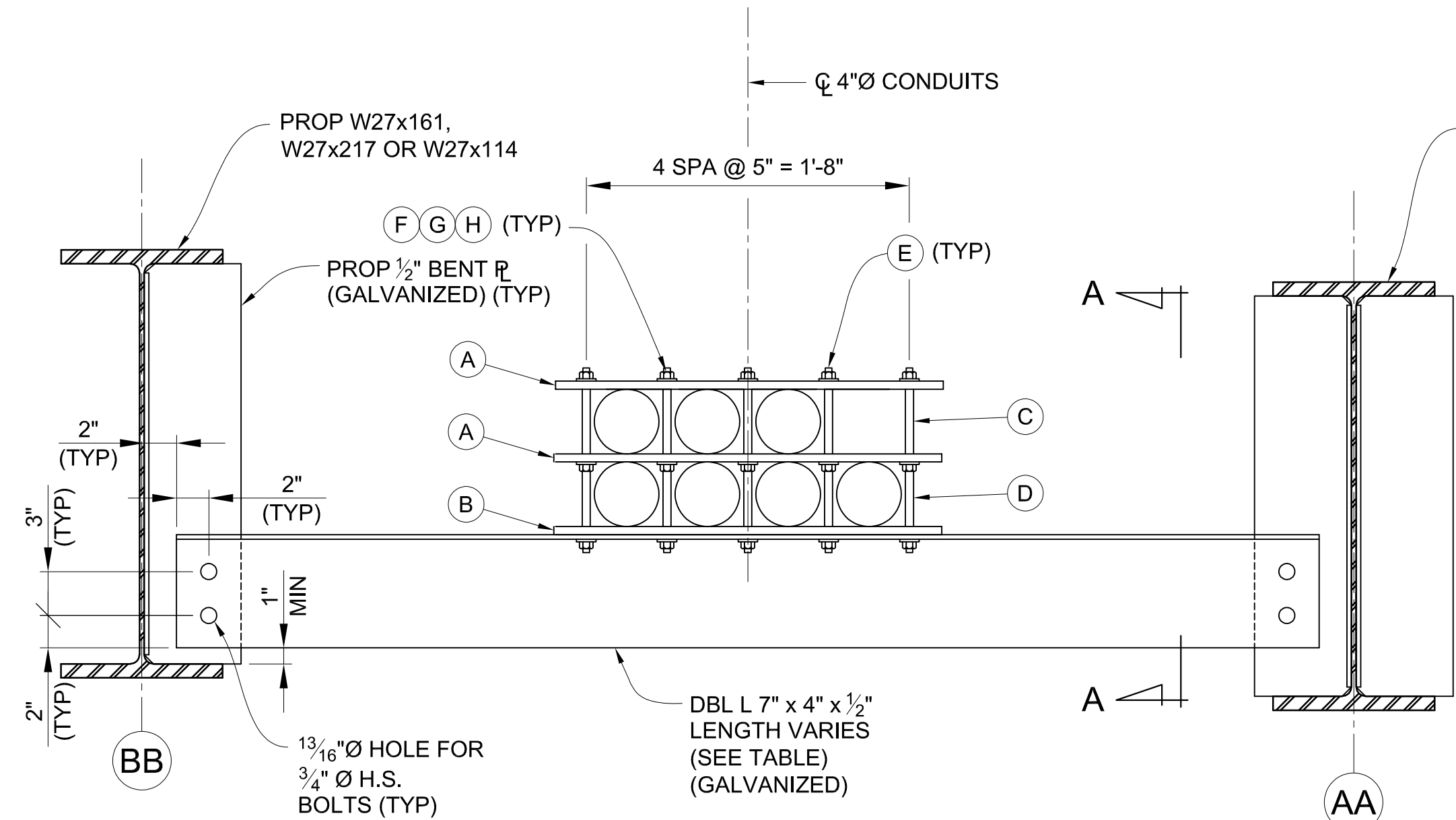
BEAM	REF LINE 2		REF LINE B	
	a	b	c	d
AA	2 1/16"	2"	3"	2 5/8"
BB	2 1/16"	2"	2 5/8"	2"
A	2 1/16"	2"	2 5/8"	2"

3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
EAST MEDICAL CENTER DRIVE			
STRUCTURAL STEEL DETAILS			
PROPOSED BEAMS SPAN 3			
APPROVED BY:	SCALE: HOR. 3/32"=1'-0"	INCH	
	DRAWING NO. 2021-008-BR34		
	SHEET NO. 97 OF 155		

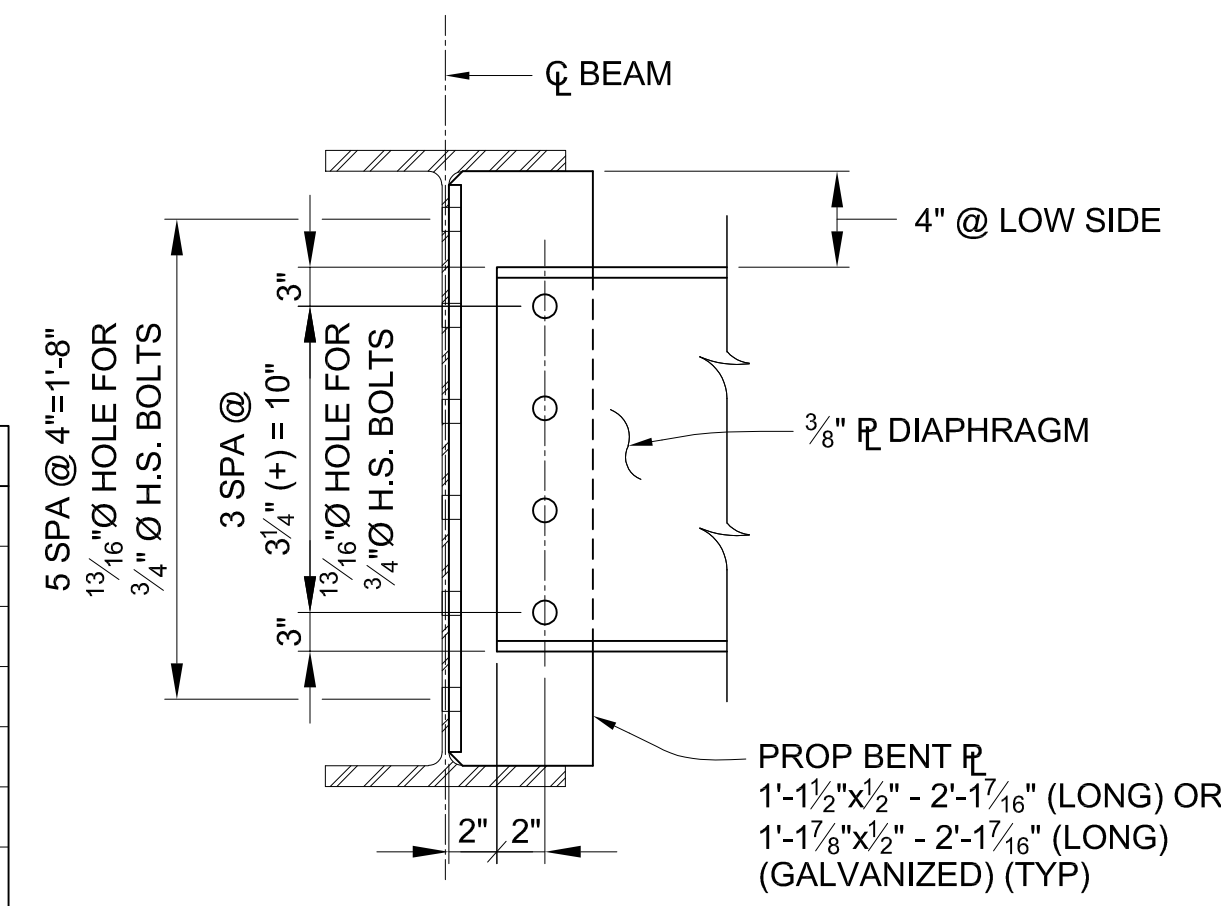
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



DIAPHRAGM D25 - D31, D38 - D46 & D54 - D58

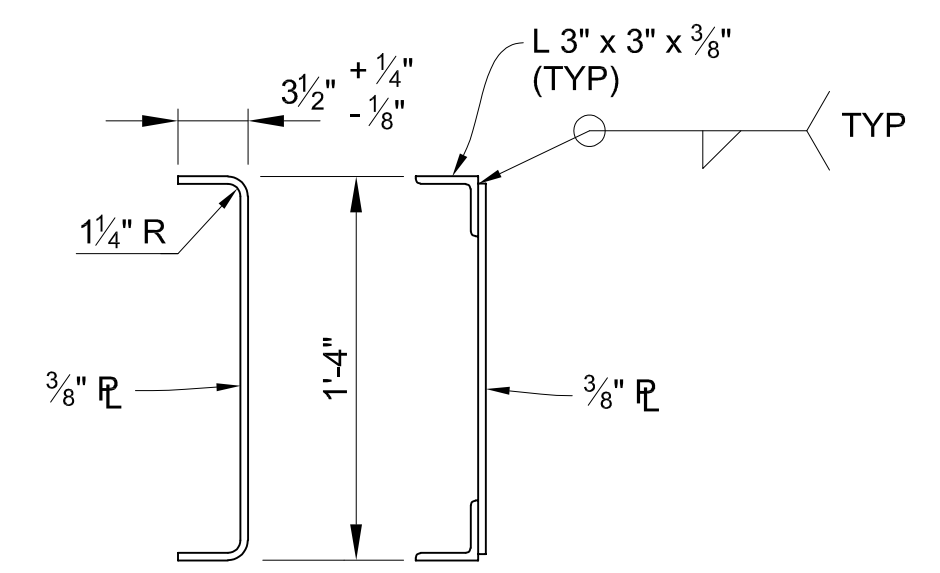
(21 REQUIRED)

CONDUIT HANGAR ASSEMBLY BILL OF MATERIALS	
A	1/2" x 2 1/2" x 2'-0" FIBERGLASS PLATE
B	1/2" x 10" x 2'-0" STEEL PLATE
C	1/2" x 5" FIBERGLASS SPACER TUBE
D	1/2" x 4 1/2" FIBERGLASS SPACER TUBE
E	1/2" x 1'-4" HOT DIP GALVANIZED THREADED ROD
F	1/2" HOT DIP GALVANIZED HEX NUT
G	1/2" HOT DIP GALVANIZED FLAT WASHER
H	1/2" HOT DIP GALVANIZED LOCK WASHER



BOLTED CONNECTION DETAIL

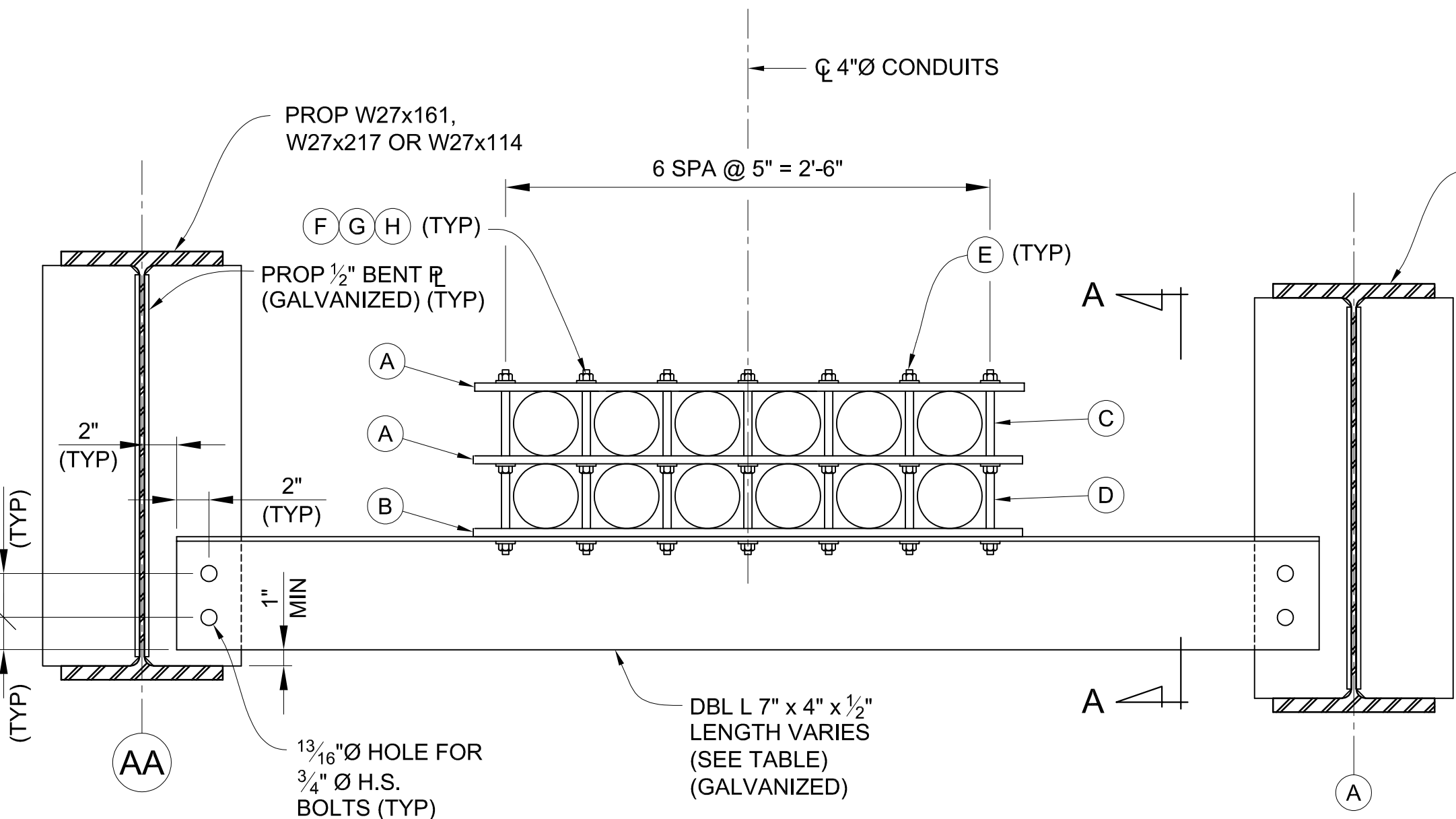
INTERMEDIATE DIAPHRAGMS
APPLIES TO: D1, D2, D4, D6, D7, D10, D11, D14, D16, D17, D20, D22, D24



ALTERNATE

TYPICAL INTERMEDIATE DIAPHRAGM

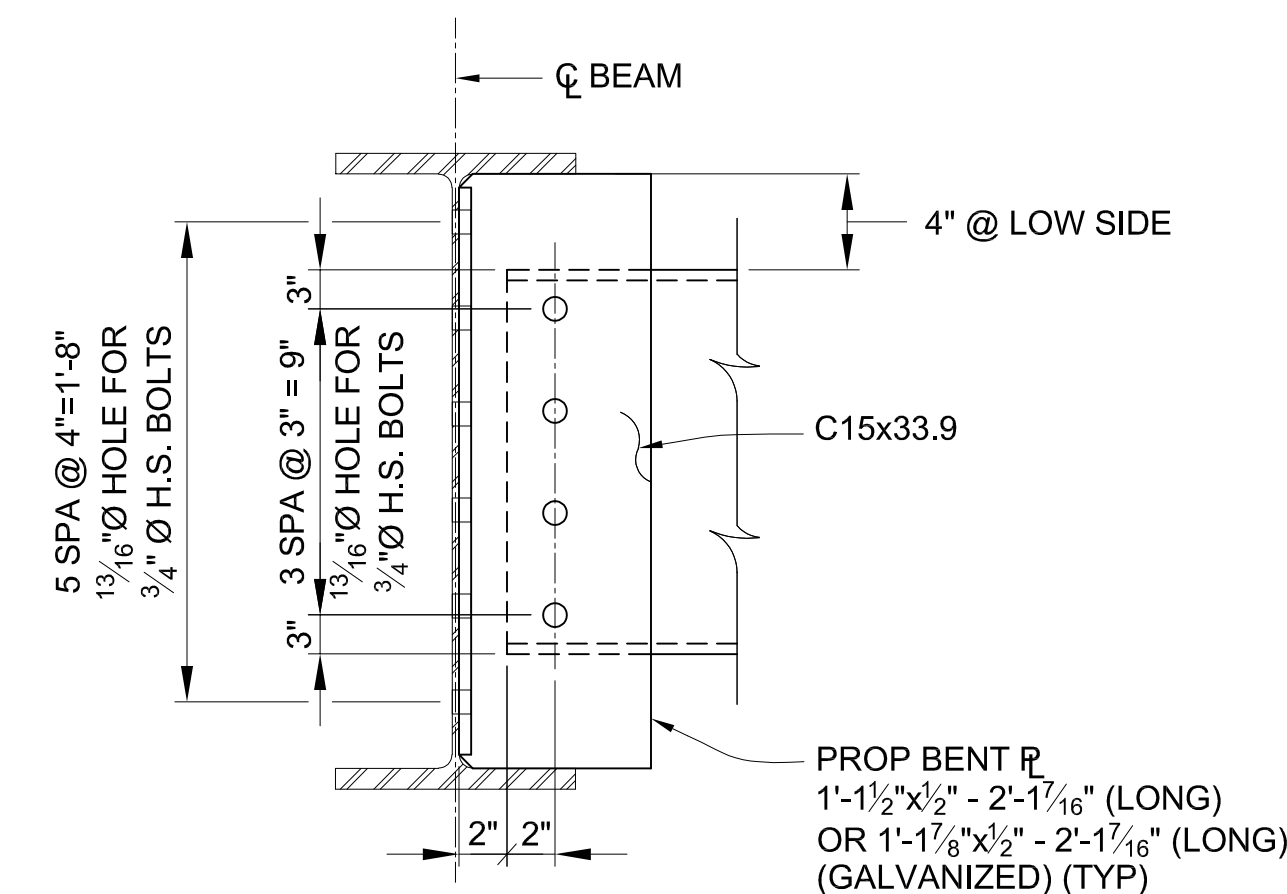
APPLIES TO: D1, D2, D4, D6, D7, D10, D11, D14, D16, D17, D20, D22, D24



DIAPHRAGM D31 - D38, D46 - D54 & D59 - D62

(21 REQUIRED)

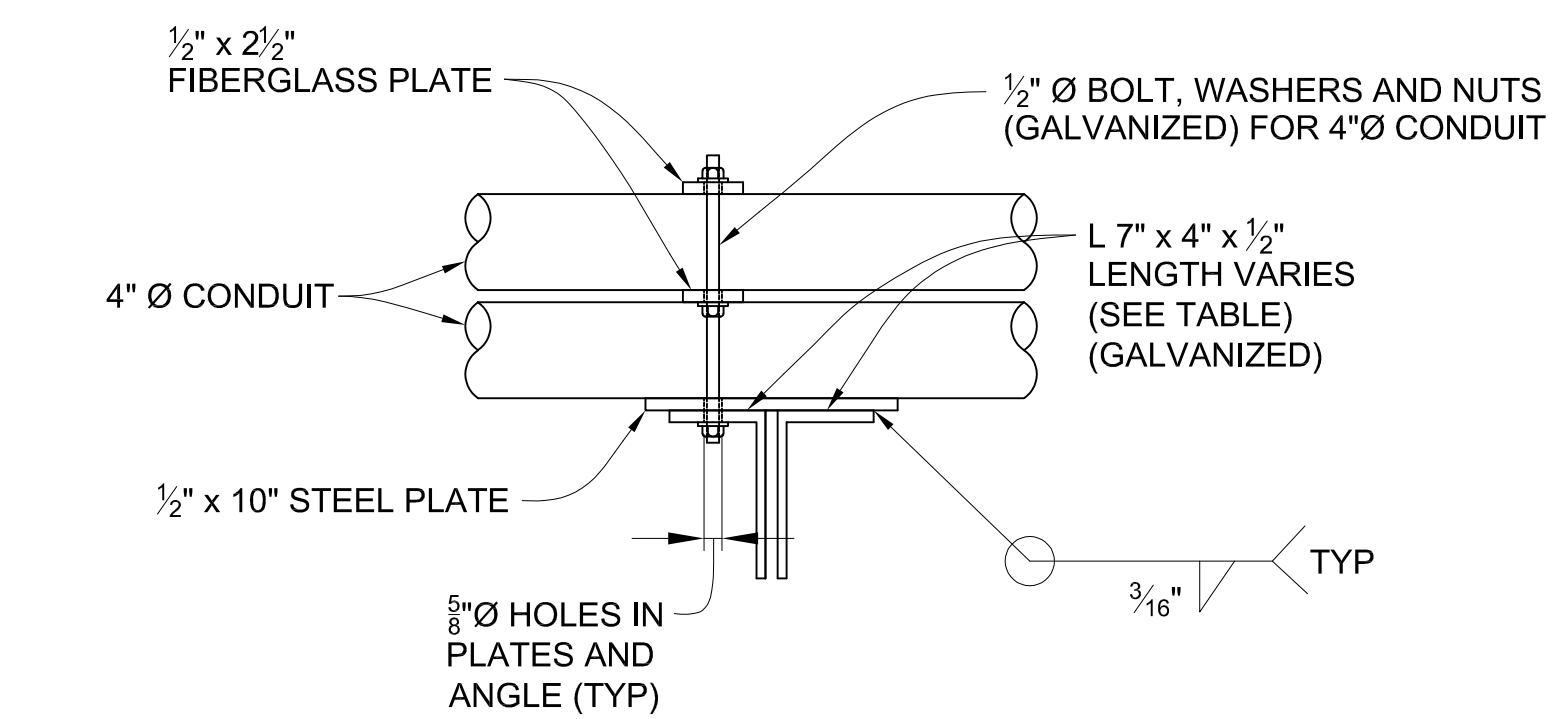
CONDUIT HANGAR ASSEMBLY BILL OF MATERIALS	
A	1/2" x 2 1/2" x 2'-10" FIBERGLASS PLATE
B	1/2" x 10" x 2'-10" STEEL PLATE
C	1/2" x 5" FIBERGLASS SPACER TUBE
D	1/2" x 4 1/2" FIBERGLASS SPACER TUBE
E	1/2" x 1'-4" HOT DIP GALVANIZED THREADED ROD
F	1/2" HOT DIP GALVANIZED HEX NUT
G	1/2" HOT DIP GALVANIZED FLAT WASHER
H	1/2" HOT DIP GALVANIZED LOCK WASHER



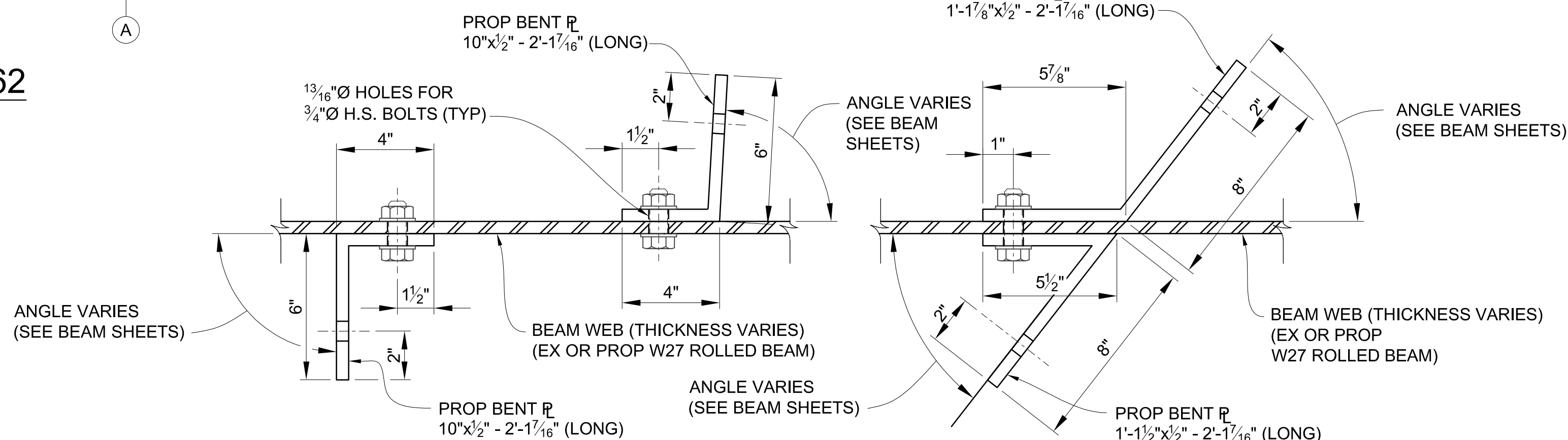
BOLTED CONNECTION DETAIL

END DIAPHRAGMS
APPLIES TO: D3, D5, D8, D9, D12, D13, D15, D18, D19, D21, D23

DIAPHRAGM LENGTH TABLE			
DIAPHRAGM	LENGTH	DIAPHRAGM	LENGTH
D1	5'-8 5/8"	D34	7'-10 5/8"
D2	4'-7"	D35	7'-9 5/8"
D3	4'-6 15/16"	D36	7'-9 1/8"
D4	5'-8 5/16"	D37	7'-8 9/16"
D5	7'-7 5/16"	D38	9'-8 1/4"
D6	5'-3 15/16"	D39	8'-1 1/16"
D7	4'-0 15/16"	D40	7'-11 3/16"
D8	4'-0 1/2"	D41	7'-9"
D9	8'-1"	D42	7'-6 3/4"
D10	6'-2 7/8"	D43	7'-4 9/16"
D11	5'-8 7/8"	D44	7'-2 5/16"
D12	6'-4 3/16"	D45	7'-0 1/8"
D13	6'-10 3/16"	D46	7'-11 1/2"
D14	5'-7 1 1/16"	D47	7'-11 15/16"
D15	7'-3 5/16"	D48	7'-9 3/4"
D16	4'-9 1/4"	D49	7'-7 3/8"
D17	3'-7 3/8"	D50	7'-5 3/8"
D18	3'-11 1/16"	D51	7'-3 3/8"
D19	7'-5 1/4"	D52	7'-1"
D20	6'-3 1/8"	D53	6'-10 13/16"
D21	6'-4 3/8"	D54	7'-11 3/8"
D22	5'-8 5/8"	D55	7'-2 5/16"
D23	6'-6 15/16"	D56	7'-1 1/8"
D24	5'-6 3/4"	D57	6'-11 15/16"
D25	7'-11 1/16"	D58	6'-10 3/4"
D26	7'-11 1/16"	D59	7'-1 7/8"
D27	7'-10 9/16"	D60	7'-0 1/16"
D28	7'-10 1/16"	D61	6'-11 1/2"
D29	7'-9 9/16"	D62	6'-10 1/16"
D30	7'-9 1/16"		
D31	9'-8 1/2"		
D32	7'-11 1/8"		
D33	7'-10 5/8"		



SECTION A-A



INTERMEDIATE DIAPHRAGMS

END DIAPHRAGMS

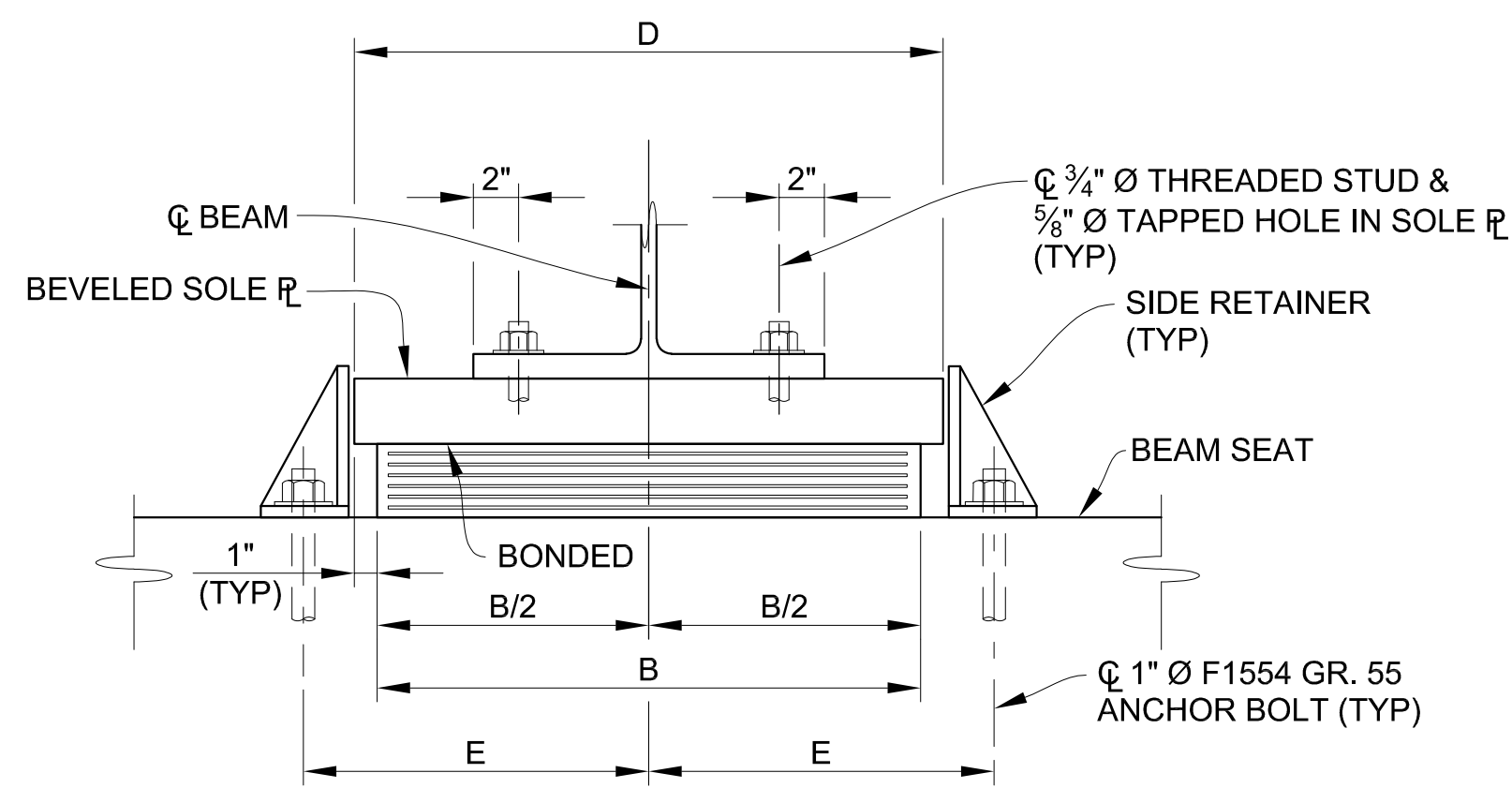
BENT PLATE DETAILS

3 WORKING DAYS |
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

DLZ			
REV. NO.	DESCRIPTION	DATE	DR. BY
	ORIGINAL ISSUE	10-6-23	DAF
			CLH

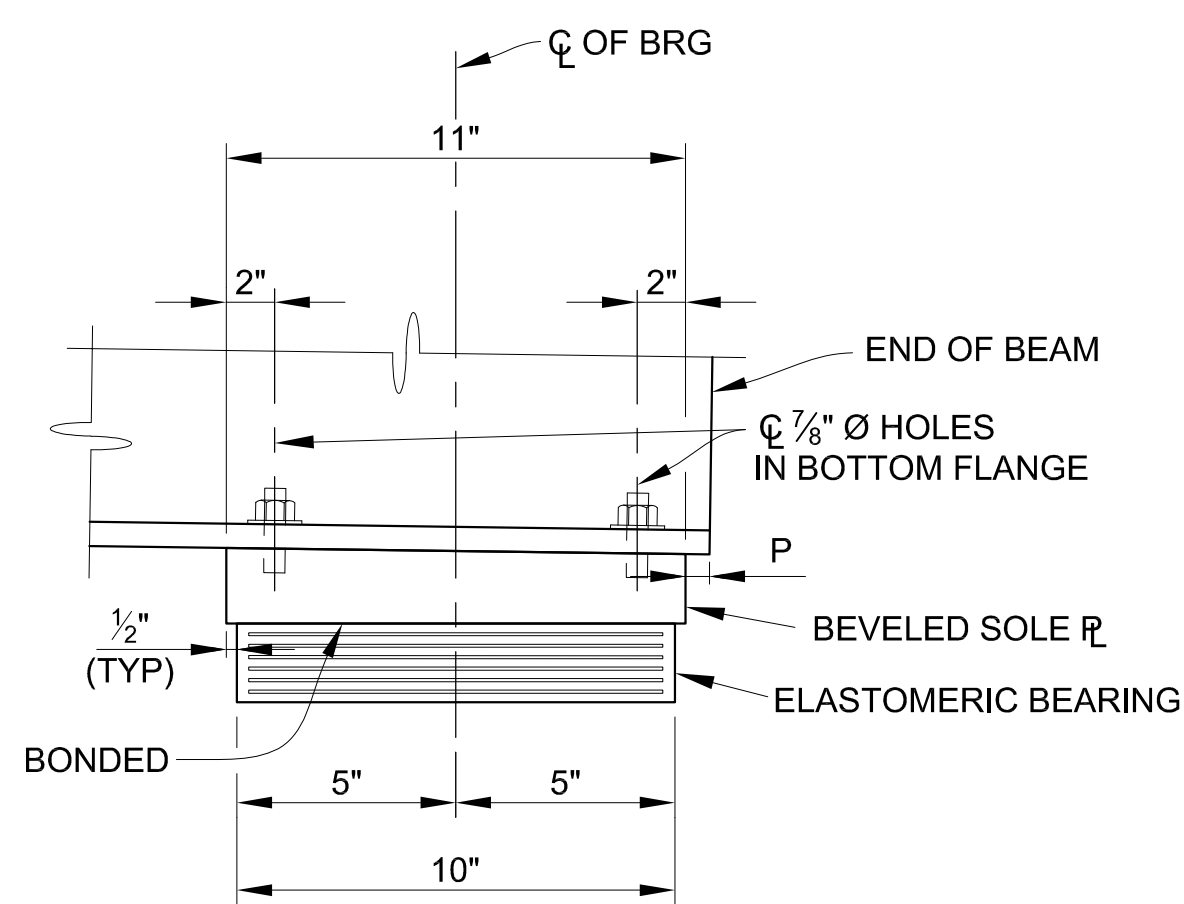
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	SCALE HOR. 3/32" = 1'-0"
STRUCTURAL STEEL DETAILS	DRAWING NO. 2021-008-BR35
DIAPHRAGM DETAILS	SHEET NO. <u>98</u> OF <u>155</u>

APPROVED BY: _____
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



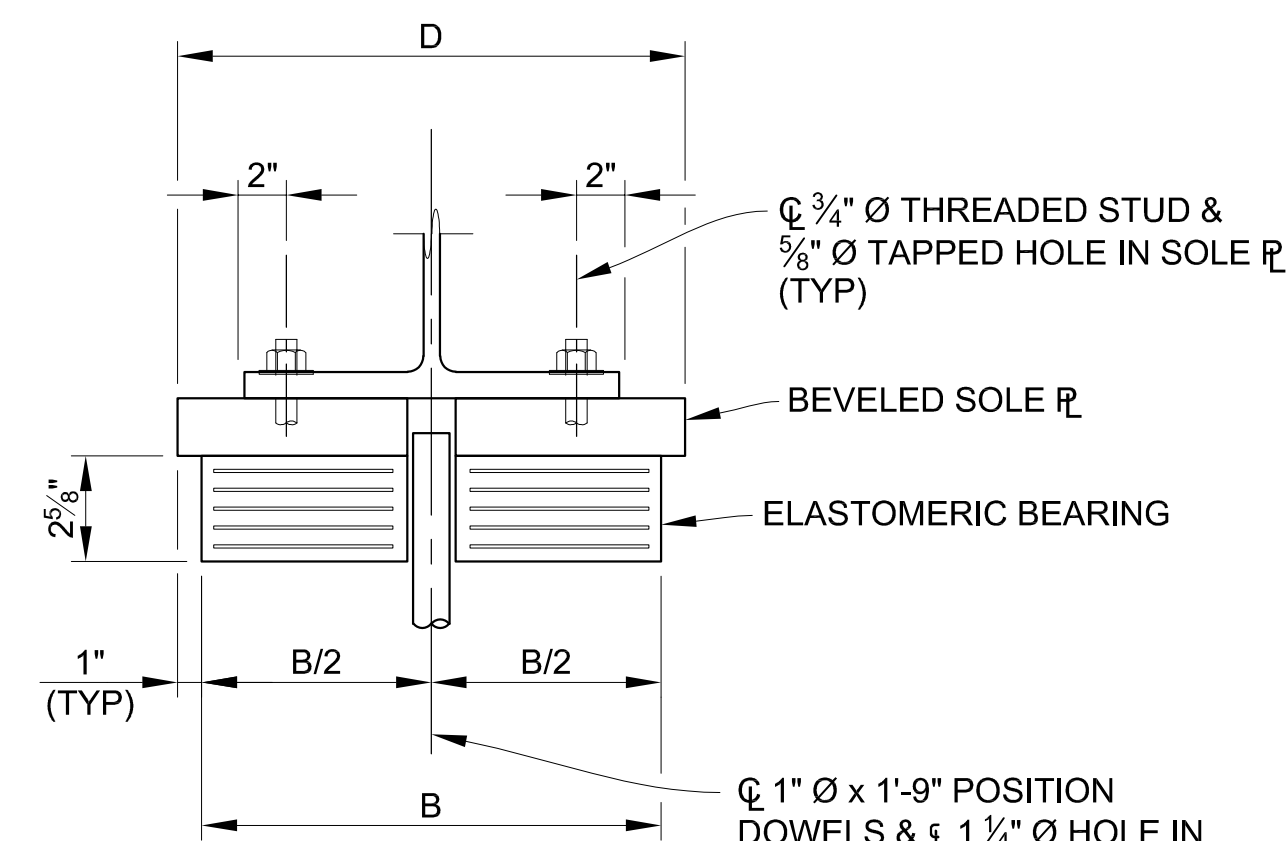
ELASTOMERIC EXPANSION BEARING

END VIEW



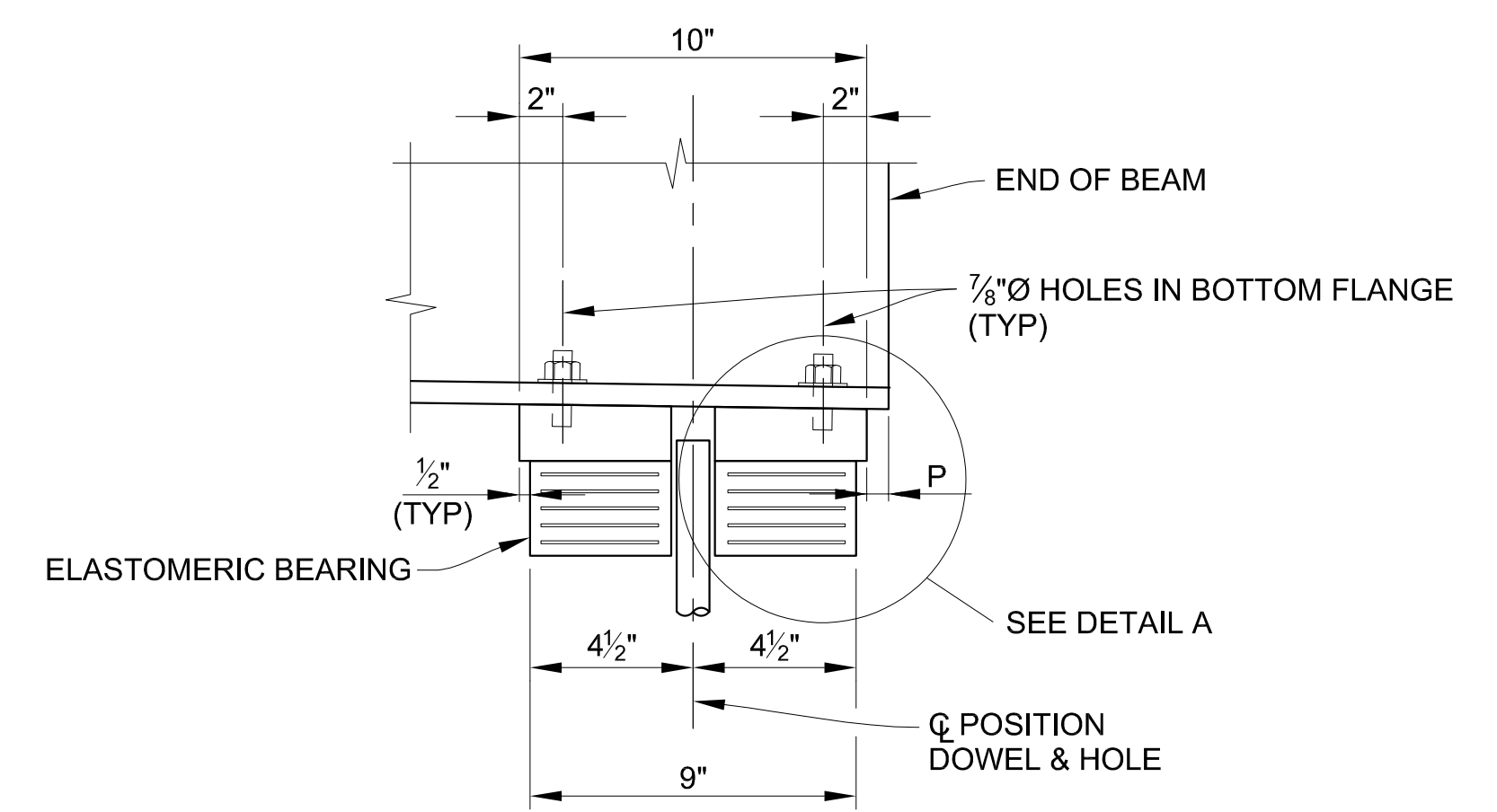
ELASTOMERIC EXPANSION BEARING

SIDE VIEW



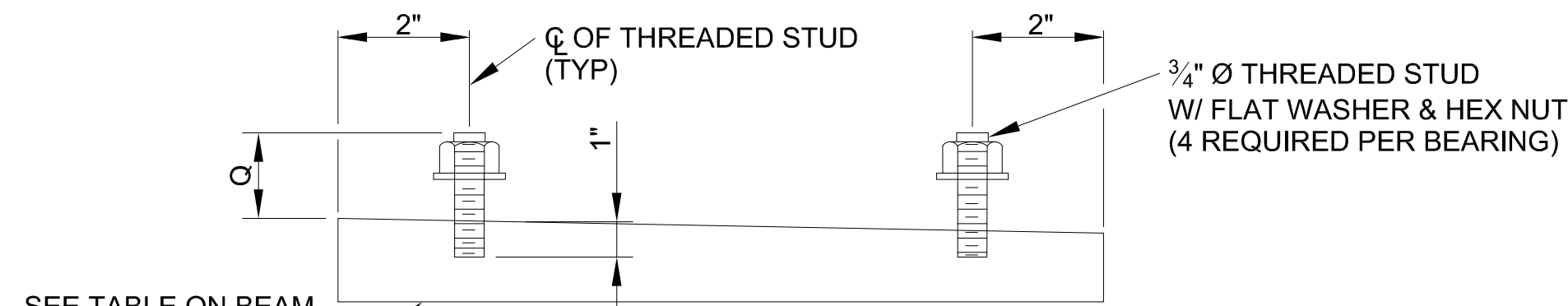
ELASTOMERIC FIXED BEARING

END VIEW



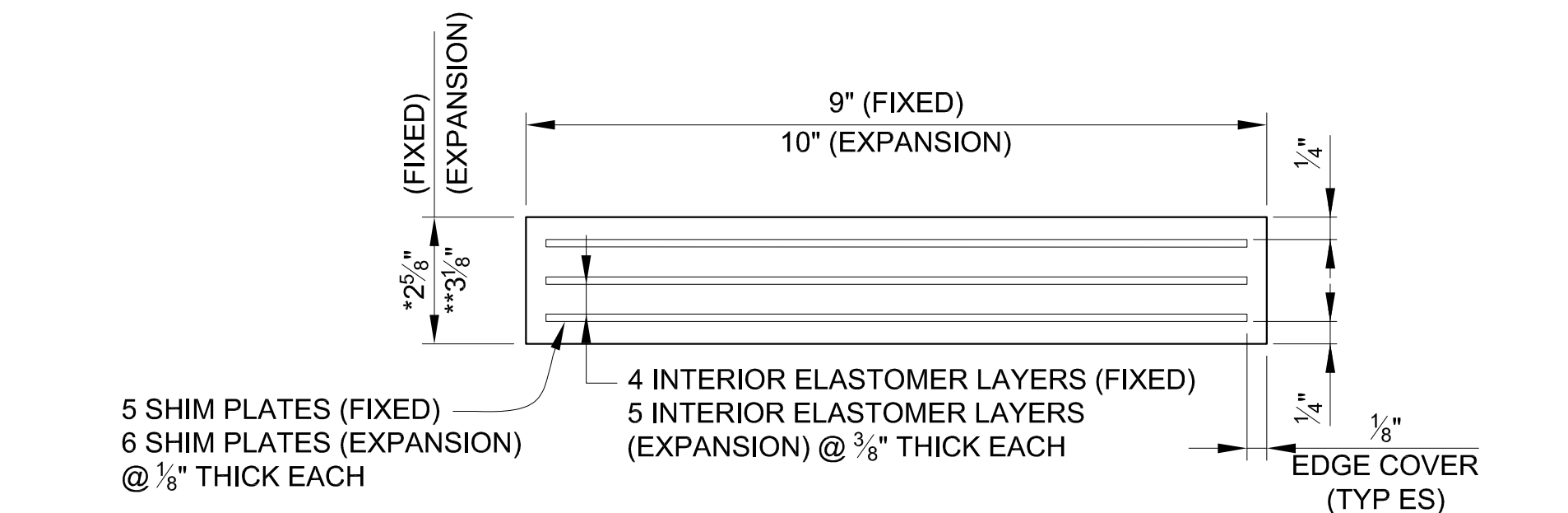
ELASTOMERIC FIXED BEARING

SIDE VIEW



BEVELED SOLE PLATE DETAILS

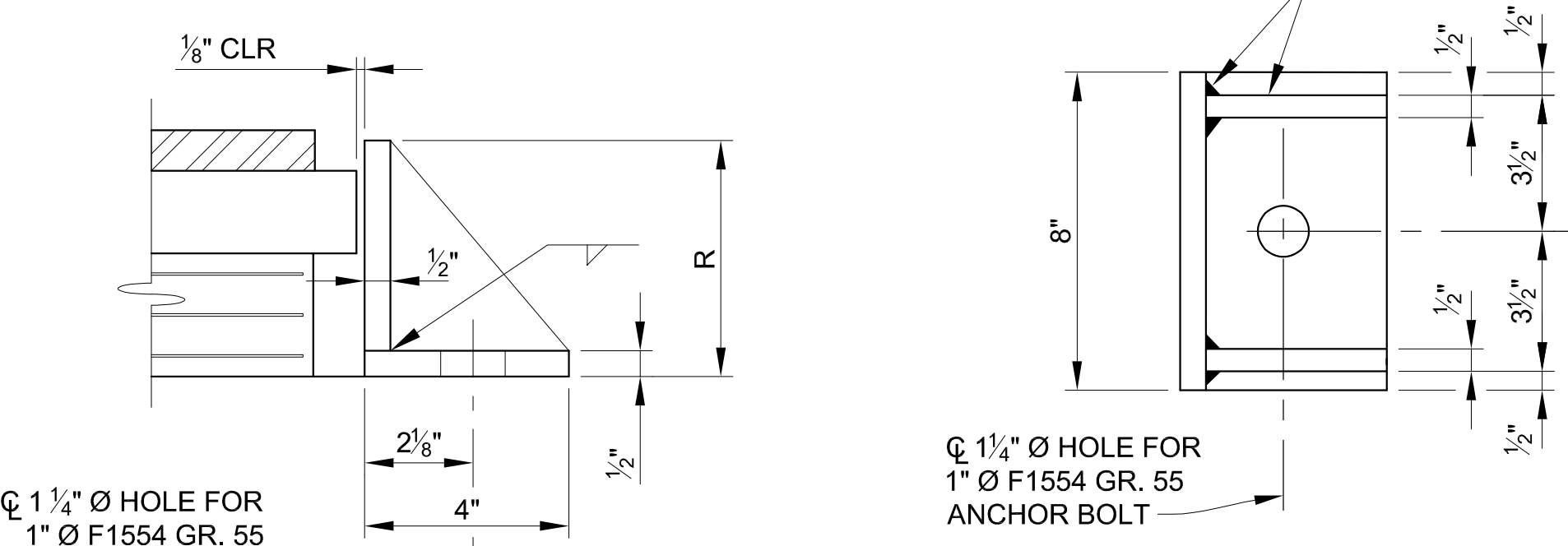
SIDE VIEW



ELASTOMERIC BEARING DETAILS

SIDE VIEW

* PAID FOR AS "BEARING ELASTOMERIC, 2 3/4 INCH"
 ** PAID FOR AS "BEARING ELASTOMERIC, 3 1/4 INCH"

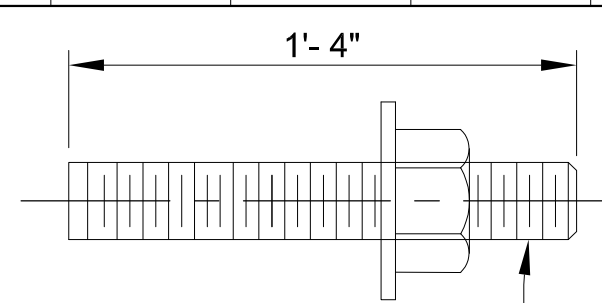


ELEVATION

SIDE RETAINER

PLAN

		ABUTMENT A (FIXED)					PIER 1 (EXPANSION)				
SPAN 1	BEAM	B	D	E	P	Q	B	D	E	P	Q
	BB	17"	19"		1"	3"	14"	16"	10 1/4"	5"	3"
	AA	20"	22"		1"	3"	16"	18"	11 1/4"	5 5/16"	3"
	A	20"	22"		1"	3"	16"	18"	11 1/4"	5 3/4"	3"
	B-L	17"	19"		1"	2 1/2"	14"	16"	10 1/4"	6 1/4"	2 1/2"
	M	17"	19"		1"	2 1/2"	14"	16"	10 1/4"	6 3/4"	2 1/2"
SPAN 2	BEAM	B	D	E	P	Q	B	D	E	P	Q
	BB	15"	17"	10 3/4"	4 7/8"	3 1/4"	18"	20"	5 5/16"	3 1/4"	
	AA	18"	20"	12 1/4"	5"	3 1/4"	21"	23"	5 9/16"	3 1/4"	
	A	18"	20"	12 1/4"	5 1/4"	3 1/4"	21"	23"	5 3/4"	3 1/4"	
	B-L	15"	17"	10 3/4"	5 3/8"	2 3/4"	18"	20"	5 7/8"	2 3/4"	
	M	15"	17"	10 3/4"	5 3/4"	2 3/4"	18"	20"	6 1/4"	2 3/4"	
SPAN 3	BEAM	B	D	E	P	Q	B	D	E	P	Q
	BB	12"	14"	9 1/4"	4 5/16"	2 3/4"	14"	16"	1"	2 3/4"	
	AA	14"	16"	10 1/4"	4 3/8"	2 3/4"	17"	19"	1"	2 3/4"	
	A	14"	16"	10 1/4"	4 11/16"	2 3/4"	17"	19"	1"	2 3/4"	
	B-L	12"	14"	9 1/4"	4 11/16"	2 1/2"	14"	16"	1"	2 1/2"	
	M	12"	14"	9 1/4"	4 13/16"	2 1/2"	14"	16"	1"	2 1/2"	
		PIER 1 (EXPANSION)					PIER 2 (FIXED)				
SPAN 1	BEAM	B	D	E	P	Q	B	D	E	P	Q
	BB	17"	19"		1"	3"	14"	16"	10 1/4"	5"	3"
	AA	20"	22"		1"	3"	16"	18"	11 1/4"	5 5/16"	3"
	A	20"	22"		1"	3"	16"	18"	11 1/4"	5 3/4"	3"
	B-L	17"	19"		1"	2 1/2"	14"	16"	10 1/4"	6 1/4"	2 1/2"
	M	17"	19"		1"	2 1/2"	14"	16"	10 1/4"	6 3/4"	2 1/2"
		PIER 2 (EXPANSION)					ABUTMENT B (FIXED)				
SPAN 2	BEAM	B	D	E	P	Q	B	D	E	P	Q
	BB	15"	17"	10 3/4"	4 7/8"	3 1/4"	18"	20"	5 5/16"	3 1/4"	
	AA	18"	20"	12 1/4"	5"	3 1/4"	21"	23"	5 9/16"	3 1/4"	
	A	18"	20"	12 1/4"	5 1/4"	3 1/4"	21"	23"	5 3/4"	3 1/4"	
	B-L	15"	17"	10 3/4"	5 3/8"	2 3/4"	18"	20"	5 7/8"	2 3/4"	
	M	15"	17"	10 3/4"	5 3/4"	2 3/4"	18"	20"	6 1/4"	2 3/4"	



ANCHOR BOLT DETAIL

SPAN	R (SIDE RETAINER HEIGHT, INCH)													
	BB	AA	A	B	C	D	E	F	G	H	J	K	L	M
1-PIER 1 (EXP)	8 1/2	8 1/2	8 1/2	7 3/4	6 1/2	7	7 1/2	6 1/2	7	7 1/2	7	7 1/2	6 1/2	7 1/2
2-PIER 1 (EXP)	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	7 1/2	6 1/2
3-PIER 2 (EXP)	6 1/2	6 1/2	6 1/2	7 1/2	6 1/2	7	6 1/2	7	6 1/2	7	6 1/2	7	6 1/2	6 1/2

POSITION DOWEL DETAIL

ESTIMATED QUANTITIES THIS SHEET

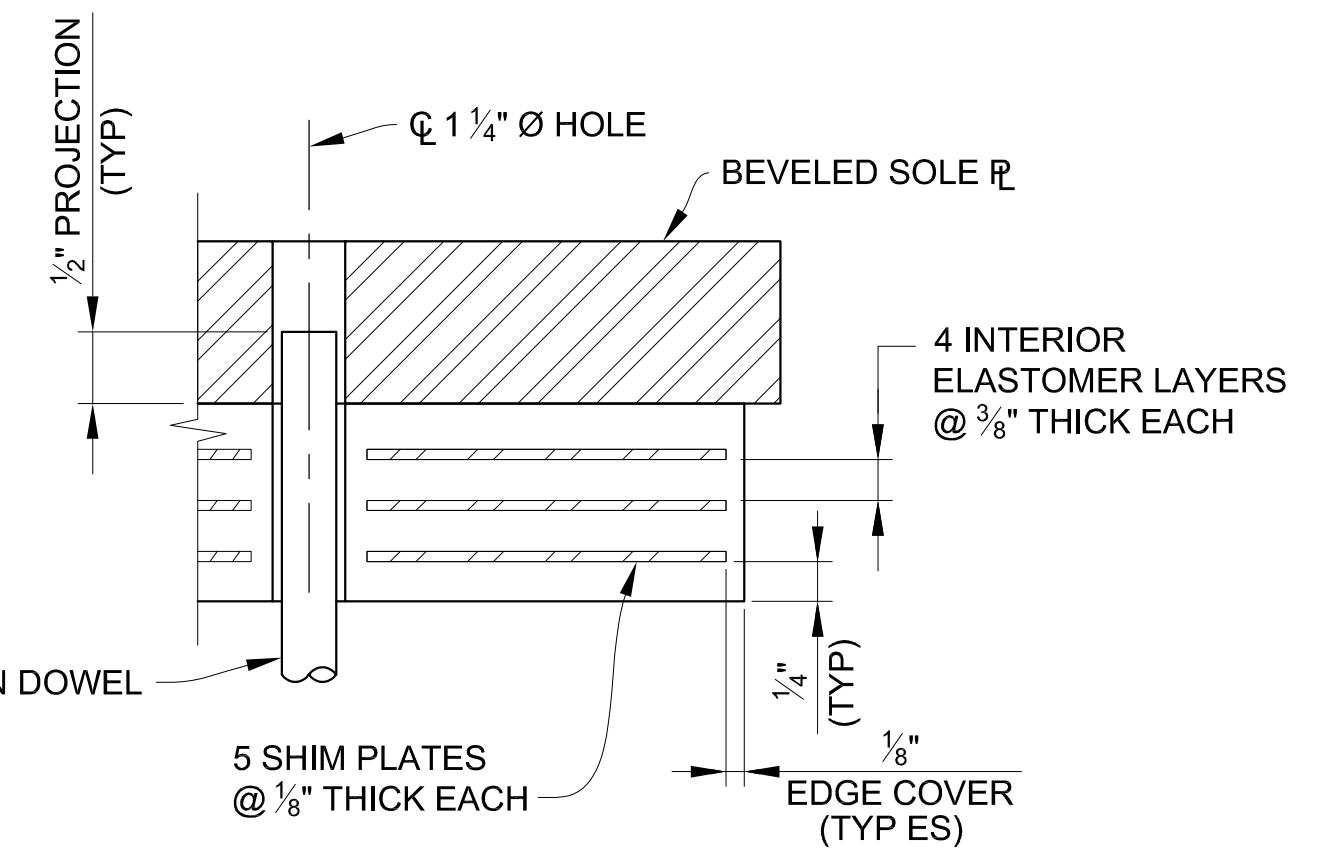
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Bearing, Elastomeric, 2 3/4 inch	Sin	4,851	1,485		6,336
Bearing, Elastomeric, 3 1/4 inch	Sin	4,510	1,370		5,880

NOTES:

- ES DENOTES EACH SIDE.
- USE NON-DEFORMED STEEL RODS IN ACCORDANCE WITH AASHTO M 270 GRADE 36 AND HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111, AS POSITION DOWELS FOR ROLLED STEEL BEAMS.
- STEEL FOR SOLE PLATES AND OTHER BEARING COMPONENTS SHALL MEET THE REQUIREMENTS OF AASHTO M 270 GRADE 36.
- ANCHOR BOLT LENGTHS SHOWN ARE MINIMUM. BOLTS LONGER THAN THAT SHOWN MAY BE FURNISHED AT NO ADDITIONAL COST. ANCHOR BOLTS AND POSITION DOWELS SHALL BE GALVANIZED ACCORDING TO MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 716.03.B.4.
- ANCHOR BOLTS SHALL CONFORM TO MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 908.14.
- ANCHOR BOLTS SHALL BE INSTALLED AFTER BEAMS ARE ERECTED IN PLACE.

DETAIL A

ELASTOMERIC BEARING DETAILS - FIXED

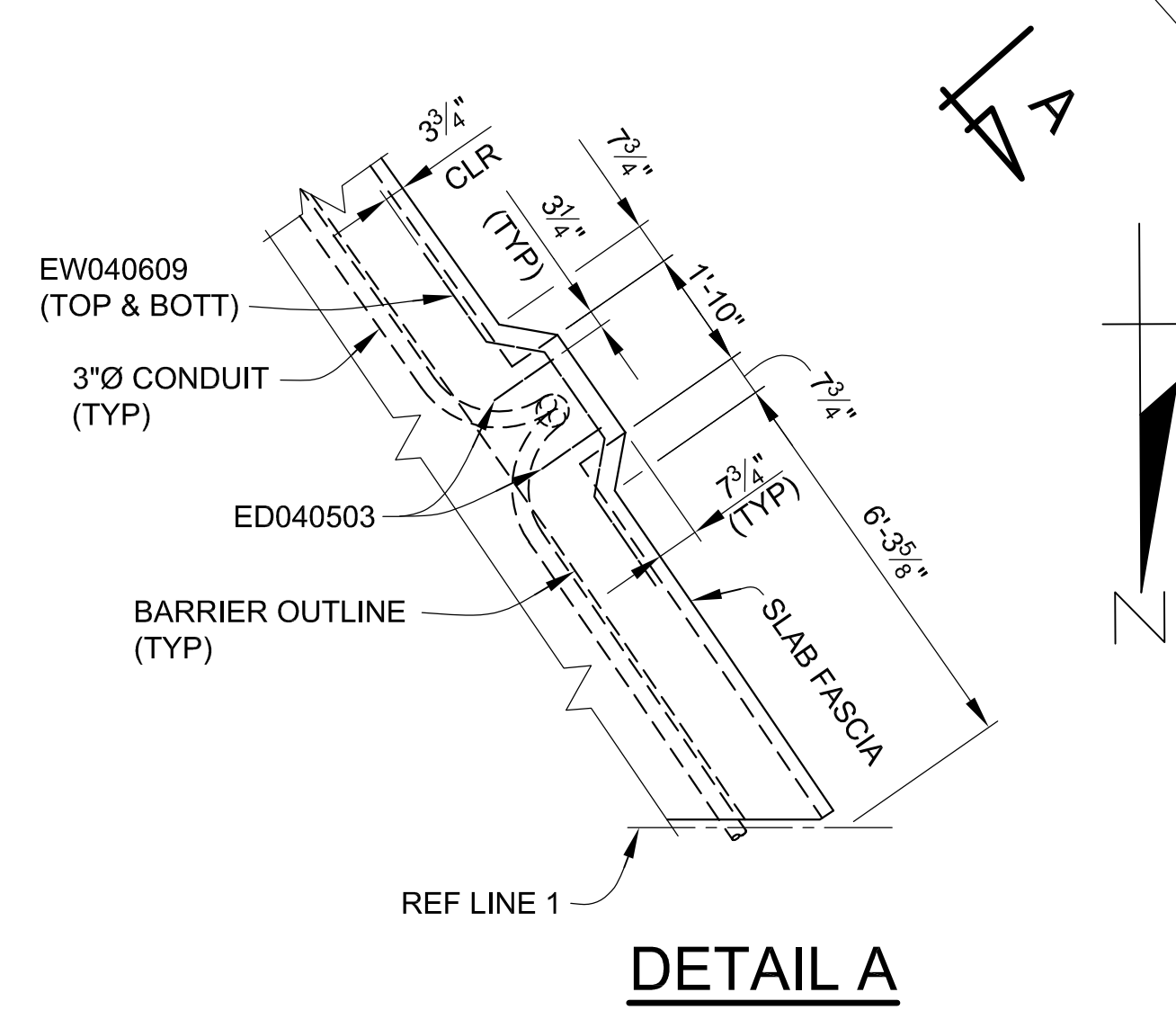
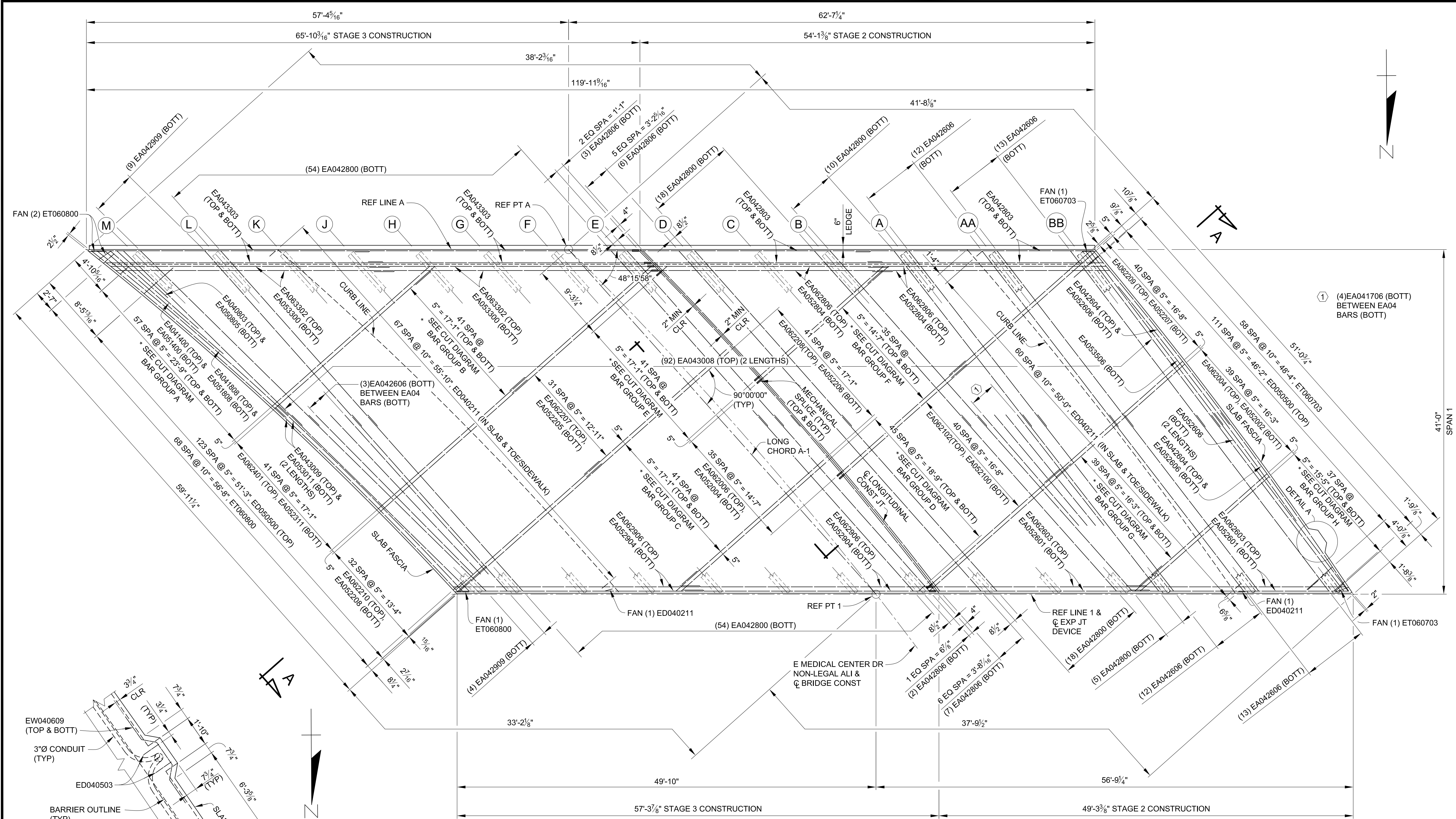


REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	SBV	KJS

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
BEARING DETAILS	
SCALE	HOR. 3/32"=1'-0"
DRAWING NO.	2021-008-BR37
SHEET NO.	100 OF 155

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)





MIN LAP TABLE	
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

* SEE STEEL REINFORCEMENT SHEETS FOR BAR CUT DIAGRAM DETAILS.

PLAN - SPAN 1

3 WORKING DAYS | BEFORE YOU DIG | CALL MISS DIG | 800-482-7171 | (TOLL FREE)

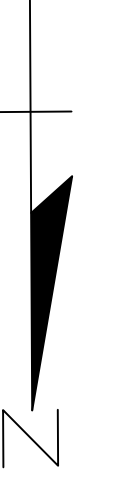
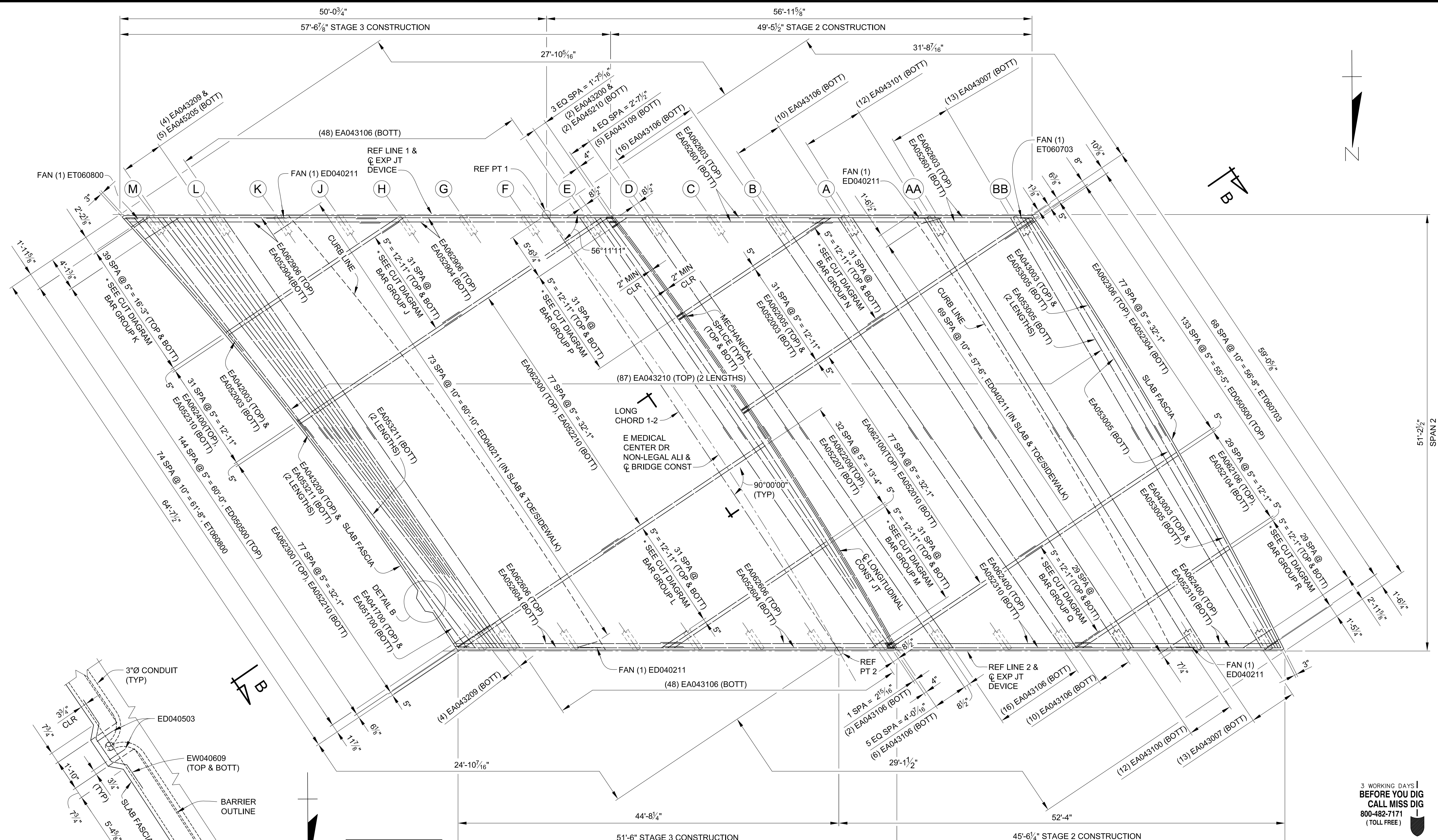
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR38	
SHEET NO. <u>101</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

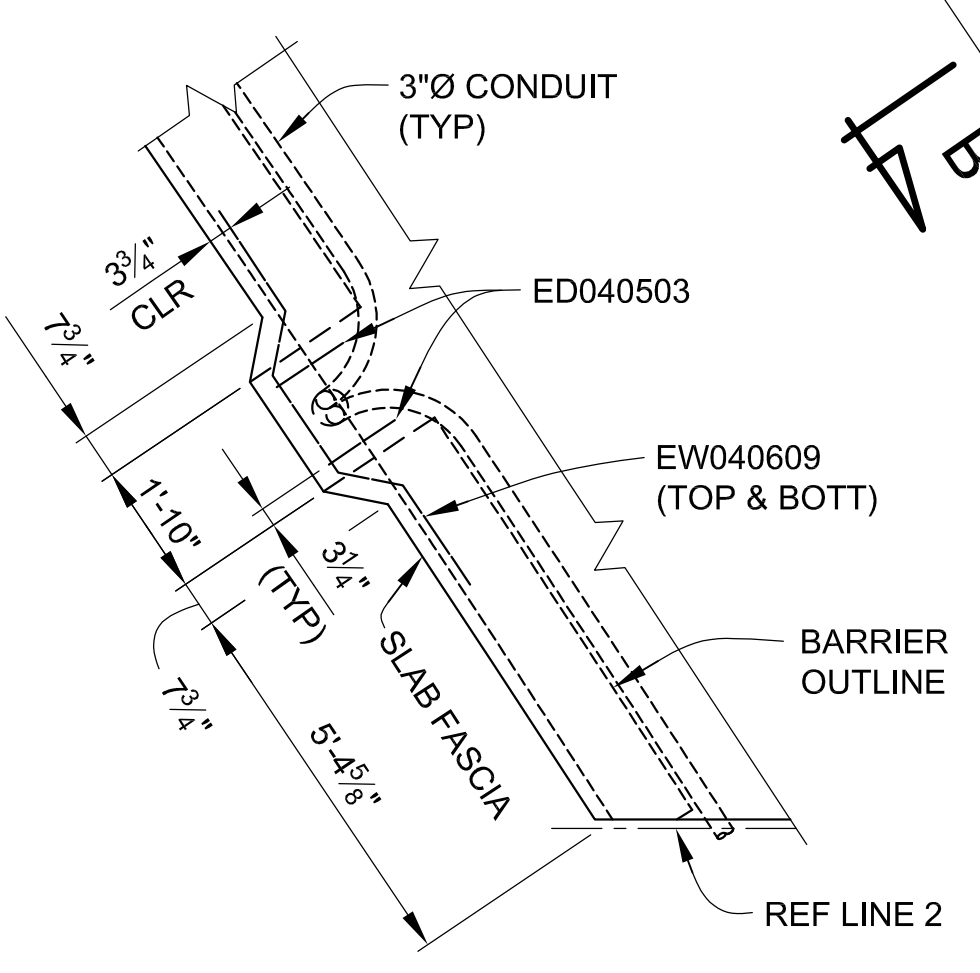
Izcorp.com\pan-files\Projects\2021\2141\736300_AA - EMCD Bridge\01_Constr\Docs\CAD\EMCD_deck_001

\\p01p.com\pan-files\Projects\2021\2141\736500_AA - EMCD Bridge\01_ConstrDocs\CAD\EMCD_deek_002



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

DETAIL B



MIN LAP TABLE	
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

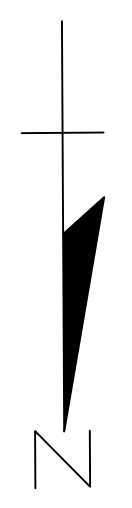
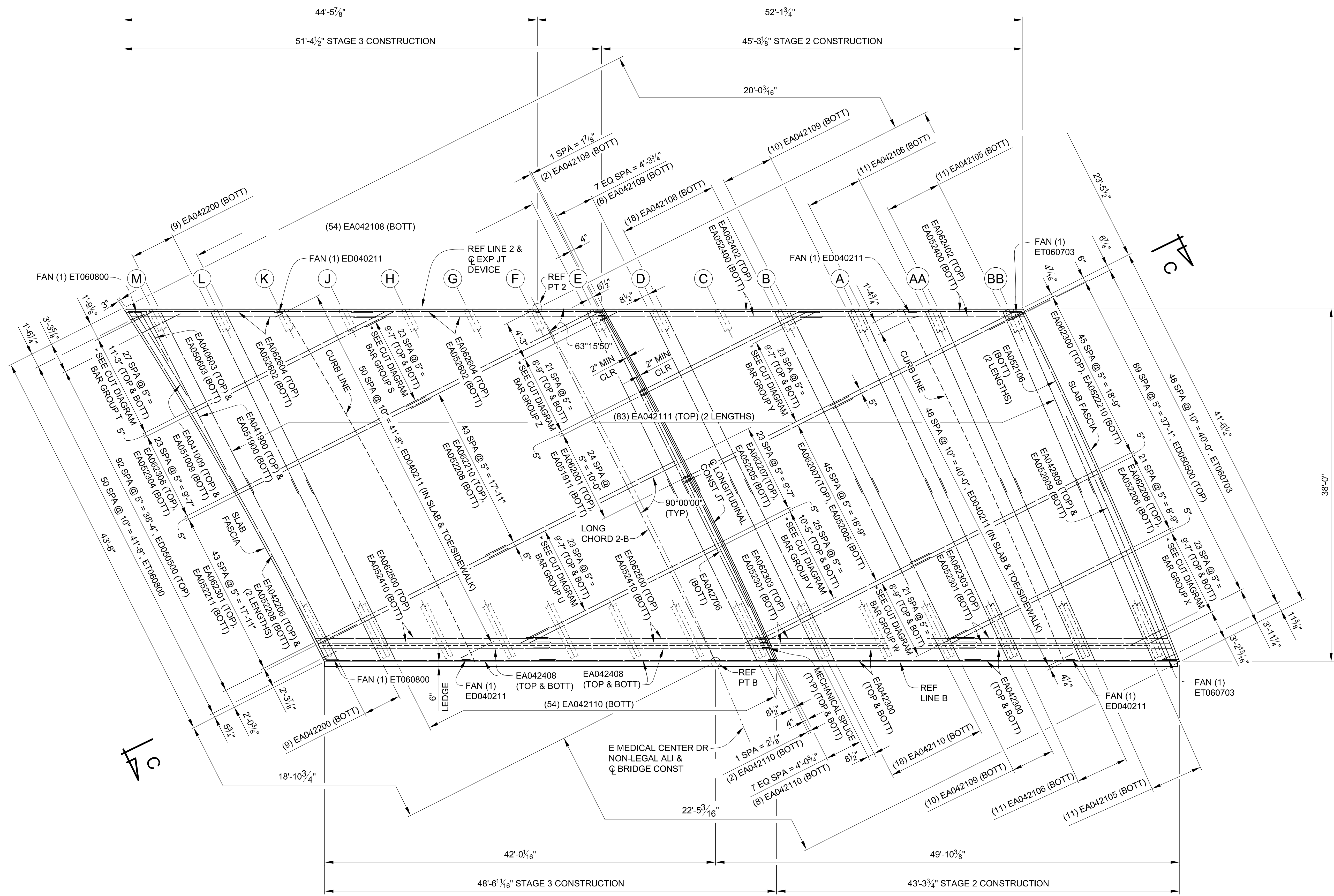
* SEE STEEL REINFORCEMENT SHEETS FOR BAR CUT DIAGRAM DETAILS.

PLAN - SPAN 2

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR39	
SHEET NO. <u>102</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



MIN LAP TABLE	
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

* SEE STEEL REINFORCEMENT SHEETS FOR BAR CUT DIAGRAM DETAILS.

PLAN - SPAN 3

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

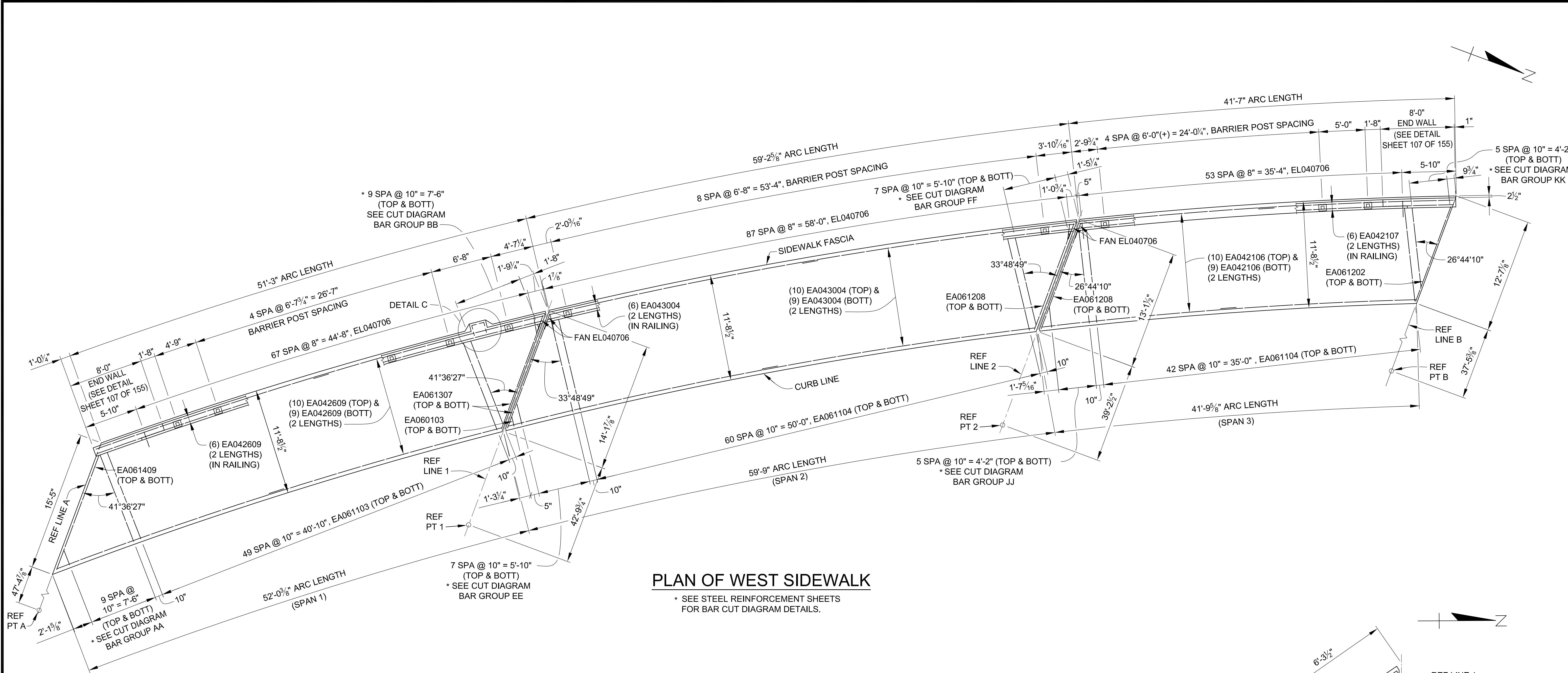
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR40	
SHEET NO. <u>103</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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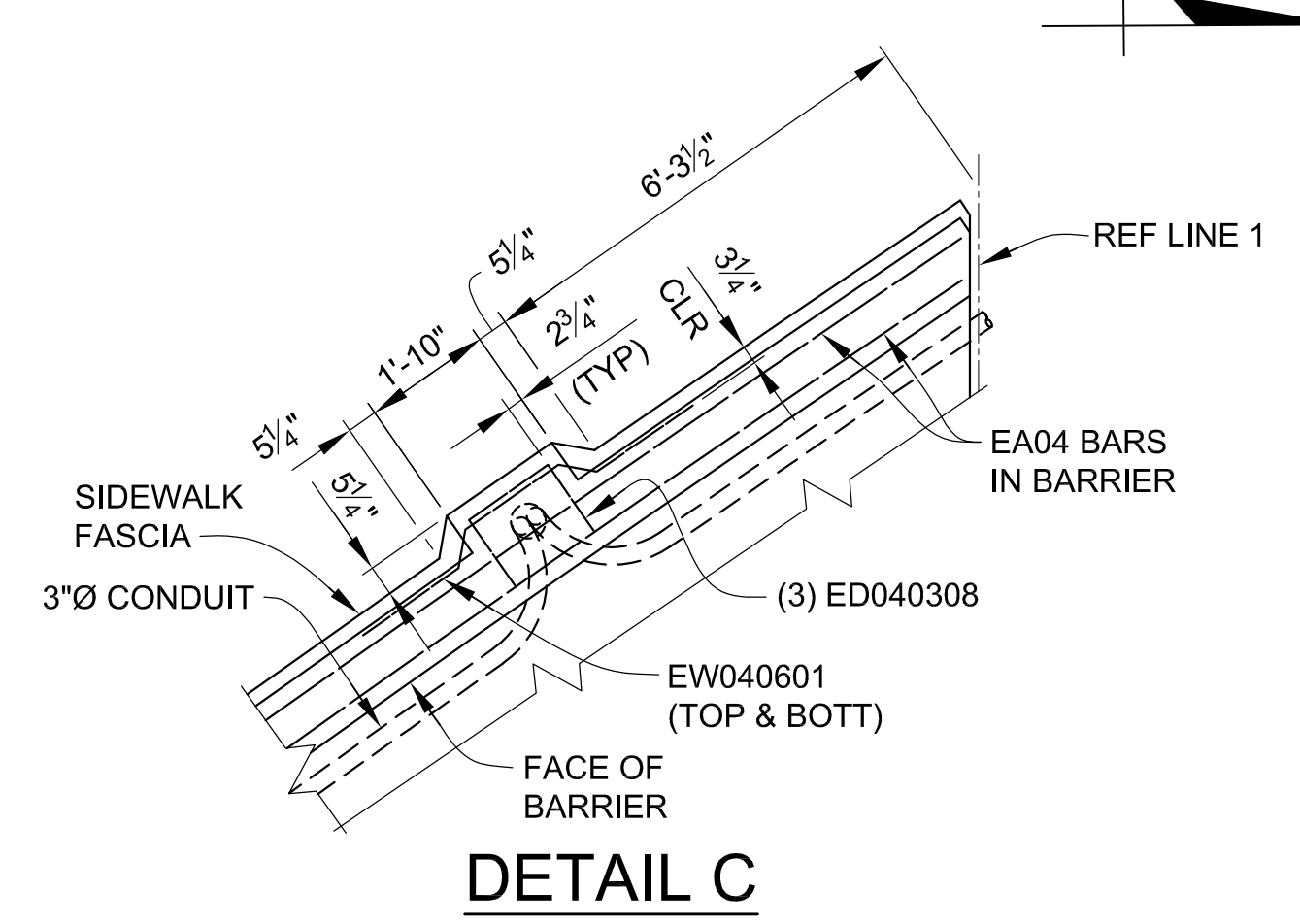
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

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PLAN OF WEST SIDEWALK

* SEE STEEL REINFORCEMENT SHEETS FOR BAR CUT DIAGRAM DETAILS.



DETAIL C

MIN LAP TABLE

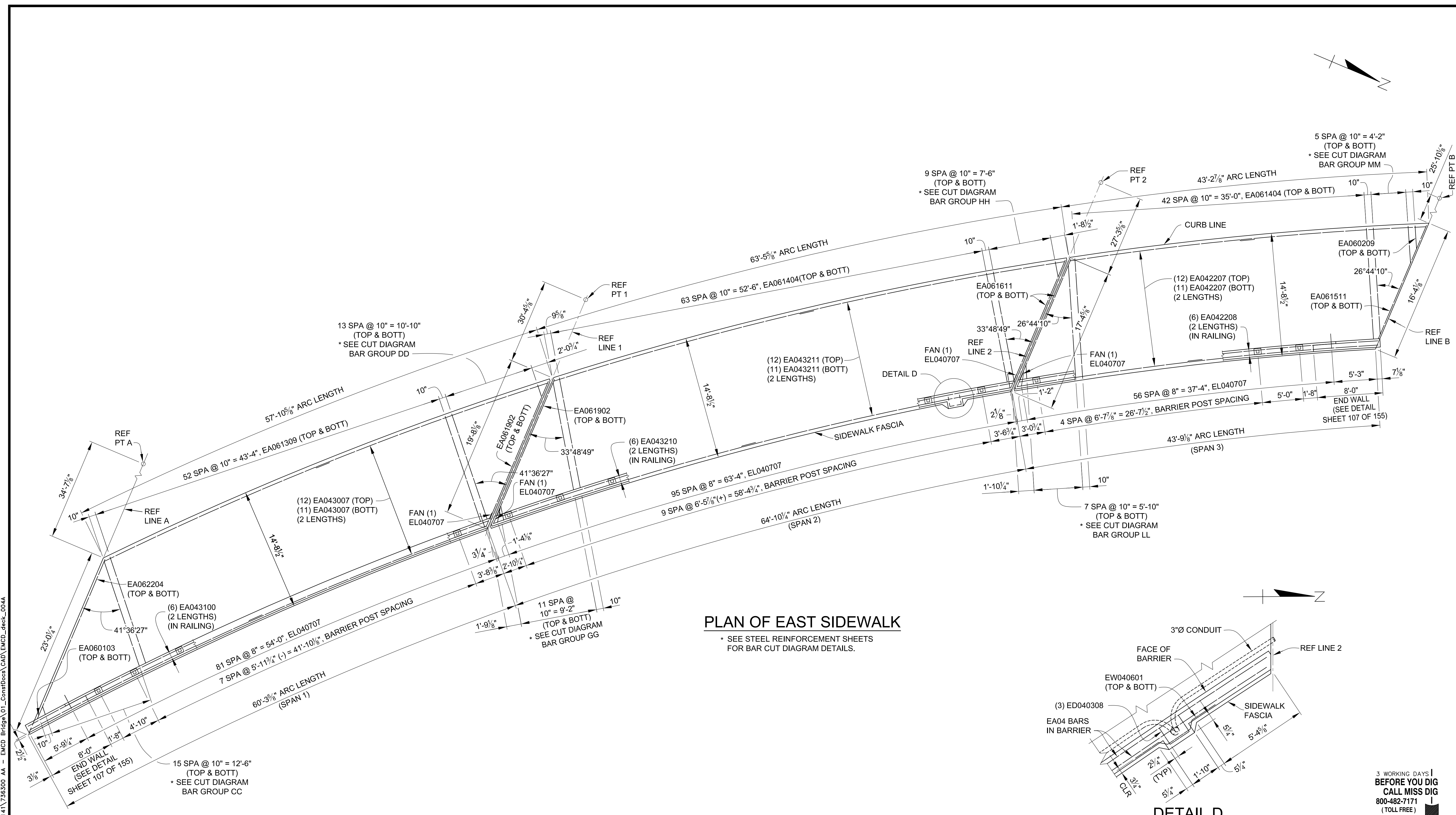
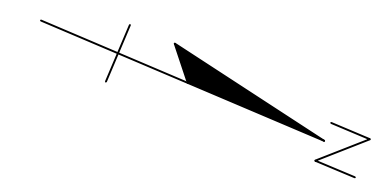
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE	INCH
HOR. 3/16"=1'-0"	0 1
DRAWING NO.	
2021-008-BR41	
SHEET NO. 104 OF 155	

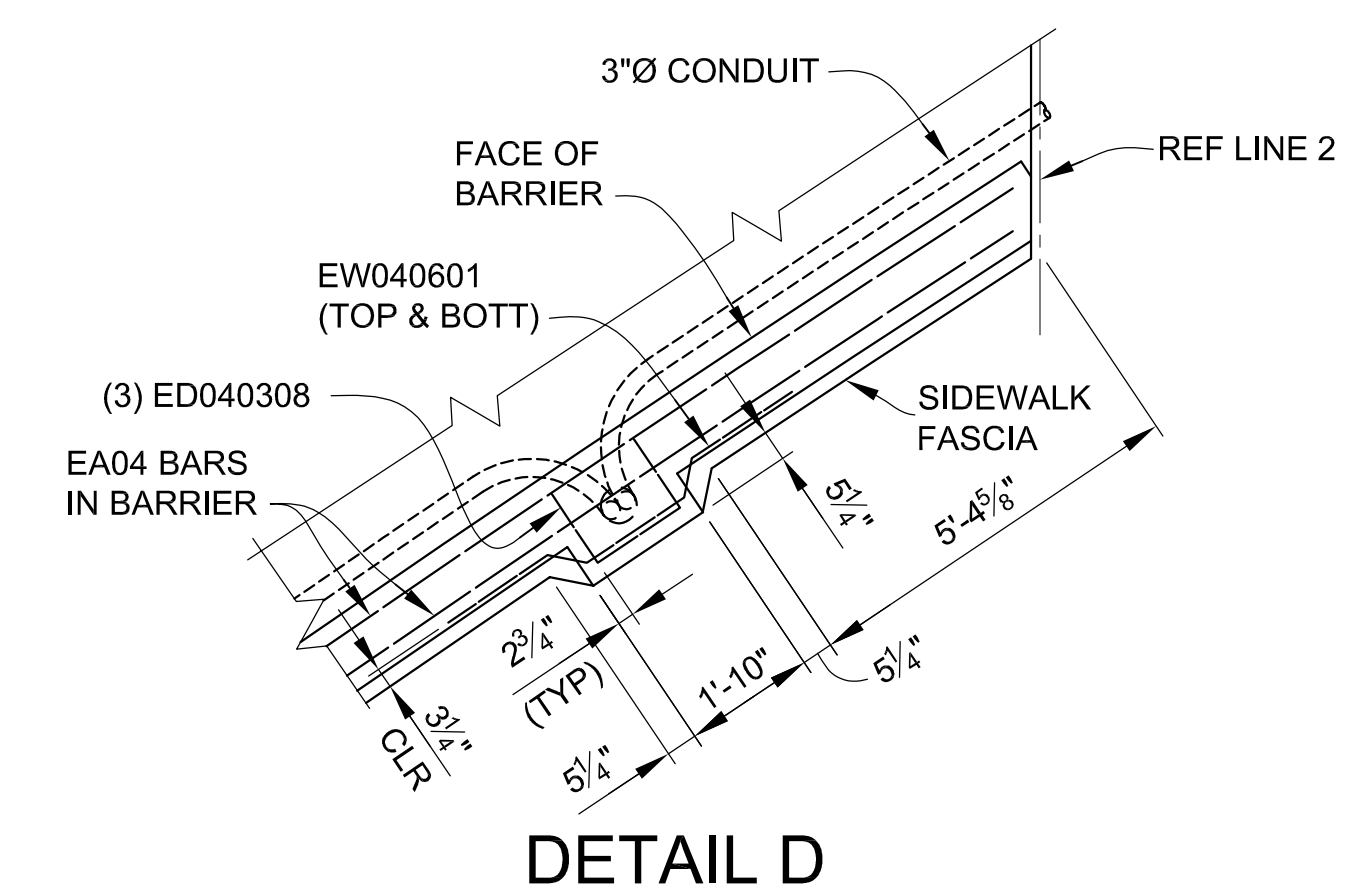
APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)



PLAN OF EAST SIDEWALK

* SEE STEEL REINFORCEMENT SHEETS FOR BAR CUT DIAGRAM DETAILS.



DETAIL D

MIN LAP TABLE	
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

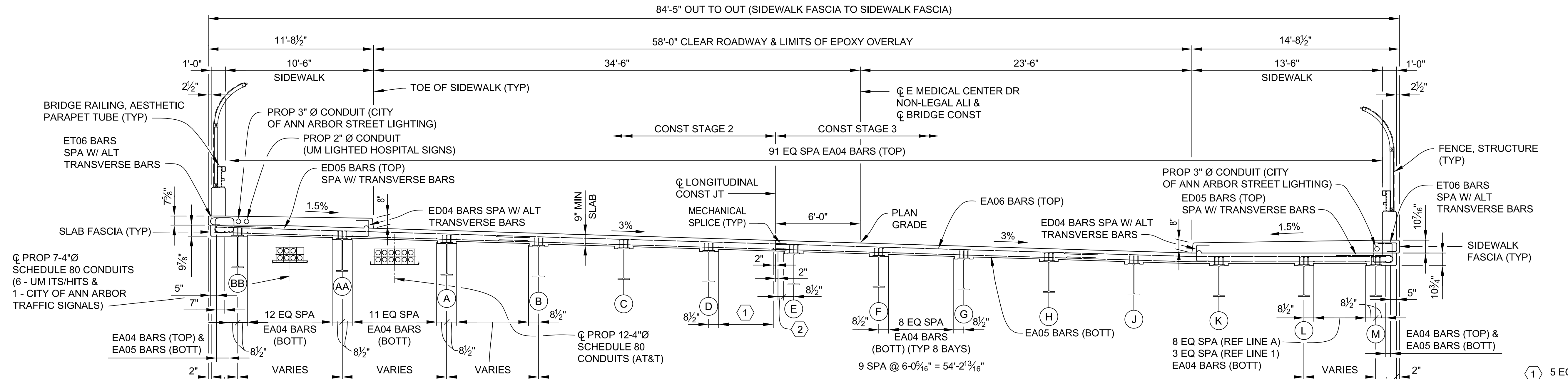
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR42	
SHEET NO. <u>105</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

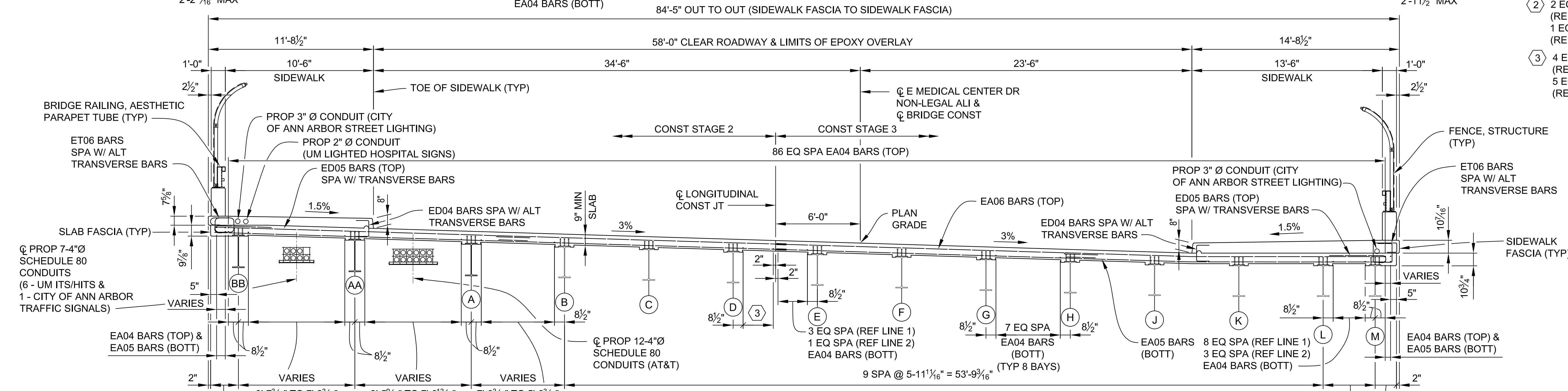
3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

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SECTION A-A



SECTION B-B

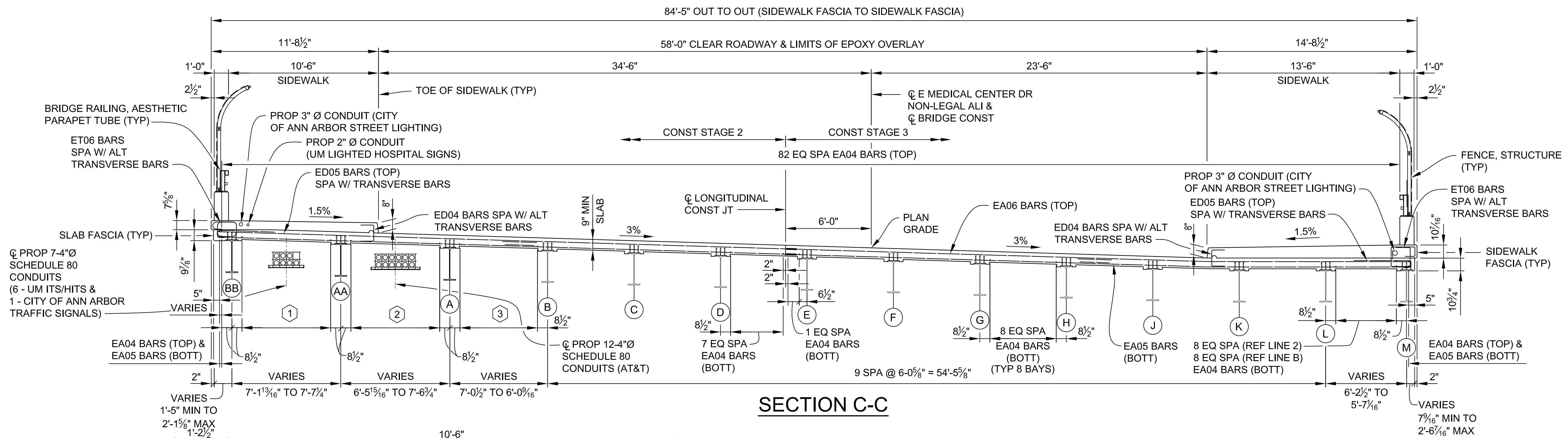
- ① 5 EQ SPA EA04 BARS (BOTT) (REF LINE A)
6 EQ SPA EA04 BARS (BOTT) (REF LINE 1)
- ② 2 EQ SPA EA04 BARS (BOTT) (REF LINE A)
1 EQ SPA EA04 BARS (BOTT) (REF LINE 1)
- ③ 4 EQ SPA EA04 BARS (BOTT) (REF LINE 1)
5 EQ SPA EA04 BARS (BOTT) (REF LINE 2)

MIN LAP TABLE	
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

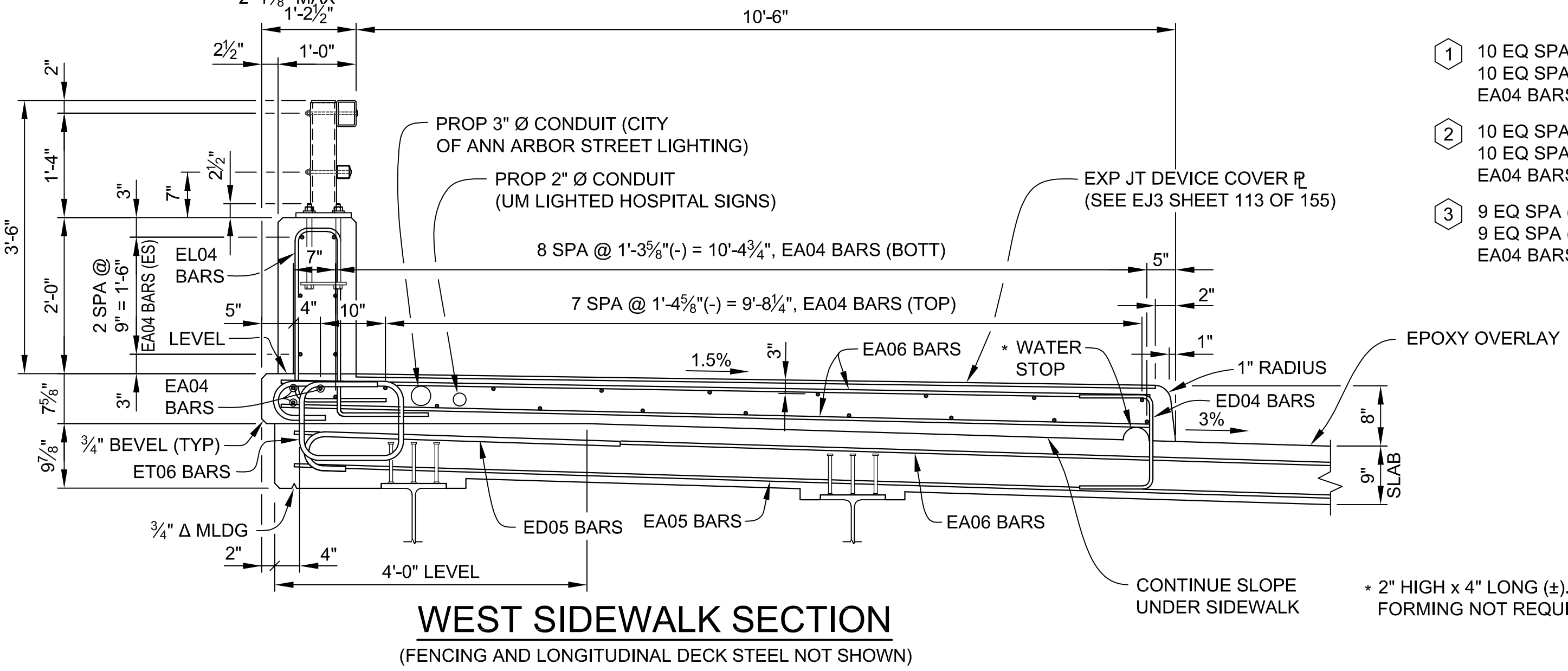
3 WORKING DAYS | BEFORE YOU DIG | CALL MISS DIG | 800-482-7171 | (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 1/4"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR43	
SHEET NO. <u>106</u> OF <u>155</u>	

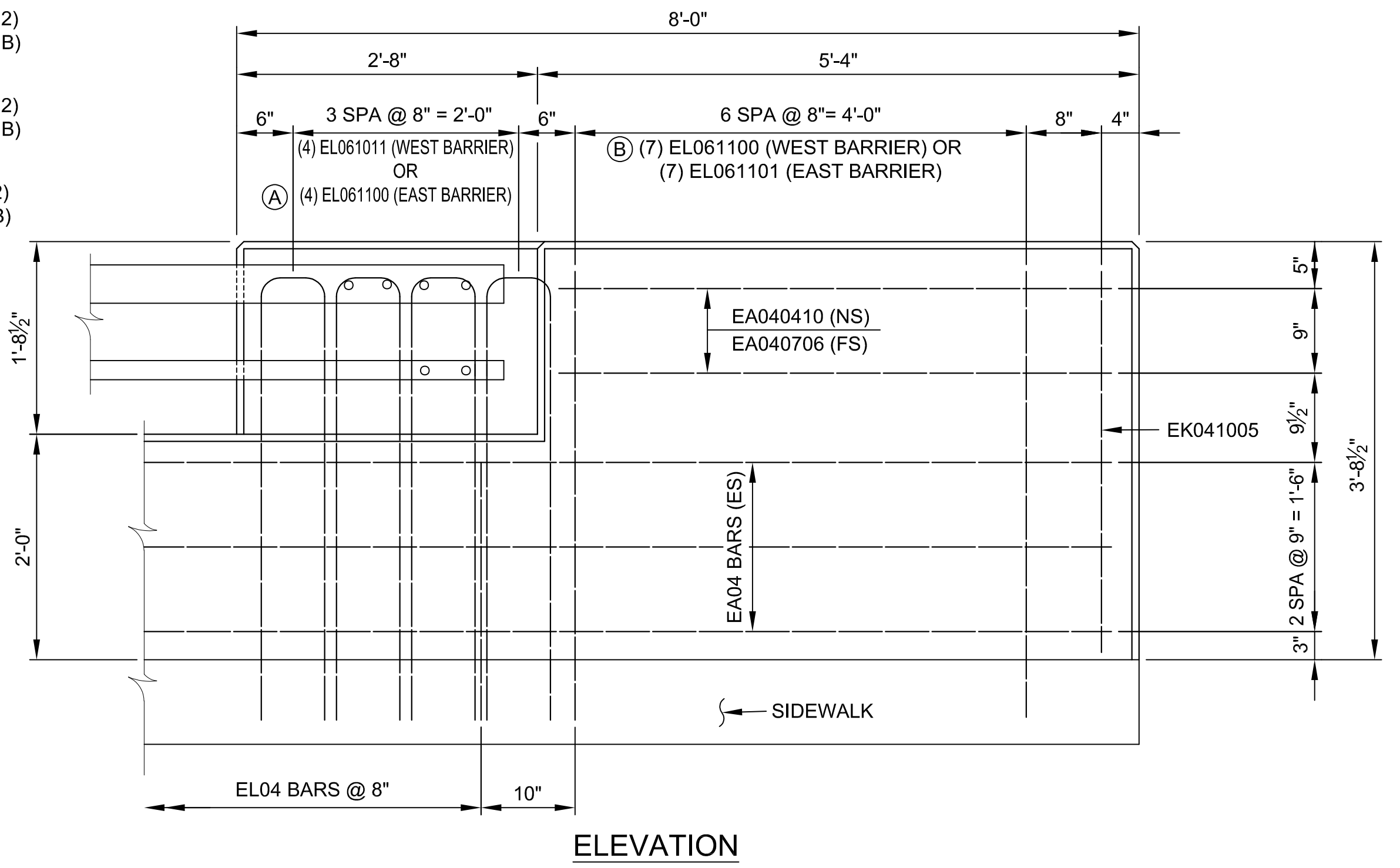


SECTION C-C



WEST SIDEWALK SECTION
(FENCING AND LONGITUDINAL DECK STEEL NOT SHOWN)

- ① 10 EQ SPA (REF LINE 2)
10 EQ SPA (REF LINE B)
EA04 BARS (BOTT)
- ② 10 EQ SPA (REF LINE 2)
10 EQ SPA (REF LINE B)
EA04 BARS (BOTT)
- ③ 9 EQ SPA (REF LINE 2)
9 EQ SPA (REF LINE B)
EA04 BARS (BOTT)

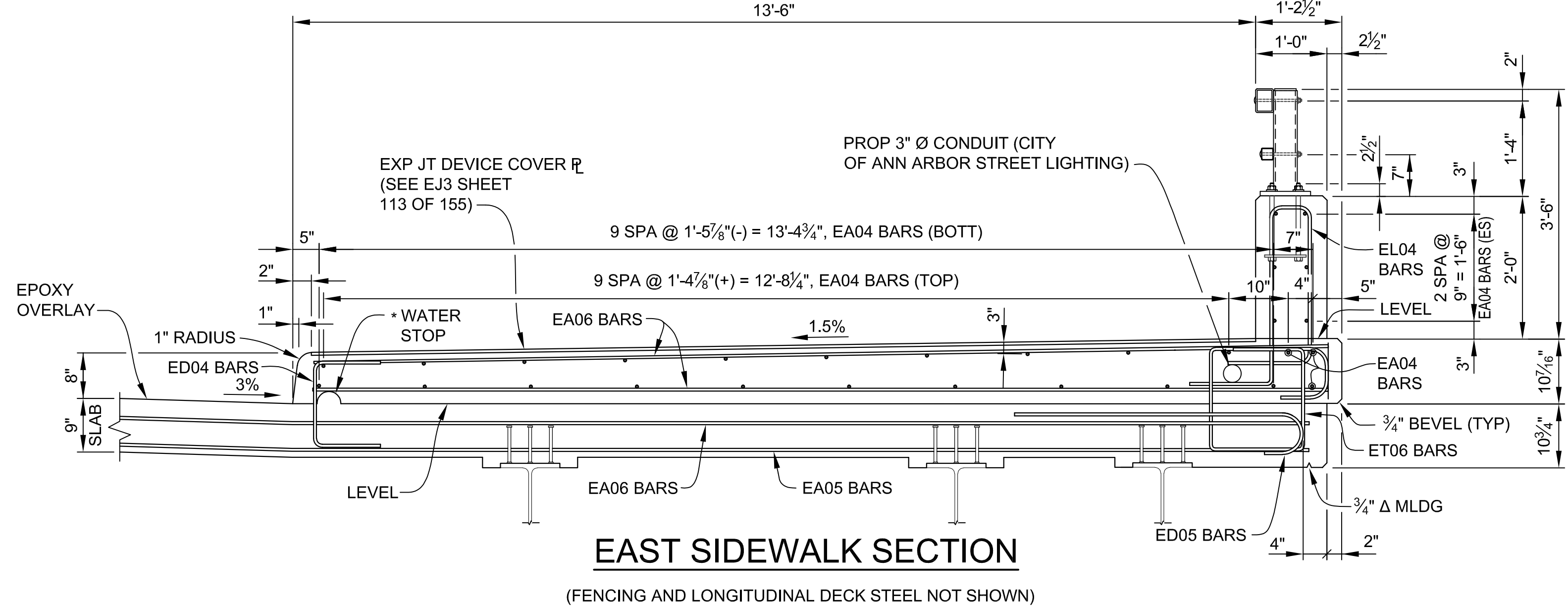


**ELEVATION
END WALL DETAIL**
(AESTHETIC PARAPET TUBE)

MIN LAP TABLE

EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

NOTE:
FOR ADDITIONAL DETAILS OF RAILING, SEE MDOT STANDARD PLAN B-25-K ON SHEETS 134 - 135 OF 155.



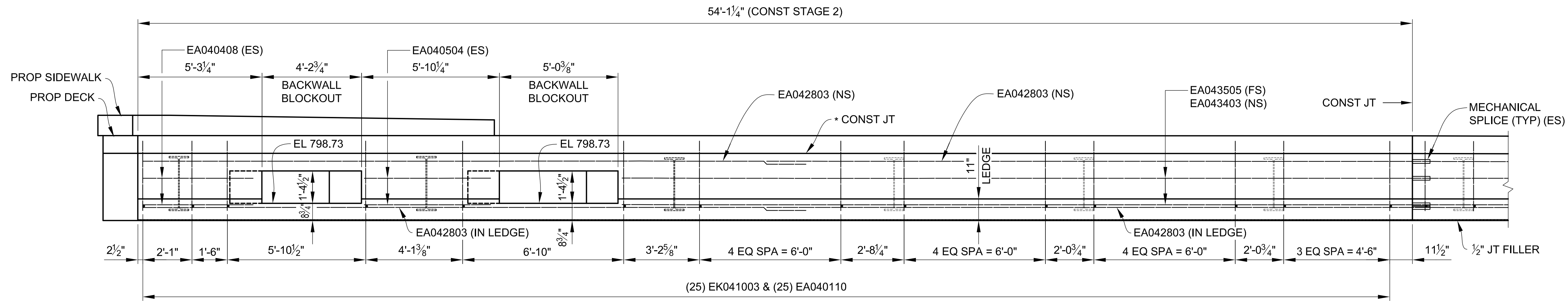
EAST SIDEWALK SECTION
(FENCING AND LONGITUDINAL DECK STEEL NOT SHOWN)

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 1/4"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR44	
SHEET NO. <u>107</u> OF <u>155</u>	

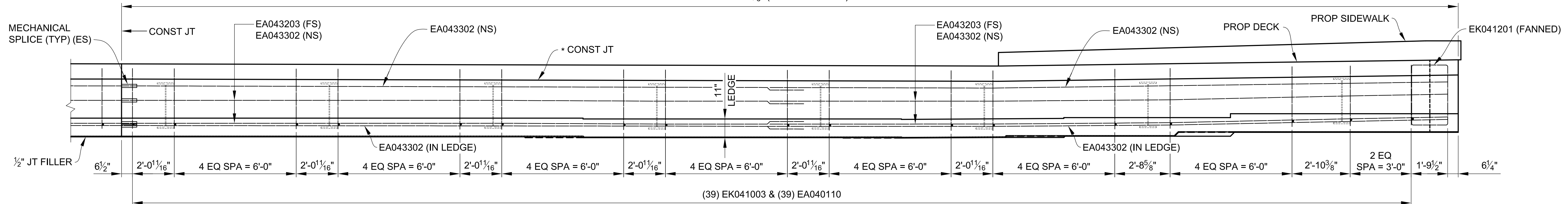
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BACKWALL ELEVATION ABUTMENT A - CONST STAGE 2

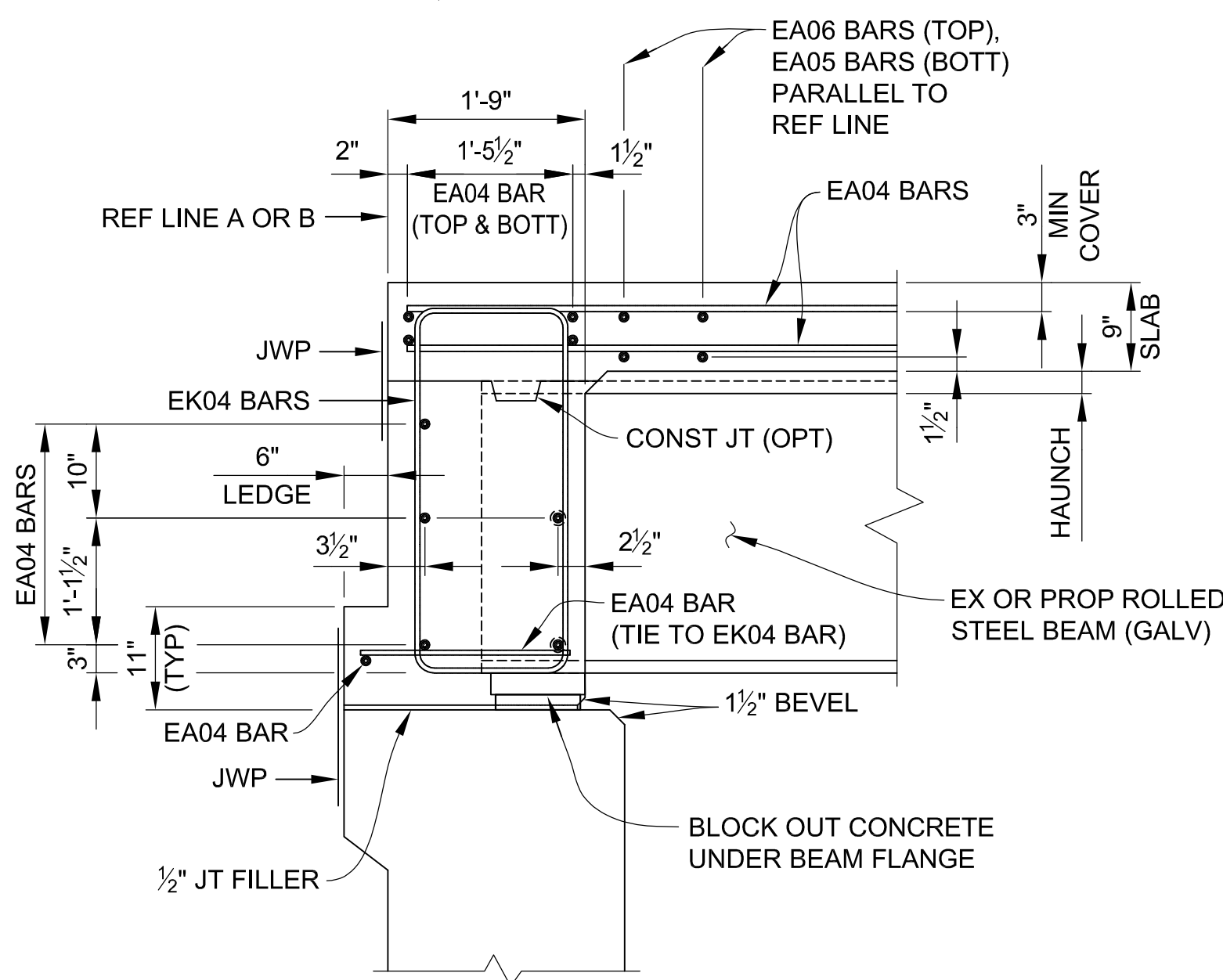
(LOOKING UP STATION)
 * OPTIONAL CONSTRUCTION JOINT IF BACKWALL IS POURED WITH DECK.

65'-9 3/8" (CONST STAGE 3)



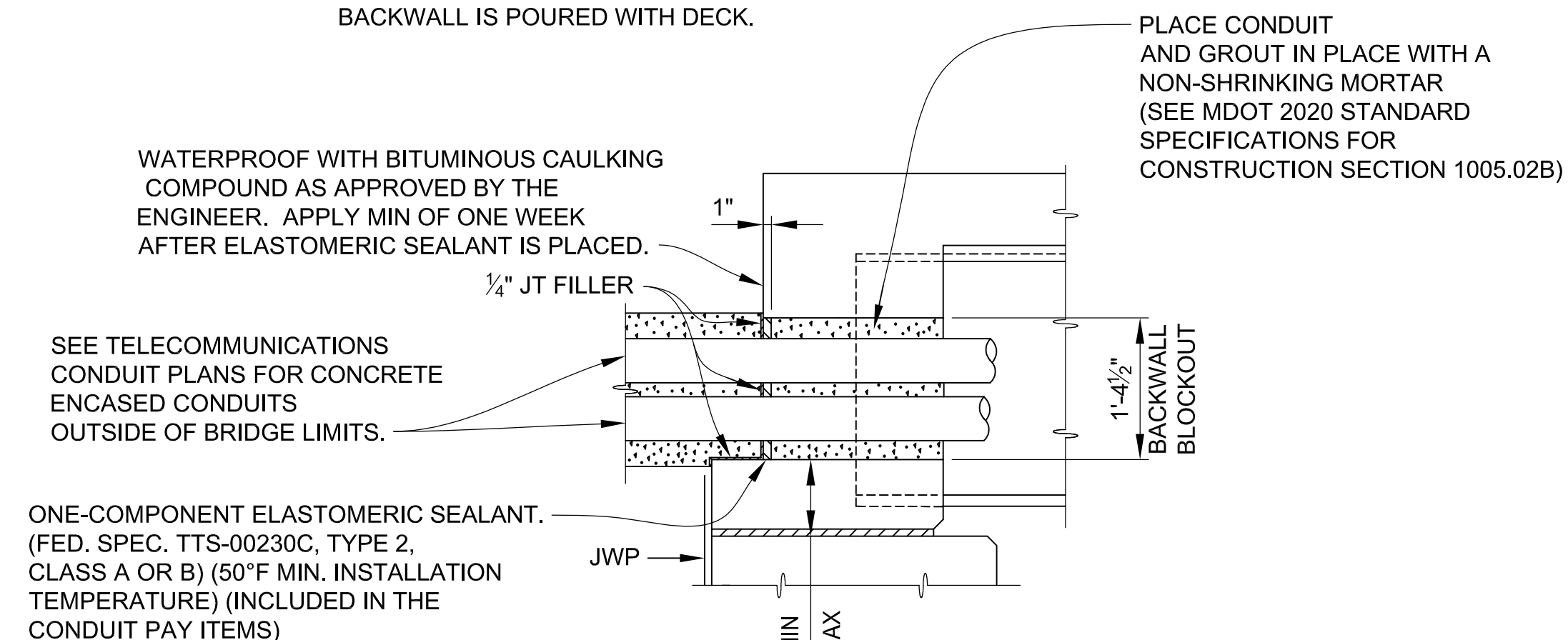
BACKWALL ELEVATION ABUTMENT A - CONST STAGE 3

(LOOKING UP STATION)
 * OPTIONAL CONSTRUCTION JOINT IF BACKWALL IS POURED WITH DECK.



TYPICAL BACKWALL SECTION

IF A CONSTRUCTION JOINT IS USED, CAST THE LOWER PORTION OF THE BACKWALL PRIOR TO PLACING DECK REINFORCEMENT. THERE WILL BE NO PAYMENT FOR THE REQUIRED JOINT WATERPROOFING.



BACKWALL CONDUIT INSTALLATION

MIN LAP TABLE

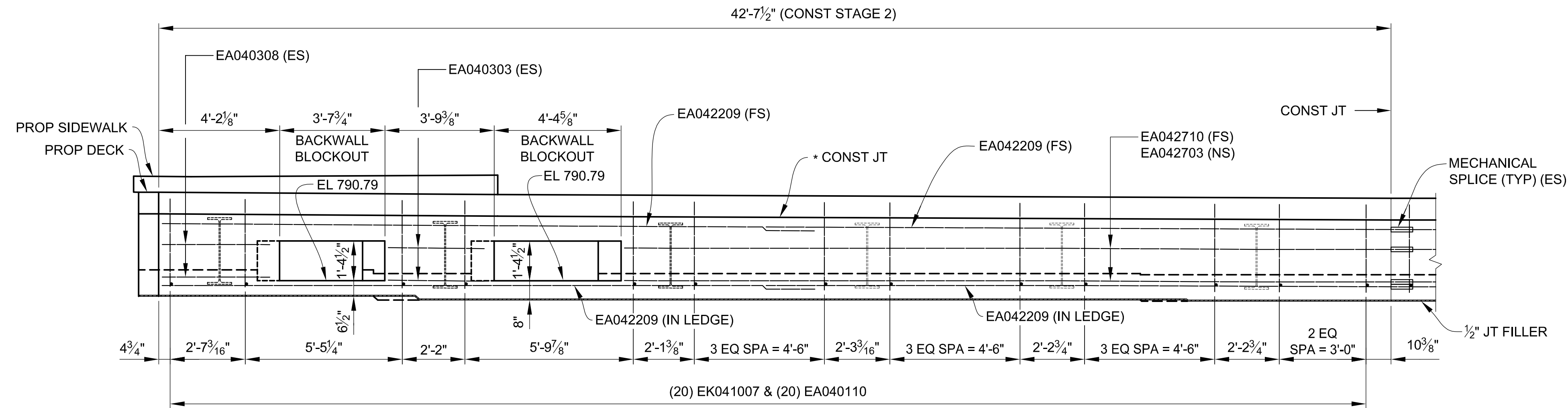
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

3 WORKING DAYS
 BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR45	
SHEET NO. <u>108</u> OF <u>155</u>	

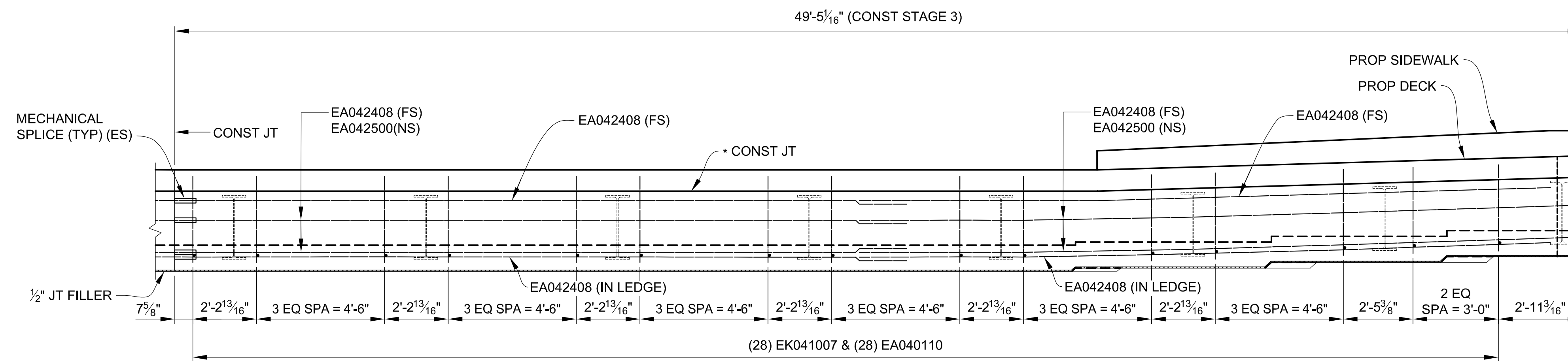
APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



BACKWALL ELEVATION ABUTMENT B - CONST STAGE 2

(LOOKING UP STATION)

* OPTIONAL CONSTRUCTION JOINT IF BACKWALL IS POURED WITH DECK.



BACKWALL ELEVATION ABUTMENT B - CONST STAGE 3

(LOOKING UP STATION)

* OPTIONAL CONSTRUCTION JOINT IF BACKWALL IS POURED WITH DECK.

MIN LAP TABLE	
EA03 BARS	- 1'-2"
EA04 BARS	- 1'-7"
EA05 BARS	- 2'-0"
EA06 BARS	- 2'-4"

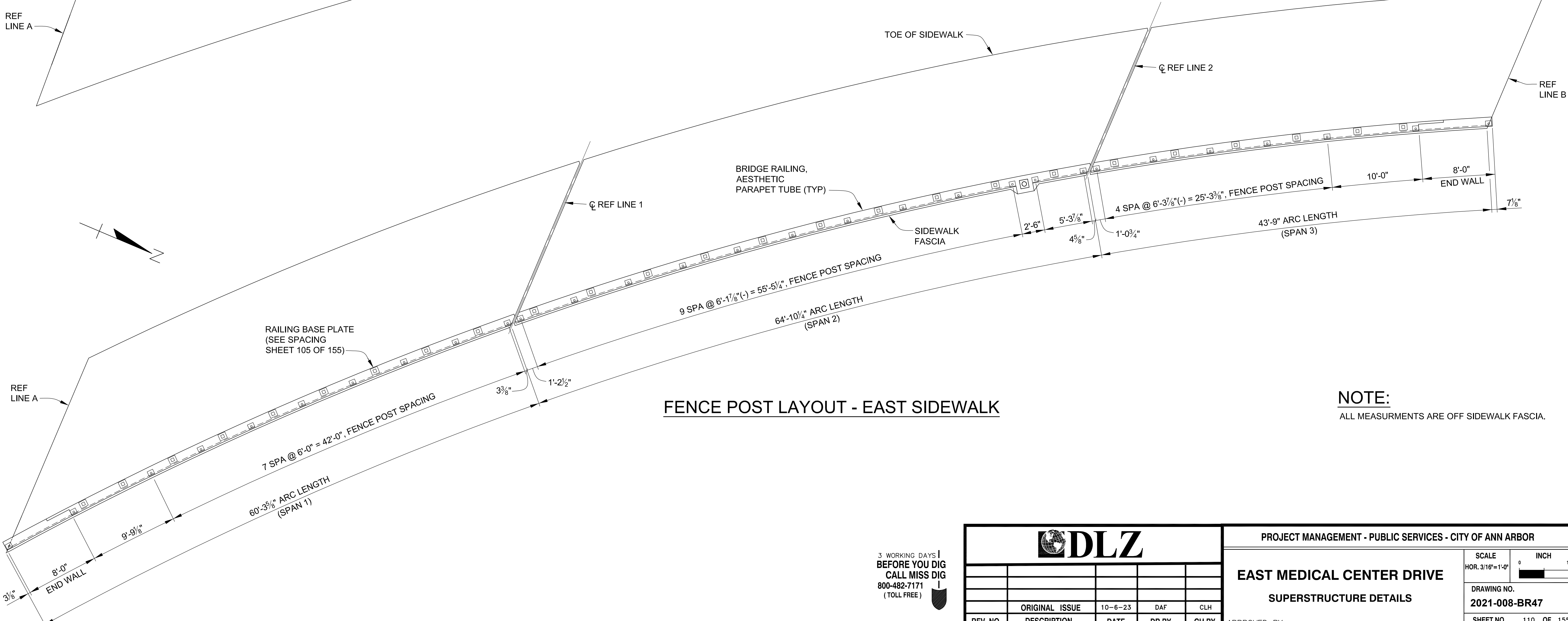
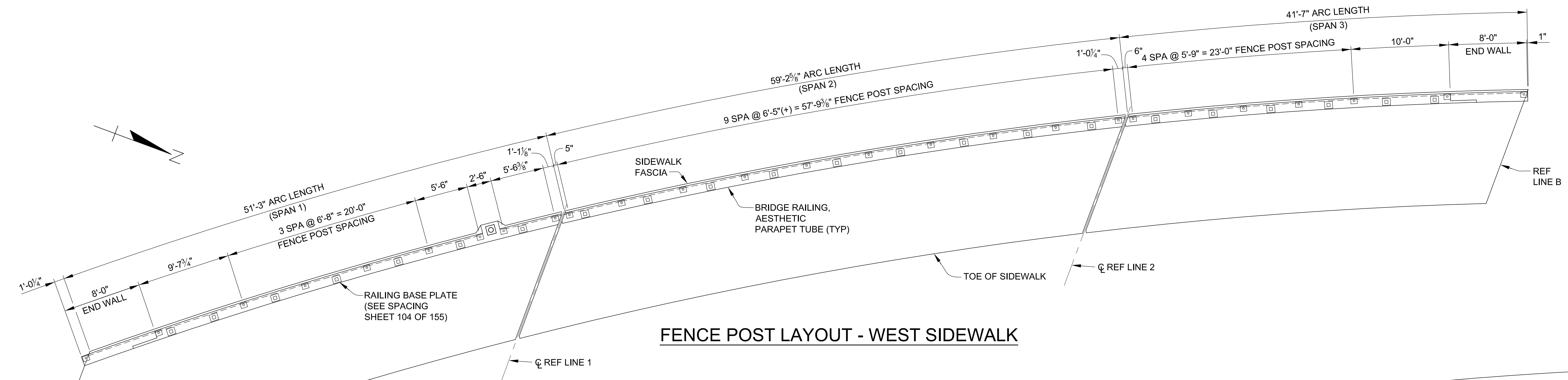
3 WORKING DAYS | BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR46	
SHEET NO. <u>109</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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NOTE:
ALL MEASUREMENTS ARE OFF SIDEWALK FASCIA.

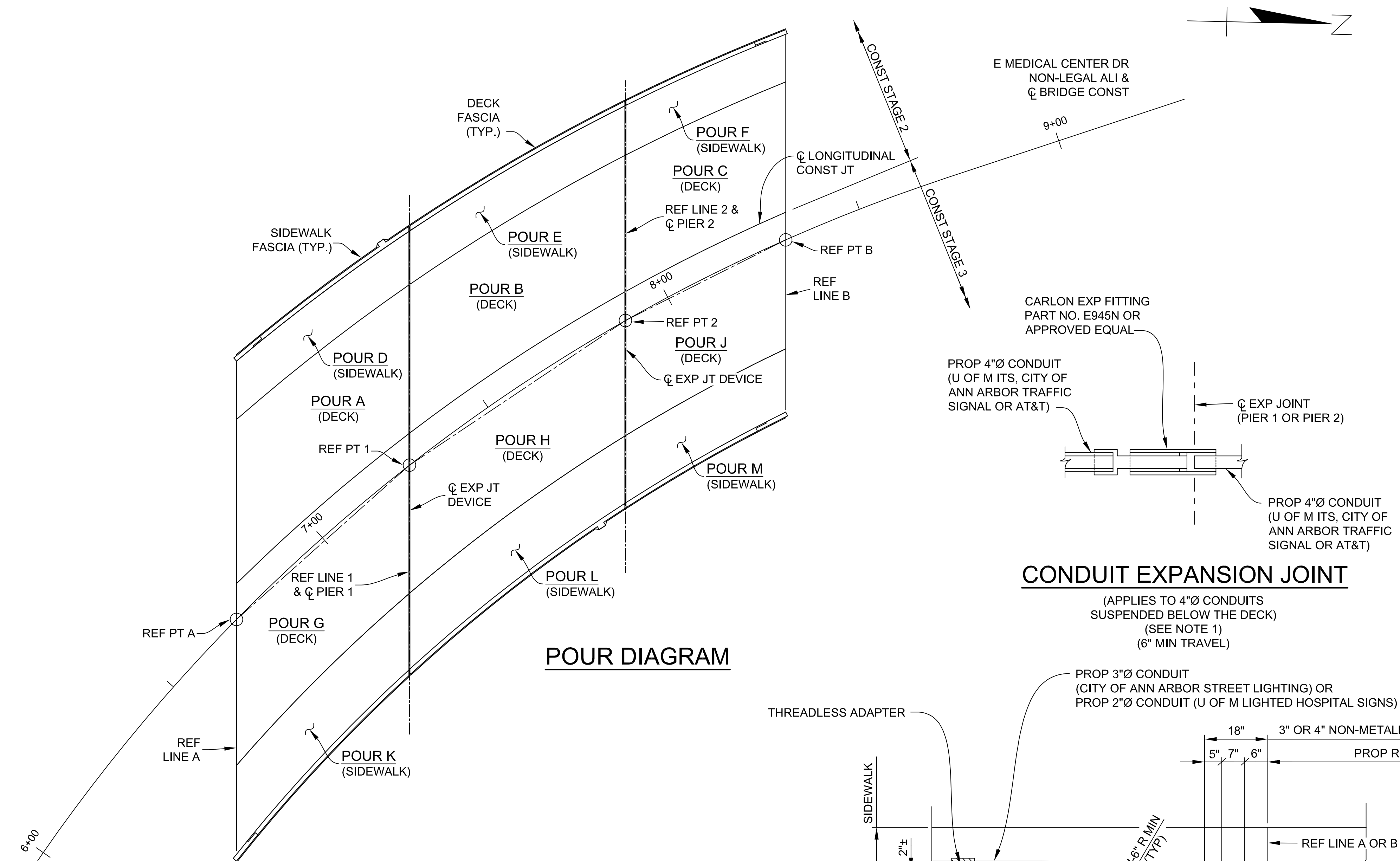
3 WORKING DAYS
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DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAILS	
SCALE HOR. 3/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR47	
SHEET NO. <u>110</u> OF <u>155</u>	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

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POUR DIAGRAM

SUPERSTRUCTURE CONCRETE QUANTITIES	
POUR	QUANTITY (CYDS)(CATG 0001)
D	14.3
E	16.5
F	11.6
K	25.5
L	27.5
M	18.6
TOTAL	114

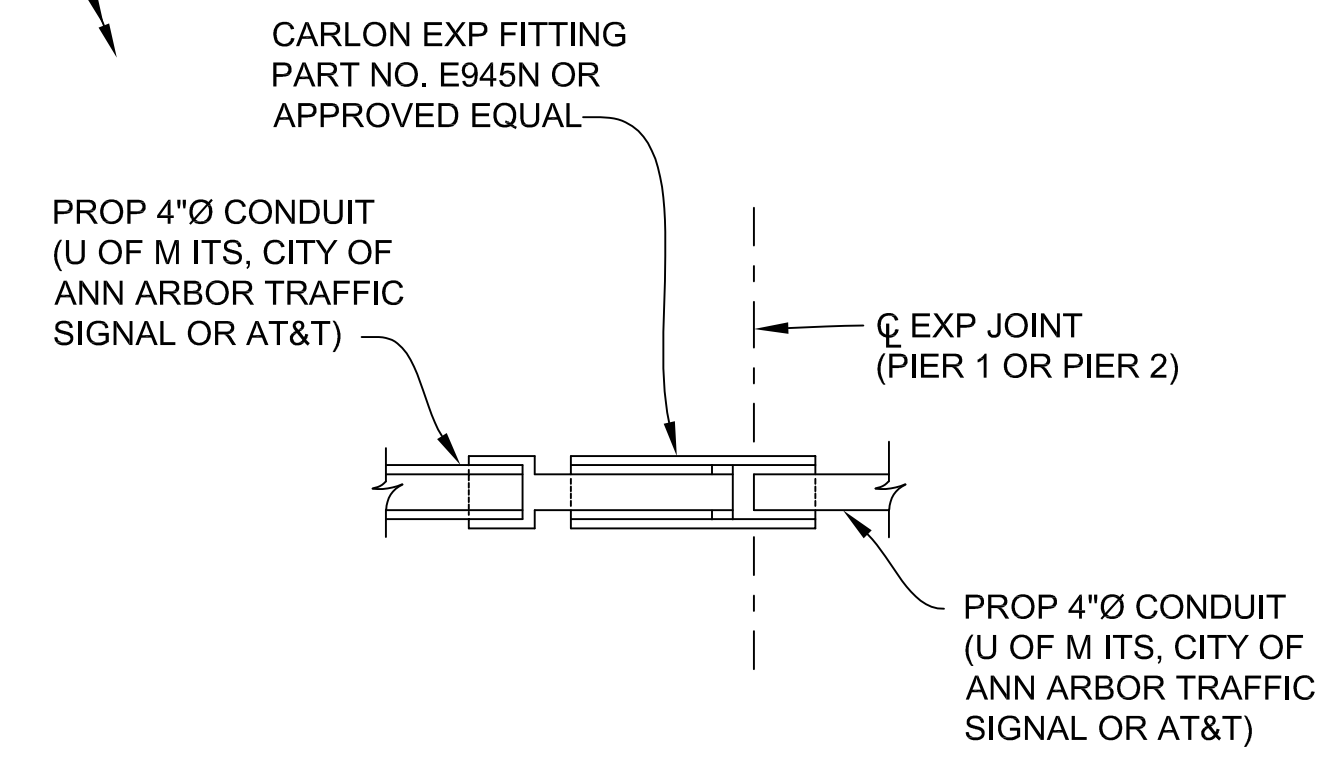
SUPERSTRUCTURE CONCRETE NIGHT CASTING QUANTITIES		
POUR	QUANTITY (CYDS)(CATG 0001)	QUANTITY (CYDS)(CATG 0002)
* A	50.7	25.7
B	48.1	24.5
* C	37.8	20.8
* G	98.6	
H	83.3	
* J	68.5	
TOTAL	387	71

* BACKWALL INCLUDED IN THE POUR.

ESTIMATED QUANTITIES THIS SHEET					
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Bridge Ltg, Furn and Rem (STR 11065)	LSUM	0.9	0.1		1
Bridge Ltg, Oper and Maintain	Cyd	387	71		458
Elec Grounding System	Ea	1			1
Superstructure Conc	Cyd	114			114
Superstructure Conc, Form, Finish, and Cure (STR 11065)	LSUM	1			1
Superstructure Conc, Form, Finish, and Cure, Night Casting (STR 11065)	LSUM	0.9	0.1		1
Superstructure Conc, Night Casting	Cyd	387	71		458
Bridge Railing, Aesthetic Parapet Tube	Ft	323			323
Epoxy Ovly	Syd	1,020			1020
Reinforcement, Mechanical Splice	Ea	796			796
Fence, Structure	Sft	2,635			2,635

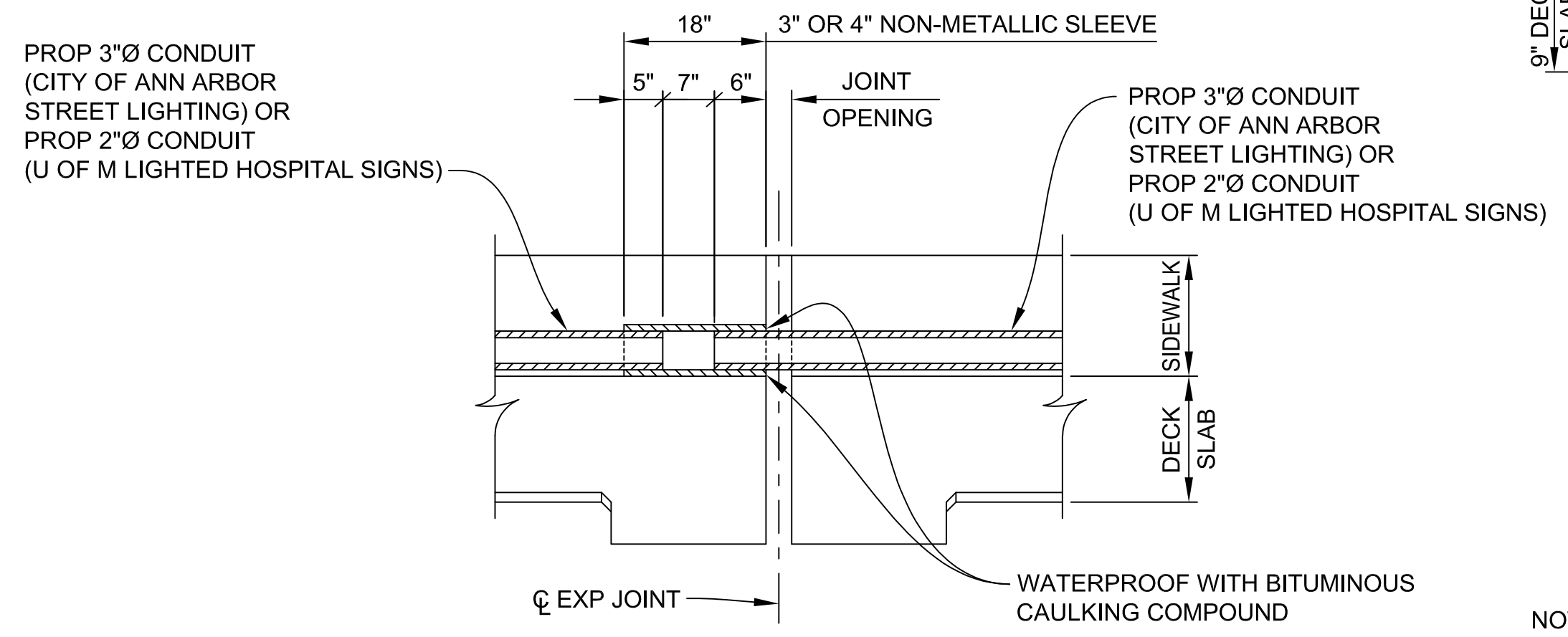
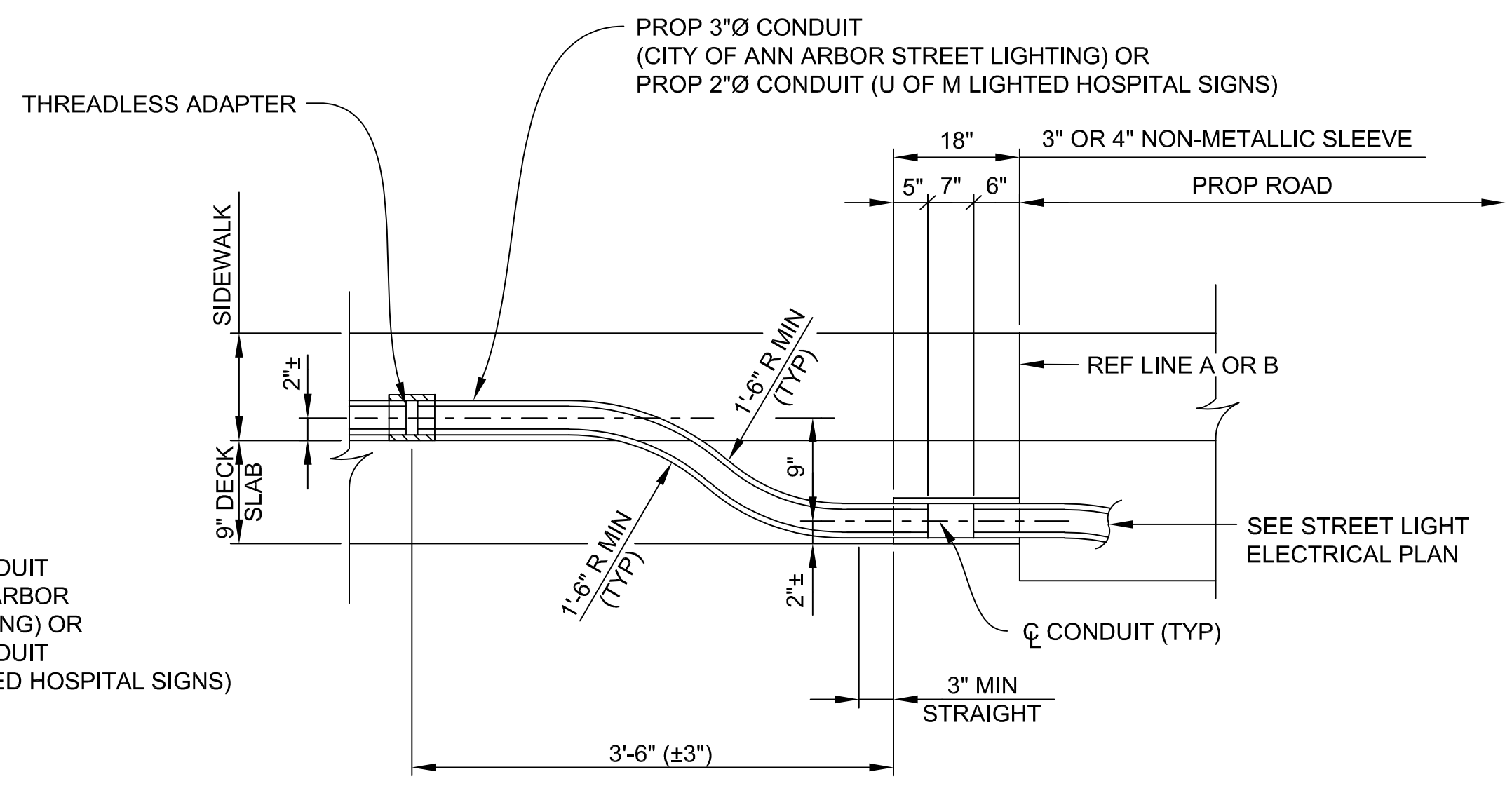
CONDUIT EXPANSION JOINT

(APPLIES TO 4"Ø CONDUITS SUSPENDED BELOW THE DECK) (SEE NOTE 1) (6" MIN TRAVEL)



CONDUIT DETAILS AT APPROACHES

(SEE NOTE 1)



LIGHTING CONDUIT AT TRANSVERSE EXPANSION JOINT

(SEE NOTE 1)

NOTE 1: SLEEVES, ADAPTERS, COUPLINGS, CONDUIT, PLUGS AND WATERPROOFING ARE INCLUDED IN THE BID ITEM "CONDUIT, SCHEDULE 40, 2 INCH", "CONDUIT, SCHEDULE 40, 3 INCH" OR "CONDUIT, SCHEDULE 80, 4 INCH, STRUCTURE"

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DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DAF	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
SUPERSTRUCTURE DETAIL	
SCALE HOR. 1/16"=1'-0"	INCH 0 1
DRAWING NO. 2021-008-BR48	
SHEET NO. 111 OF 155	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

BOTTOM OF SLAB ELEVATIONS

		REF. A					SPAN 1					REF. 1					SPAN 2					REF. 2					SPAN 3					REF. B											
		0	1	2	3	4	0	1	2	3	4	5	6	0	1	2	3	4	5	6	7	0	1	2	3	4	5	0	1	2	3	4	5										
BB	FASCIA	800.85	800.56	800.25	799.91	799.55	799.16	798.75	798.64	798.25	797.84	797.40	796.93	796.45	795.97	795.48	795.37	794.92	794.48	794.03	793.56	793.10	800.83	800.54	800.24	799.90	799.54	799.15	798.73	798.63	798.24	797.83	797.39	796.92	796.44	795.95	795.46	795.35	794.91	794.46	794.00	793.54	793.07
AA	LEFT	800.87	800.60	800.30	799.97	799.61	799.21	798.80	798.69	798.31	797.91	797.47	797.01	796.51	796.00	795.49	795.37	794.92	794.47	794.00	793.53	793.05	800.83	800.56	800.27	799.94	799.57	799.18	798.76	798.66	798.28	797.88	797.44	796.97	796.47	795.97	795.45	795.34	794.90	794.44	793.98	793.50	793.02
A	RIGHT	800.87	800.60	800.30	799.98	799.62	799.23	798.82	798.72	798.34	797.93	797.50	797.03	796.52	796.01	795.49	795.37	794.91	794.45	793.98	793.49	793.00	800.84	800.57	800.28	799.95	799.59	799.21	798.80	798.70	798.31	797.91	797.47	797.00	796.50	795.98	795.46	795.34	794.89	794.43	793.95	793.47	792.98
B	LEFT	800.86	800.69	800.44	800.14	799.76	799.34	798.84	798.75	798.45	798.09	797.67	797.18	796.65	796.08	795.50	795.38	794.89	794.41	793.93	793.45	792.97	800.86	800.69	800.44	800.14	799.76	799.34	798.84	798.75	798.45	798.09	797.67	797.18	796.65	796.08	795.50	795.38	794.89	794.41	793.93	793.45	792.97
C	RIGHT	800.84	800.67	800.41	800.11	799.74	799.31	798.81	798.72	798.42	798.06	797.64	797.15	796.62	796.05	795.47	795.35	794.87	794.38	793.90	793.42	792.94	800.84	800.67	800.41	800.11	799.74	799.31	798.81	798.72	798.42	798.06	797.64	797.15	796.62	796.05	795.47	795.35	794.87	794.38	793.90	793.42	792.94
D	LEFT	800.86	800.70	800.45	800.15	799.78	799.36	798.87	798.78	798.47	798.12	797.70	797.20	796.68	796.10	795.51	795.39	794.90	794.41	793.92	793.43	792.94	800.86	800.70	800.45	800.15	799.78	799.36	798.87	798.78	798.47	798.12	797.70	797.20	796.68	796.10	795.51	795.39	794.90	794.41	793.92	793.43	792.94
E	RIGHT	800.84	800.67	800.43	800.13	799.76	799.34	798.84	798.75	798.45	798.09	797.67	797.17	796.66	796.08	795.49	795.37	794.87	794.38	793.89	793.40	792.92	800.84	800.67	800.43	800.13	799.76	799.34	798.84	798.75	798.45	798.09	797.67	797.17	796.66	796.08	795.49	795.37	794.87	794.38	793.89	793.40	792.92
F	LEFT	800.82	800.67	800.44	800.16	799.80	799.39	798.90	798.81	798.52	798.18	797.76	797.29	796.77	796.17	795.54	795.41	794.90	794.39	793.88	793.38	792.88	800.82	800.67	800.44	800.16	799.80	799.39	798.90	798.81	798.52	798.18	797.76	797.29	796.77	796.17	795.54	795.41	794.90	794.39	793.88	793.38	792.88
G	RIGHT	800.84	800.70	800.47	800.19	799.84	799.44	798.96	798.86	798.58	798.24	797.83	797.36	796.83	796.24	795.61	795.47	794.95	794.43	793.92	793.40	792.89	800.84	800.70	800.47	800.19	799.84	799.44	798.96	798.86	798.58	798.24	797.83	797.36	796.83	796.24	795.61	795.47	794.95	794.43	793.92	793.40	792.89
H	LEFT	800.82	800.69	800.48	800.21	799.86	799.46	798.99	798.89	798.61	798.28	797.87	797.40	796.88	796.29	795.65	795.51	794.99	794.46	793.94	793.41	792.90	800.82	800.69	800.48	800.21	799.86	799.46	798.99	798.89	798.61	798.28	797.87	797.40	796.88	796.29	795.65	795.51	794.99	794.46	793.94	793.41	792.90
J	RIGHT	800.80	800.67	800.45	800.18	799.84	799.44	798.96	798.86	798.59	798.25	797.84	797.37	796.85	796.26	795.63	795.49	794.96	794.44	793.91	793.39	792.87	800.80	800.67	800.45	800.18	799.84	799.44	798.96	798.86	798.59	798.25	797.84	797.37	796.85	796.26	795.63	795.49	794.96	794.44	793.91	793.39	792.87
K	LEFT	800.80	800.68	800.48	800.22	799.88	799.49	799.02	798.92	798.65	798.33	797.93	797.47	796.95	796.35	795.70	795.56	795.03	794.49	793.95	793.42	792.89	800.80	800.68	800.48	800.22	799.88	799.49	799.02	798.92	798.65	798.33	797.93	797.47	796.95	796.35	795.70	795.56	795.03	794.49	793.95	793.42	792.89
L	RIGHT	800.78	800.66	800.45	800.19	799.86	799.46	798.99	798.89	798.63	798.31	797.91	797.45	796.92	796.33	795.67	795.53	795.00	794.46	793.93	793.39	792.87	800.78	800.66	800.45	800.19	799.86	799.46	798.99	798.89	798.63	798.31	797.91	797.45	796.92	796.33	795.67	795.53	795.00	794.46	793.93	793.39	792.87
M	LEFT	800.78	800.67	800.47	800.22	799.90	799.51	799.05	798.95	798.69	798.37	797.98	797.52	797.00	796.40	795.75	795.60	795.07	794.52	793.98	793.44	792.90	800.78	800.67	800.47	800.22	799.90	799.51	799.05	798.95	798.69	798.37	797.98	797.52	797.00	796.40	795.75	795.60	795.07	794.52	793.98	793.44	792.90
	RIGHT	800.75	800.64	800.45	800.20	799.87	799.49	799.02	798.92	798.66	798.35	797.95	797.49	796.97	796.38	795.73	795.58	795.04	794.50	793.95	793.41	792.87	800.75	800.64	800.45	800.20	799.87	799.49	799.02	798.92	798.66	798.35	797.95	797.49	796.97	796.38	795.73	795.58	795.04	794.50	793.95	793.41	792.87
	LEFT	800.75	800.68	800.52	800.30	800.00	799.63	799.17	799.01	798.78	798.49	798.11	797.67	797.15	796.56	795.90	795.67	795.15	794.62	794.07	793.52	792.98	800.75	800.68	800.52	800.30	800.00	799.63	799.17	799.01	798.78	798.49	798.11	797.67	797.15	796.56	795.90	795.67	795.15	794.62	794.07	793.52	792.98
	RIGHT	800.72	800.65	800.50	800.27	799.97	799.60	799.15	798.99	798.76	798.46	798.09	797.64	797.13	796.53	795.87	795.64	795.12	794.59	794.05	793.50	792.95	800.72	800.65	800.50	800.27	799.97	799.60	799.15	798.99	798.76	798.46	798.09	797.64	797.13	796.53	795.87	795.64	795.12	794.59	794.05	793.50	792.95
	LEFT	800.86	800.81	800.67	800.46	800.18	799.82	799.38	799.20	799.01	798.74	798.38	797.94	797.42	796.82	796.14	795.89	795.40	794.89	794.32	793.74	793.18	800.86	800.81	800.67	800.46	800.18	799.82	799.38	799.20	799.01	798.74	798.38	797.94	797.42	796.82	796.14	795.89	795.40	794.89	794.32	793.74	793.18
	RIGHT	800.84	800.79	800.65	800.44	800.15	799.80	799.36	799.18	798.99	798.71	798.36	797.92	797.40	796.79	796.11	795.87	795.38	794.86	794.30	793.72	793.15	800.84	800.79	800.65	800.44	800.15	799.80	799.36	799.18	798.99	798.71	798.36	797.92	797.40	796.79	796.11	795.87	795.38	794.86	794.30	793.72	793.15
	FASCIA	801.04	800.99	800.84	800.63	800.34	799.99	799.55	799.46	799.25	798.95	798.58	798.13	797.61	797.01	796.34	796.21	795.69	795.14	794.55	793.96	793.38	801.04	800.99	800.84	800.63	800.34	799.99	799.55	799.46	799.25	798.95	798.58	798.13	797.61	797.01	796.34	796.21	795.69	795.14	794.55	793.96	793.38

BULKHEAD ELEVATIONS

LOCATION	CONST. JT. A	EXP. JT. 1	EXP. JT. 2	CONST. JT. B
WEST FASCIA	801.64	799.45	796.18	793.93
GRADE BREAK/WEST SIDEWALK	801.64	799.46	796.17	793.89
TOE/WEST SIDEWALK	801.64	799.49	796.17	793.82
LONG CONST. JT.	801.63	799.61	796.24	793.61
P/G & BRIDGE C/L	801.61	799.64	796.28	793.59
TOE/EAST SIDEWALK	801.51	799.75	796.45	793.57
EAST FASCIA	801.81	800.26	797.03	794.05

NOTES:

BOTTOM OF SLAB ELEVATIONS ARE AT RIGHT ANGLES TO THE BEAM CENTERLINE AND ARE BASED ON THE CONDITION THAT THE BEAMS AND DIAPHRAGMS RE COMPLETELY ERRECTED WITH NO OTHER LOADS APPLIED. THESE ELEVATIONS INCLUDE ALLOWANCE FOR VERTICAL CURVE AND DEFLECTION DUE TO FORMS, STEEL REINFORCEMENT, CONCRETE SLAB, BRUSHBLOCK AND RAILING.

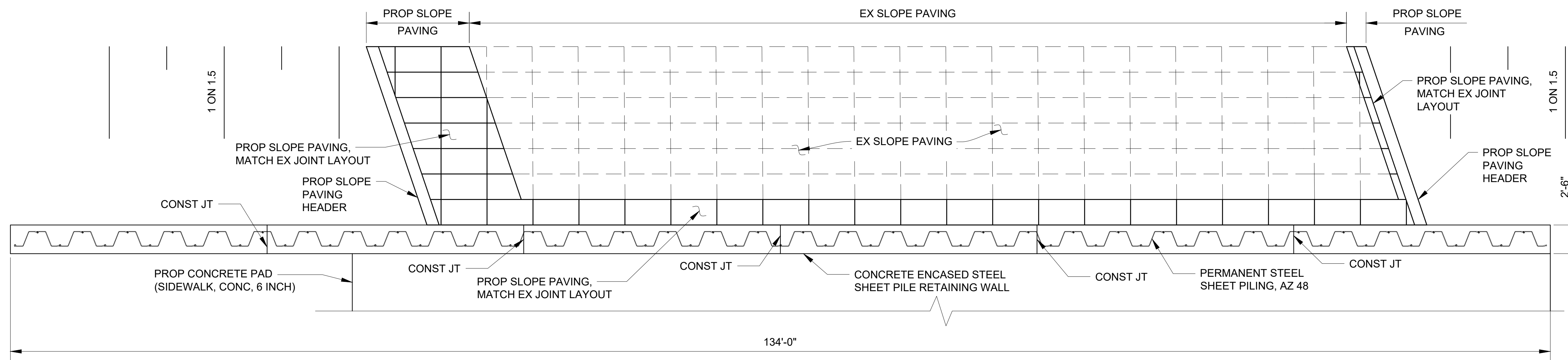
SCREEN ELEVATIONS ARE BASED ON THE CONDITION THAT NO SLAB CONCRETE HAS BEEN CAST AND THAT FORMWORK AND STEEL REINFORCEMENT ARE IN PLACE.

SCREED RAILS FOR FINISHIG OF STRUCTURAL CONCRETE SHALL BE LOCATED OVER FASCIA BEAMS.

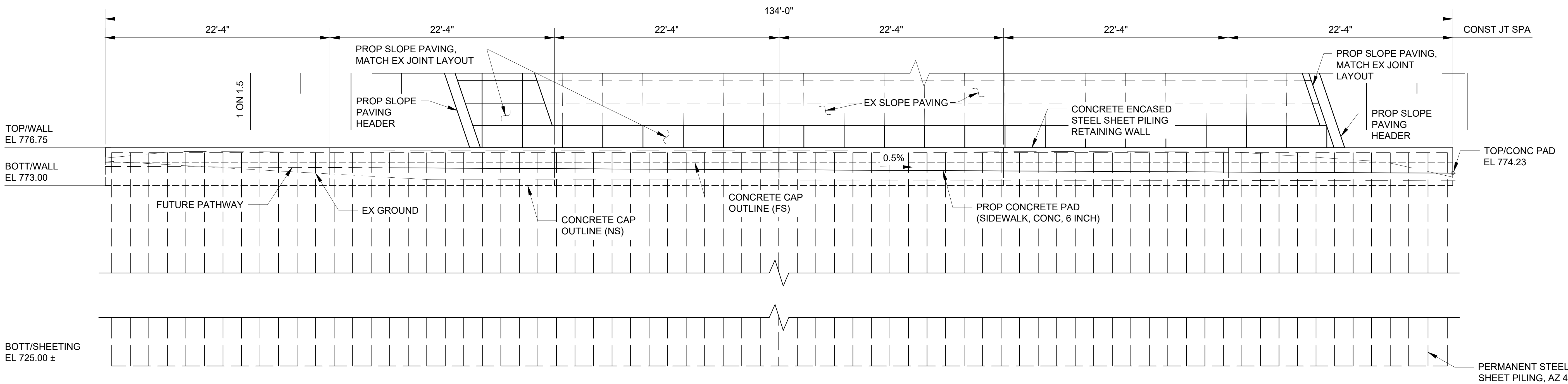
SECTIONS FOR BOTTOM OF SLAB AND/OR SCREED ELEVATIONS ARE GIVEN ALONG BEAM CENTERLINES FROM CENTERLINE OF BEARING TO CENTERLINE OF BEARING AT EQUAL SPACINGS.

SCREED ELEVATIONS

	REF. A	SPAN 1					REF. 1					SPAN 2					REF. 2					SPAN 3					REF. B															
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	7	0	1	2	3	4	5	0	1	2	3	4	5															
WEST FASCIA	801.48	801.19	800.88	800.54	800.18	799.79	799.38	799.27	798.88	798.47	798.03	797.56	797.08	796.60	796.11	796.00	795.55	795.11	794.66	794.19	793.73	801.60	801.31	801.01	800.67	800.31	799.92	799.51	799.41	799.01	798.60	798.16	797.69	797.21	796.72	796.22	796.11	795.66	795.21	794.76	794.29	793.82
GRADE BREAK/WEST SIDEWALK	801.60	801.33	801.03	800.71	800.34	799.95	799.54	799.43	799.05	798.65	798.21	797.74	797.25	796.74	796.22	796.11	795.66	795.20	794.73	794.25	793.77	801.60	801.33	801.03	800.71	800.34	799.95	799.54	799.43	799.05	798.65	798.21	797.74	797.25	796.74	796.22	796.1					



PLAN



ELEVATION

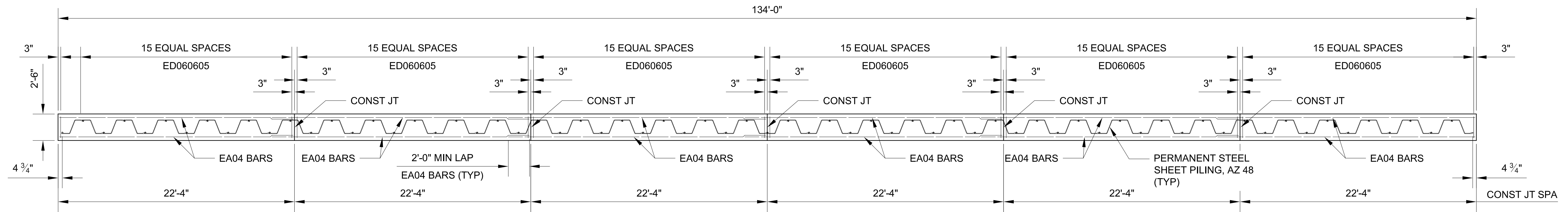
X:\Projects\2021\2141\736500_AA - EMCD Bridge\01_Constr\Draws\CAD\EMCD_Wall_001

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

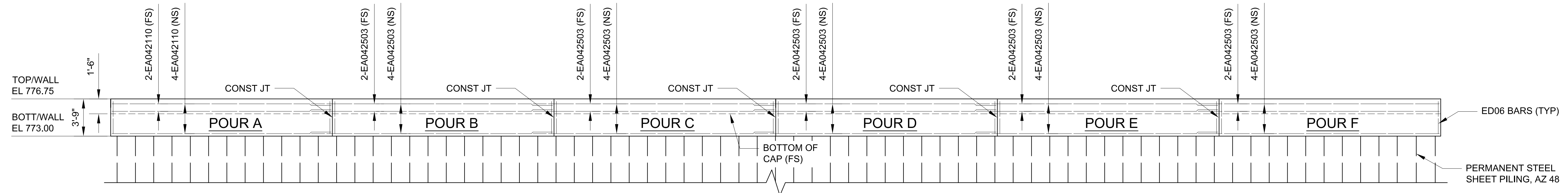
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	SBV	KJS

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
RETAINING WALL DETAILS	
SCALE NTS	INCH 0 1
DRAWING NO. 2021-008-BR51	
SHEET NO. <u>114</u> OF <u>155</u>	

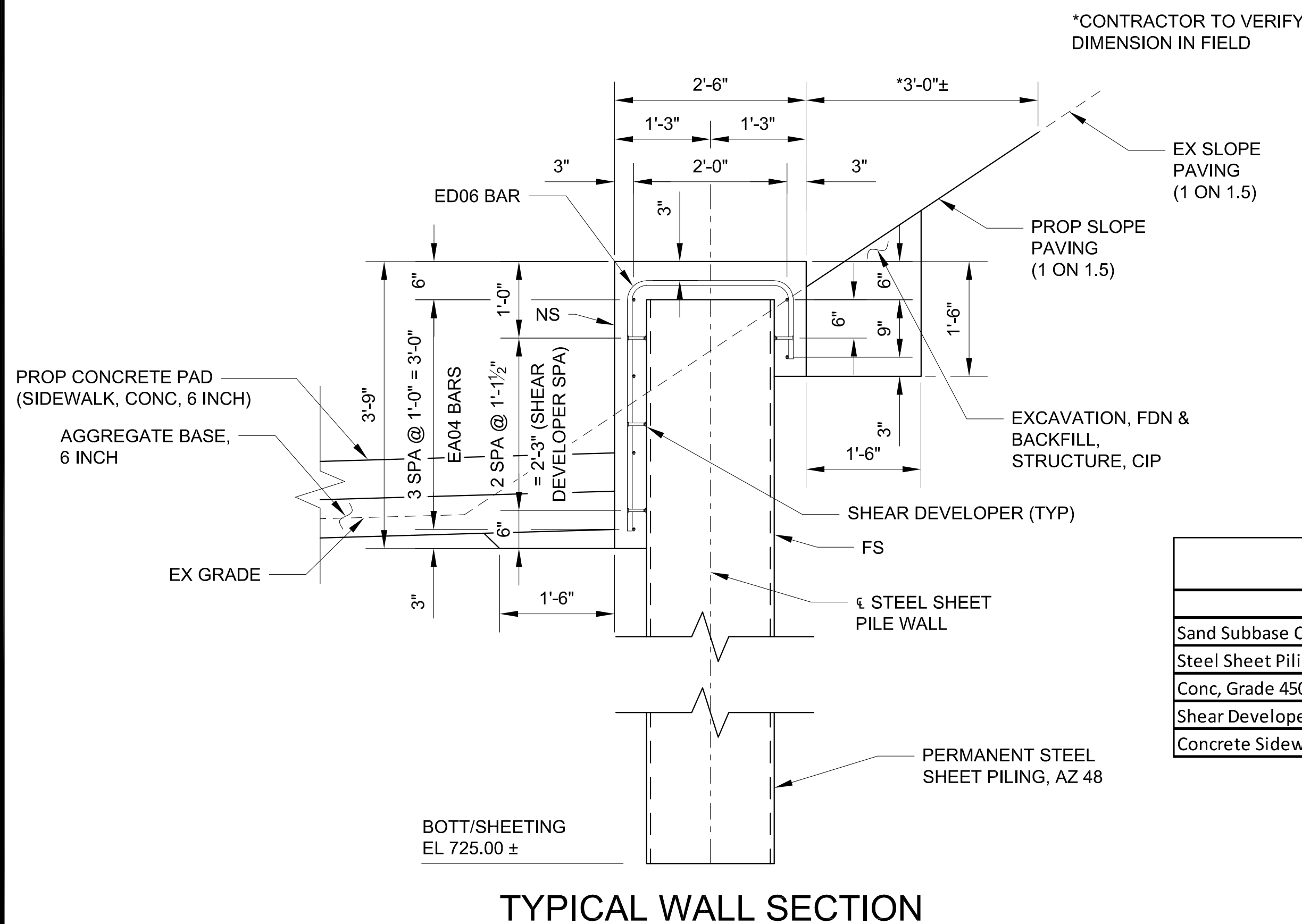
APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734



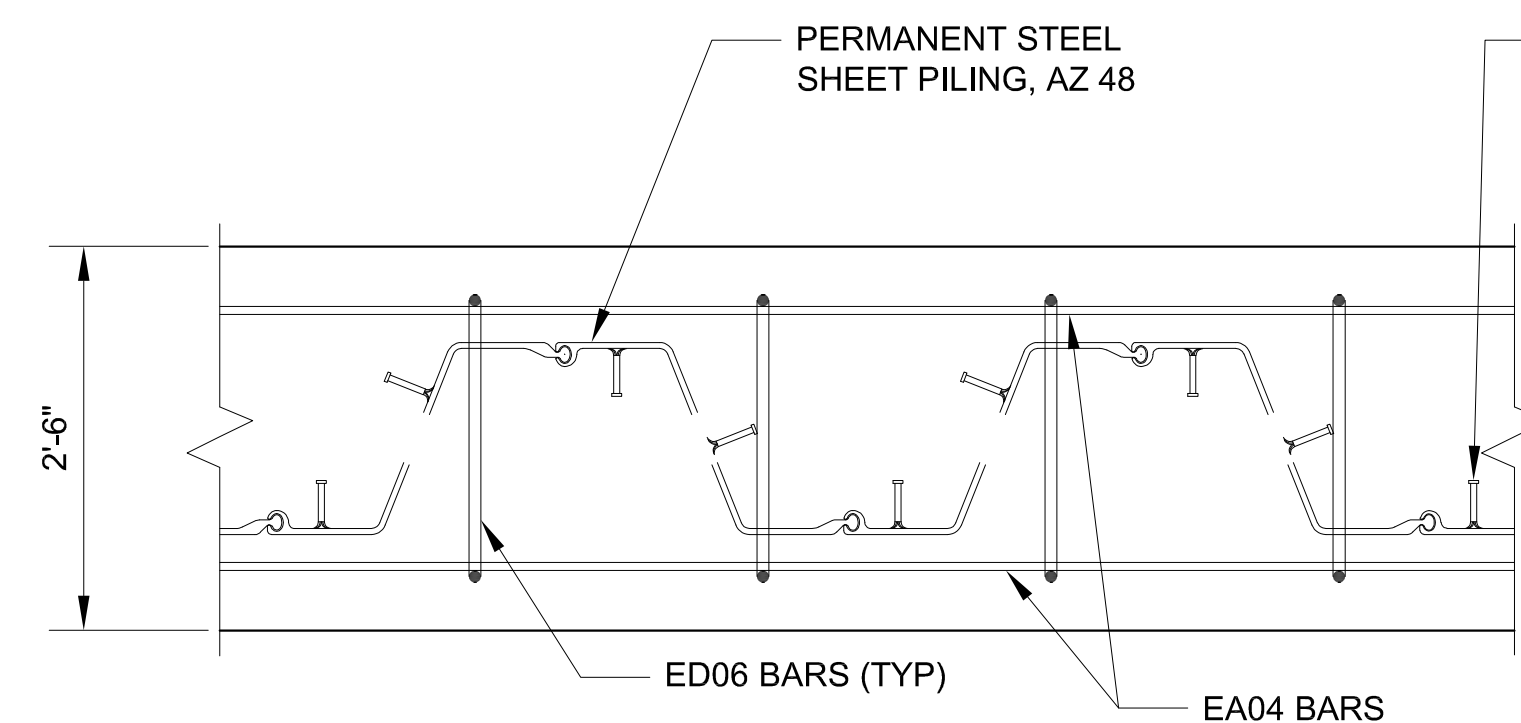
PLAN



ELEVATION



TYPICAL WALL SECTION



PARTIAL PLAN OF CONCRETE CAP

SHEAR DEVELOPER (SEE TYPICAL SECTION FOR VERTICAL SPACING) (TYP)

CONC, GRADE 4500 QUANTITIES**

POUR	CYD
A	5.5
B	5.5
C	5.5
D	5.5
E	5.5
F	5.5
TOTAL	33.0

** FOR INFORMATION ONLY

ESTIMATED QUANTITIES THIS SHEET

DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Sand Subbase Course, Class II, CIP	Cyd			35	35
Steel Sheet Piling, Permanent	Sft			6,870	6,870
Conc, Grade 4500	Cyd			33	33
Shear Developers (STR 11065)	LSUM			0.25	0.25
Concrete Sidewalk, 6 inch	Sft			1,880	1,880

NOTES:

- NS DENOTES NEAR SIDE.
- FS DENOTES FAR SIDE.
- FOR BEVEL AND MOLDING DETAILS, SEE MDOT STANDARD PLAN B-103 SERIES.
- VERTICAL SURFACES OF THE CONCRETE WALL ENCASUREMENT SHALL BE FORMED AND CAST VERTICAL, AND CENTERED ON THE STEEL SHEET PILING, AFTER BACKFILLING, AS NOTED ABOVE.
- SHEAR DEVELOPERS SHALL BE 3/4" DIAMETER HEADED STUDS AND 3 INCHES IN LENGTH, AND SHALL BE WELDED ALL-AROUND TO THE STEEL SHEET PILING.
- ALL PERMANENT STEEL SHEET PILING SHALL BE AZ 48. WHERE ALLOWED BY THE ENGINEER, SELECT ALTERNATE HOT ROLLED SHEET PILING WITH A NOMINAL SECTION MODULUS OF AT LEAST 89.3 IN³/FT.
- PROVIDE HOT ROLLED PERMANENT STEEL SHEET PILING. DO NOT USE COLD ROLLED PILING.
- LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE BID ITEM "CONC, GRADE 4500".
- SHOES SHALL BE REQUIRED FOR PROP SHEET PILING DUE TO THE ANTICIPATED PRESENCE OF COBBLES/BOULDERS DURING DRIVING.

3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	SBV	KJS

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
RETAINING WALL DETAILS	
SCALE NTS	0 INCH 1
DRAWING NO. 2021-008-BR52	
SHEET NO. 115 OF 155	

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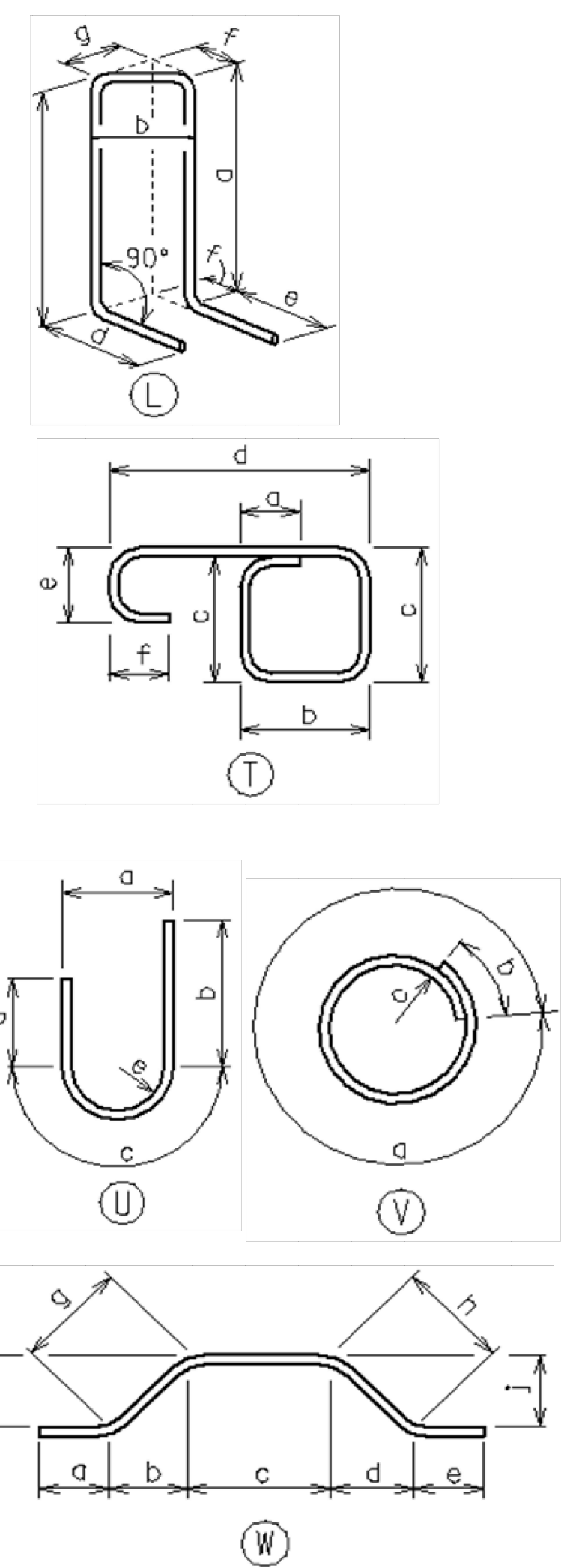
RETAINING WALL	BAR	DIMENSIONS											NO.	TOTAL			
		A	B	C	D	E	F	G	H	J	K	M			P	REQ'D	WT.
EA042110	21'-10"															6	88
EA042503	25'-3"															30	506
ED060605	1'-0"	2'-2"	3'-3"													96	925
EA041500	15'-0"															5	50
EA041600	16'-0"															3	32
EA041807	18'-7"															4	50
EA041905	19'-5"															4	52
EA060908	9'-8"															1	15
EA061400	14'-0"															1	21
EA061500	15'-0"															1	23
EA061501	15'-1"															4	91
EA061906	19'-6"															1	29
EA062306	23'-6"															4	141
EA062504	25'-4"															3	114
EA063103	31'-3"															6	282
EA064003	40'-3"															3	181
EA064005	40'-5"															4	242
EA080908	9'-8"															3	77
EA081400	14'-0"															3	112
EA081500	15'-0"															3	120
EA081600	16'-0"															3	128
EA082306	23'-6"															3	188
EA083103	31'-3"															2	167
EA084005	40'-5"															3	324
EA084109	41'-9"															3	334
EC061109	0'-0"	2'-3 1/4"	0'-9 5/8"	4'-8 1/2"	4'-9 1/4"	4'-8 1/2"	4'-8 1/2"									34	600
ED041200	5'-5 1/2"	1'-1"	5'-5 1/2"													13	104
ED041204	5'-5 1/2"	1'-5"	5'-5 1/2"													1	8
ED041211	5'-9"	1'-5"	5'-9"													1	9
ED060405	1'-0 3/4"	2'-3 1/2"	1'-0 3/4"													7	46
ED060406	1'-1 1/4"	2'-3 1/2"	1'-1 1/4"													10	68
ED060407	1'-1 3/4"	2'-3 1/2"	1'-1 3/4"													48	330
ED060408	2'-0"	0'-8"	2'-0"													81	567
ED060500	1'-4 1/4"	2'-3 1/2"	1'-4 1/4"													7	53
ED060511	1'-10"	2'-3"	1'-10"													36	320
EF061211	3'-5 1/4"	0'-0"	0'-0"	4'-8 1/2"	0'-0"	0'-0"	4'-9 1/4"	0'-9 5/8"	4'-8 3/8"							34	660

ABUTMENT A

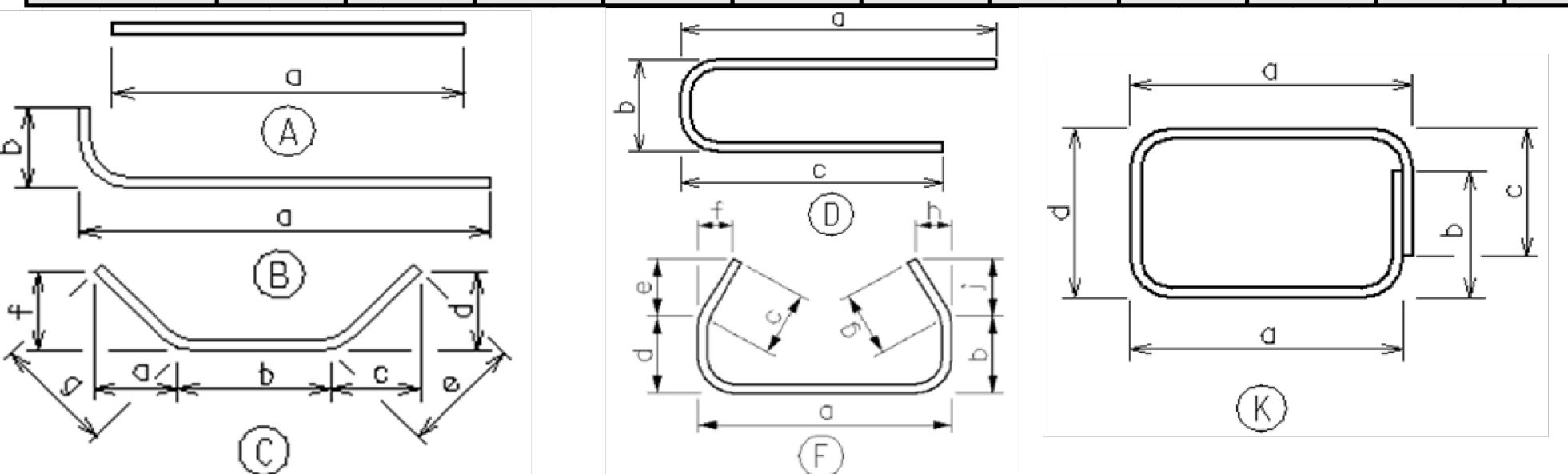
ABUTMENT B	BAR	DIMENSIONS											NO.	TOTAL				
		A	B	C	D	E	F	G	H	J	K	M			P	REQ'D	WT.	
EA040406	4'-6"																1	3
EA040411	4'-11"																1	3
EA040903	9'-3"																1	6
EA040908	9'-8"																1	6
EA041300	13'-0"																1	9
EA041306	13'-6"																1	9
EA060507	5'-7"																4	34
EA061203	12'-3"																1	18
EA061306	13'-6"																1	20
EA061311	13'-11"																1	21
EA062810	28'-10"																1	43
EA062900	29'-0"																2	87
EA063002	30'-2"																6	272
EA063301	33'-1"																2	99
EA063610	36'-10"																1	55
EA064102	41'-2"																1	62
EA064402	44'-2"																1	66
EA064404	44'-4"																2	133
EA080507	5'-7"																3	45
EA080902	9'-2"																3	73
EA081211	12'-11"																3	103
EA081306	13'-6"																3	108
EA081311	13'-11"																3	111
EA082709	27'-9"																3	222
EA082810	28'-10"																3	231
EA083002	30'-2"																2	161
EA083610	36'-10"																3	295
EC041307	10'-7 3/8"	2'-5 1/2"	0'-0"	0'-0"	0'-0"	3'-4 1/8"	11'-1 1/2"										1	9
EC041400	10'-7 3/8"	2'-10 1/2"	0'-0"	0'-0"	0'-0"	3'-4 1/8"	11'-1 1/2"										1	9
EC061109	0'-0"	2'-3 1/4"	0'-9 5/8"	4'-8 1/2"	4'-9 1/4"	4'-8 1/2"	4'-8 1/2"										34	600
ED040704	3'-1 1/2"	1'-1"	3'-1 1/2"														4	20
ED041105	5'-2"	1'-1"	5'-2"														5	38
ED041110	5'-5"	1'-0"	5'-5"														1	8
ED041303	6'-0"	1'-3"	6'-0"														1	9
ED060403	0'-11 3/4"	2'-3 1/2"	0'-11 3/4"														28	179
ED060404	1'-0 1/4"	2'-3 1/2"	1'-0 1/4"														12	78
ED060406	1'-1 1/4"	2'-3 1/2"	1'-1 1/4"														4	27
ED060408	2'-0"	0'-8"	2'-0"														61	427
ED060409	1'-2 3/4"	2'-3 1/2"	1'-2 3/4"														4	29
ED060503	1'-5 3/4"	2'-3 1/2"	1'-5 3/4"														3	24
ED060511	1'-10"	2'-3"	1'-10"														38	338
EF061211	3'-5 1/4"	0'-0"	0'-0"	4'-8 1/2"	0'-0"	0'-0"	4'-9 1/4"	0'-9 5/8"	4'-8 3/8"							34	660	

ABUTMENT B

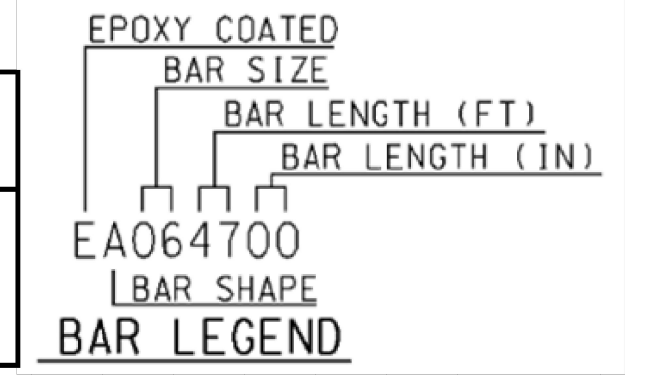
*Threaded



** 141,785 LB (CATG 0001), 35,446 LB (CATG 0002), AND 1,519 LB (CATG 0003) INCLUDES AN ADDITIONAL 200 LB OF REINFORCING STEEL FOR SUBSTRUCTURE PATCHING AS DIRECTED BY THE ENGINEER.



MISCELLANEOUS QUANTITIES		
** 178750 Lb	Reinforcement, Steel, Epoxy Coated	



NOTES:
REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION SHOWN ON THIS SHEET.

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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

DLZ

EAST MEDICAL CENTER DRIVE

STEEL REINFORCEMENT DETAILS

DRAWING NO. **2021-008-BR53**

SHEET NO. 116 OF 155

SCALE
HOR. 1"=40'
VERT. 1"=4'

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

30m\pwr-files\Files\Projects\2021\2141\36300 AA - EMCD Bridge\01_ConstrDocs\CAD\EMCD_reinforcement_001

BAR	DIMENSIONS													NO.	TOTAL
	A	B	C	D	E	F	G	H	J	K	M	P	REQ'D		
EA050400	4'-0"													6	25
EA051103	11'-3"													16	188
EA052010	20'-10"													6	130
EA052607	26'-7"													6	166
EA053105	31'-5"													6	197
EA053211	32'-11"													6	206
EA060306	3'-6"													22	116
EA060607	6'-7"													2	20
EA060806	8'-6"													34	434
EA061006	10'-6"													4	63
EA061010	10'-10"													2	33
EA061106	11'-6"													24	415
EA061107	11'-7"													4	70
EA061300	13'-0"													15	293
EA062007	20'-7"													2	62
EA080900	9'-0"													8	192
EA081710	17'-10"													8	381
EA092301	23'-1"													5	392
EA092310	23'-10"													5	405
EA092607	26'-7"													10	904
EA093211	32'-11"													10	1120
EA093307	33'-7"													5	571
EA093404	34'-4"													5	584
ED050804	2'-6"	3'-4"	2'-6"											95	826
EK051305	2'-2 1/2"	2'-9"	2'-9"	3'-6"										190	2659
EU051106	3'-11"	2'-8 1/8"	6'-1 3/4"	2'-8 1/8"	1'-10 7/8"									8	96
EU051207	3'-5"	3'-7 1/4"	5'-4 1/2"	3'-7 1/4"	1'-7 7/8"									12	157
EV040804	6'-3"	2'-1"	0'-11 1/2"	0'-0"	0'-0"									16	89

PIER 1

PIER 2

BAR	DIMENSIONS													NO.	TOTAL
	A	B	C	D	E	F	G	H	J	K	M	P	REQ'D		
EA050401	4'-1"													6	26
EA051103	11'-3"													16	188
EA051910	19'-10"													6	124
EA052402	24'-2"													6	151
EA052808	28'-8"													6	179
EA052909	29'-9"													6	186
EA060306	3'-6"													22	116
EA060510	5'-10"													2	18
EA060806	8'-6"													34	434
EA061006	10'-6"													4	63
EA061010	10'-10"													2	33
EA061106	11'-6"													24	415
EA061107	11'-7"													4	70
EA061300	13'-0"													15	293
EA061907	19'-7"													2	59
EA080900	9'-0"													8	192
EA081305	13'-5"													8	287
EA092200	22'-0"													5	374
EA092209	22'-9"													5	387
EA092402	24'-2"													10	822
EA092808	28'-8"													10	974
EA093111	31'-11"													5	543
EA093208	32'-8"													5	555
ED050804	2'-6"	3'-4"	2'-6"											89	774
EK051305	2'-2 1/2"	2'-9"	2'-9"	3'-6"										178	2491
EU051106	3'-11"	2'-8 1/8"	6'-1 3/4"	2'-8 1/8"	1'-10 7/8"									8	96
EU051207	3'-5"	3'-7 1/4"	5'-4 1/2"	3'-7 1/4"	1'-7 7/8"									12	157
EV040804	6'-3"	2'-1"	0'-11 1/2"	0'-0"	0'-0"									11	61

*Threaded

3 WORKING DAYS
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	CLH	KJS

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
STEEL REINFORCEMENT DETAILS	
SCALE HOR. 1"=40' VERT. 1"=4'	INCH 0 1
DRAWING NO. 2021-008-BR54	
SHEET NO. <u>117</u> OF <u>155</u>	

com\pwr-files\Projects\2021\2141\736500_AA - EMCDD Bridge\01_Constr\Draws\CAD\EMCD_reinforcement_001

DECK-SPAN 1

BAR	DIMENSIONS												NO.	TOTAL
	A	B	C	D	E	F	G	H	J	K	M	P		
EA040110	1'-10"												64	79
EA040408	4'-8"												4	12
EA040410	4'-10"												4	13
EA040504	5'-4"												4	14
EA040706	7'-6"												4	20
EA040803	8'-3"												1	6
EA041400	14'-0"												1	9
EA041706	17'-6"												4	47
EA041808	18'-8"												1	12
EA042604	26'-4"												2	35
EA042606	26'-6"												53	939
EA042609	26'-9"												50	893
EA042800	28'-0"												159	2974
EA042803	28'-3"												12	226
EA042806	28'-6"												18	342
EA042909	29'-9"												13	258
EA043007	30'-7"												46	940
EA043008	30'-8"												184	3769
EA043009	30'-9"												4	82
EA043100	31'-0"												12	248
EA043203	32'-3"												4	86
EA043302	33'-2"												8	177
EA043303	33'-3"												8	178
EA043403	34'-3"												2	46
EA043505	35'-5"												2	47
EA050805	8'-5"												1	9
EA051400	14'-0"												1	15
EA051808	18'-8"												1	19
EA052002	20'-2"												40	841
EA052004	20'-4"												36	763
EA052100	21'-0"												41	898
EA052110	21'-10"												19	433
EA052202	22'-2"												21	486
EA052205	22'-5"												32	748
EA052206	22'-6"												42	986
EA052207	22'-7"												41	966
EA052208	22'-8"												33	780
EA052311	23'-11"												42	1048
EA052400	24'-0"												23	576
EA052508	25'-8"												18	482
EA052511	25'-11"												21	568
EA052601	26'-1"												25	680
EA052605	26'-5"												29	799
EA052606	26'-6"												4	111
EA052705	27'-5"												20	572
EA052804	28'-4"												4	118
EA052904	29'-4"												4	122
EA053011	30'-11"												4	129
EA053300	33'-0"												4	138
EA053506	35'-6"												1	37

DECK-SPAN 1 (CONT.)

BAR	DIMENSIONS												NO.	TOTAL
	A	B	C	D	E	F	G	H	J	K	M	P		
EA060103	1'-3"												2	4
EA061103	11'-3"												100	1690
EA061201	12'-1"												10	181
EA061205	12'-5"												10	186
EA061307	13'-7"												2	41
EA061309	13'-9"												106	2189
EA061409	14'-9"												2	44
EA061504	15'-4"												14	322
EA061604	16'-4"												16	393
EA061902	19'-2"												2	58
EA062004	20'-4"												40	1222
EA062006	20'-6"												36	1108
EA062102	21'-2"												41	1303
EA062110	21'-10"												19	623
EA062202	22'-2"												21	699
EA062204	22'-4"												2	67
EA062207	22'-7"												32	1085
EA062208	22'-8"												42	1430
EA062209	22'-9"												41	1401
EA062210	22'-10"												33	1132
EA062400	24'-0"												23	829
EA062401	24'-1"												42	1519
EA062508	25'-8"												18	694
EA062511	25'-11"												21	817
EA062601	26'-1"												21	823
EA062603	26'-3"												4	158
EA062605	26'-5"												29	1151
EA062705	27'-5"												20	824
EA062806	28'-6"												4	171
EA062906	29'-6"												4	177
EA063302	33'-2"												4	199
ED040211	0'-10 3/4"	1'-1 1/2"	0'-10 3/4"										131	255
ED040308	1'-1 3/4"	1'-4 1/2"	1'-1 3/4"										3	7
ED040503	1'-1 1/2"	3'-0"	1'-1 1/2"										2	7
ED050500	4'-0"	0'-6"	0'-6"										236	1231
EK041003	1'-4 1/2"	2'-3 1/2"	2'-3 1/2"	2'-11"									64	438
EK041005	0'-7 1/4"	2'-11 3/4"	2'-11 3/4"	3'-3"									2	14
EK041201	2'-3 1/2"	2'-3 1/2"	2'-3 1/2"	2'-11"									1	8
EL040706	2'-2"	0'-7"	2'-5"	1'-2"	1'-2"	0'-7"	0'-0"						69	346
EL040707	2'-2"	0'-7"	2'-6"	1'-2"	1'-2"	0'-7"	0'-0"						83	420
EL061011	3'-10 1/2"	0'-6 3/4"	4'-1 1/2"	1'-2 1/8"	1'-2 1/8"	0'-0"	0'-6 3/4"						4	66
EL061100	3'-10 1/2"	0'-6 3/4"	4'-2 1/2"	1'-2 1/8"	1'-2 1/8"	0'-0"	0'-6 3/4"						4	66
EL061101	4'-1 1/2"	0'-7 1/4"	3'-10 1/2"	1'-2 3/8"	1'-2 3/8"	0'-7 1/4"	0'-0"						7	116
EL061101	4'-2 1/2"	0'-7 1/4"	3'-10 1/2"	1'-2 3/8"	1'-2 3/8"	0'-7 1/4"	0'-0"						7	117
ET060703	1'-0"	1'-4"	1'-0"	1'-8"	0'-6"	0'-9"							61	664
ET060800	1'-0"	1'-4"	1'-4 1/2"	1'-8"	0'-7"	0'-8"							72	865
EW040601	1'-8"	0'-4 3/4"	1'-7 1/2"	0'-4 3/4"	1'-8"	0'-4 3/4"	0'-6 3/4"	0'-6 3/4"	0'-4 3/4"				2	8
EW040609	1'-8"	0'-7 3/4"	1'-7"	0'-7 3/4"	1'-8"	0'-7 7/8"	0'-11"	0'-11"	0'-7 7/8"				2	9

*Threaded

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DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	CLH	KJS

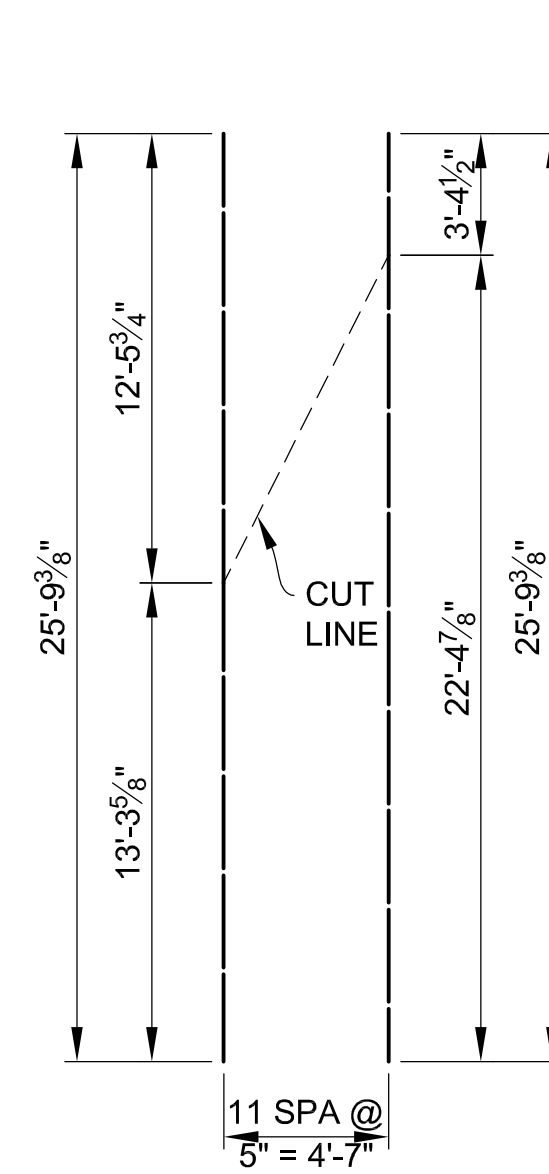
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

STEEL REINFORCEMENT DETAILS

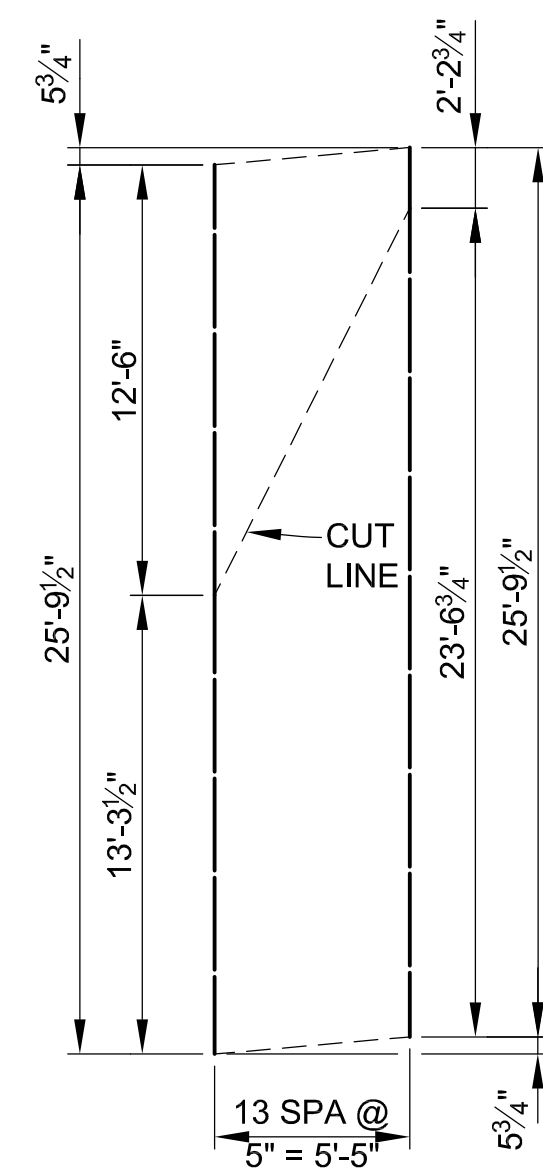
APPROVED BY:
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

SCALE HOR. 1"=40' VERT. 1"=4'	INCH 0 1
DRAWING NO. 2021-008-BR55	
SHEET NO. 118 OF 155	



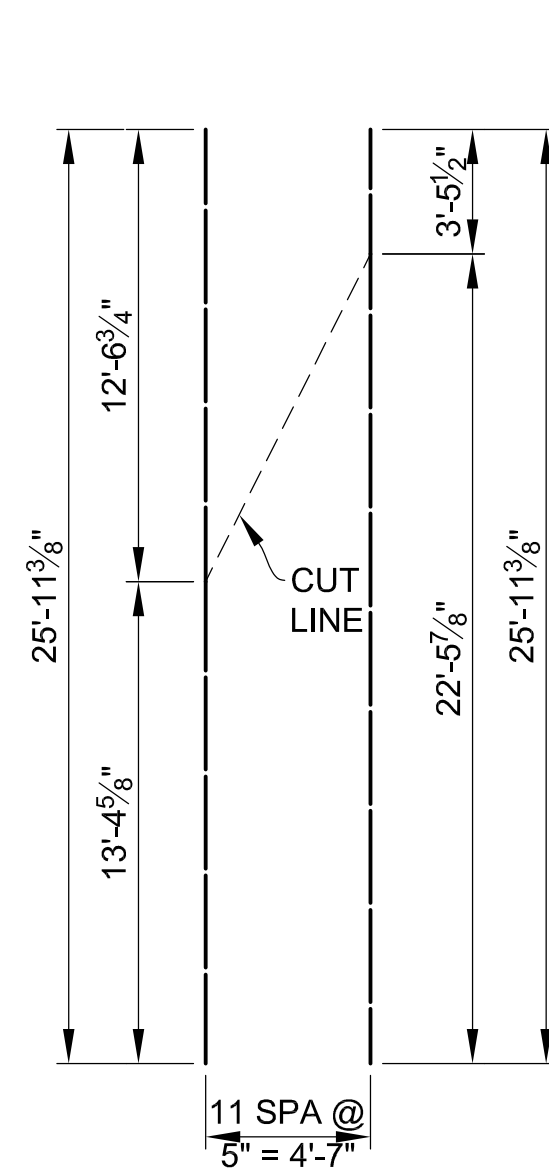
BAR GROUP S

EA052510 (TOTAL 12 BARS) (BOTT)
EA062510 (TOTAL 12 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 3 CONSTRUCTION)



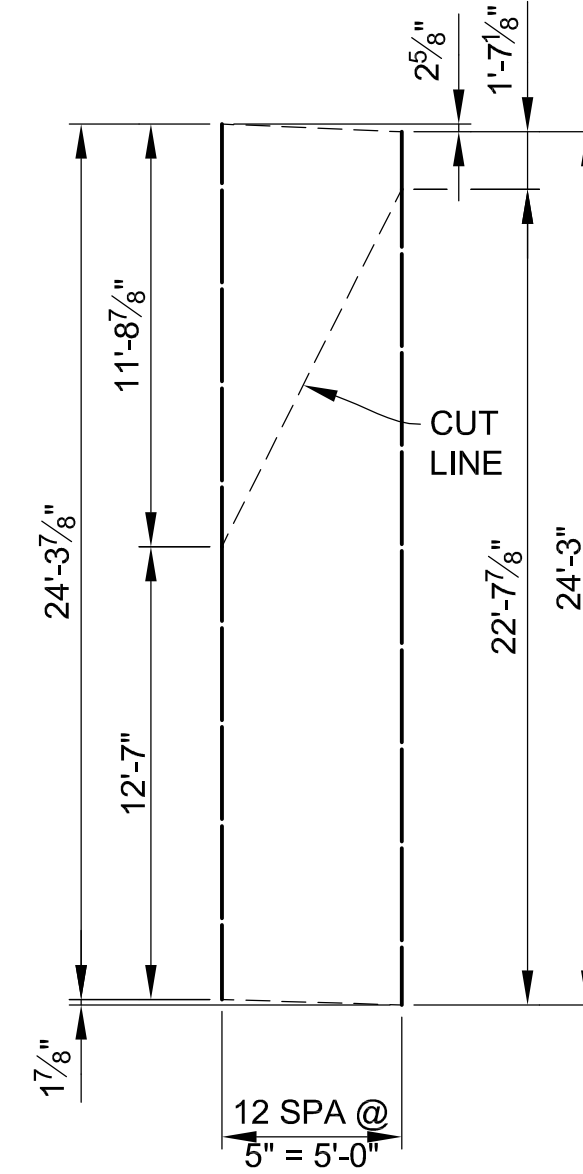
BAR GROUP T

EA052510 (TOTAL 14 BARS) (BOTT)
EA062510 (TOTAL 14 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 3 CONSTRUCTION)



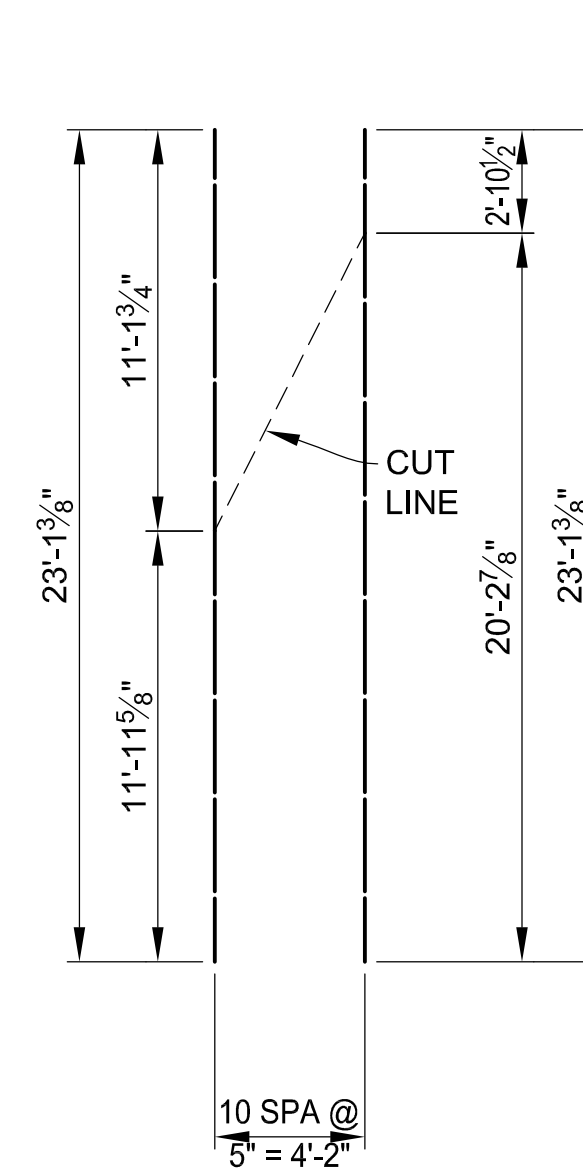
BAR GROUP U

EA052600 (TOTAL 12 BARS) (BOTT)
EA062600 (TOTAL 12 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 3 CONSTRUCTION)



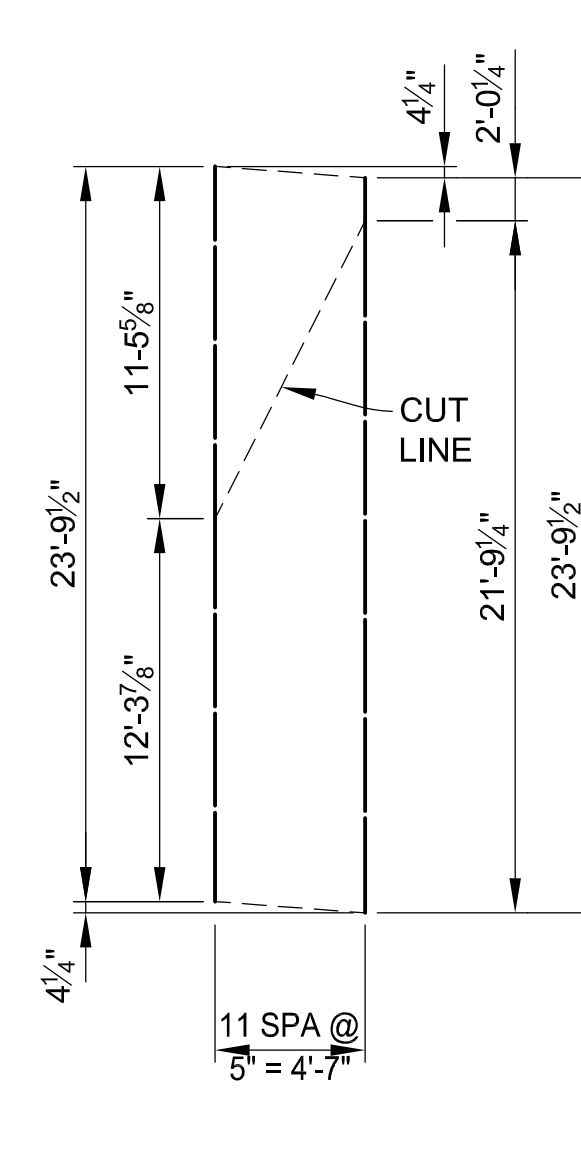
BAR GROUP V

EA052404 (TOTAL 13 BARS) (BOTT)
EA062404 (TOTAL 13 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 3 CONSTRUCTION)



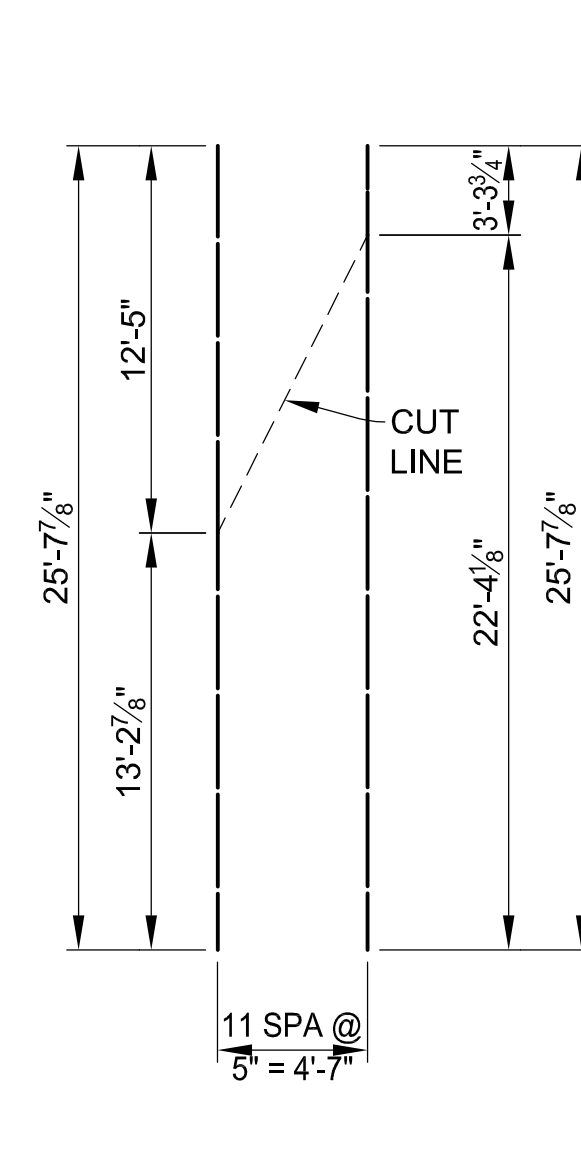
BAR GROUP W

EA052302 (TOTAL 11 BARS) (BOTT)
EA062302 (TOTAL 11 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 2 CONSTRUCTION)



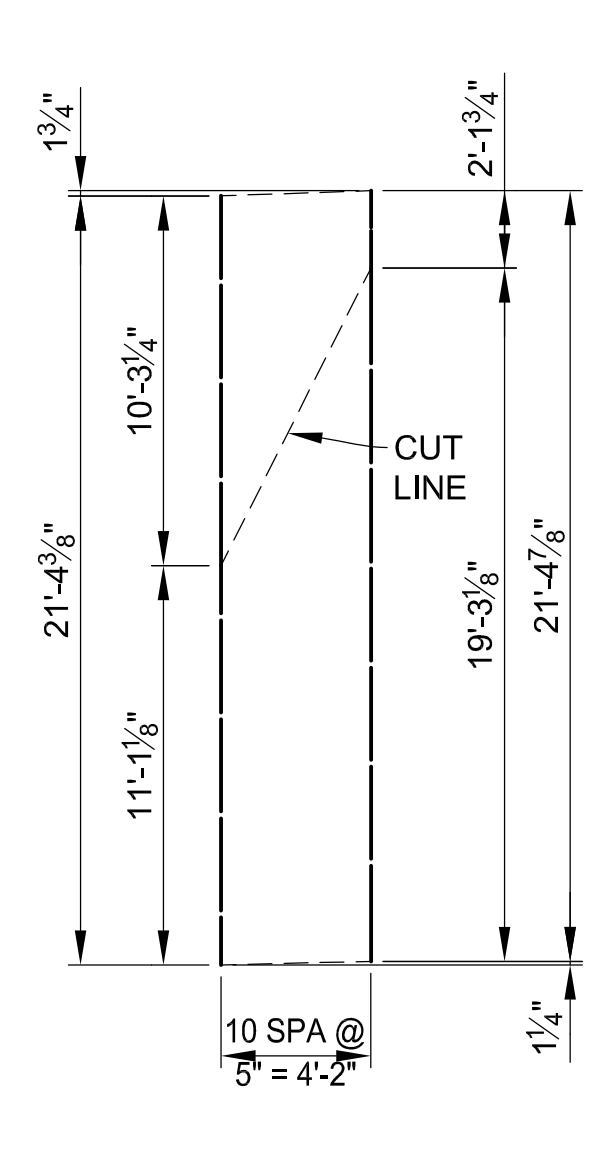
BAR GROUP X

EA052310 (TOTAL 12 BARS) (BOTT)
EA062310 (TOTAL 12 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 2 CONSTRUCTION)



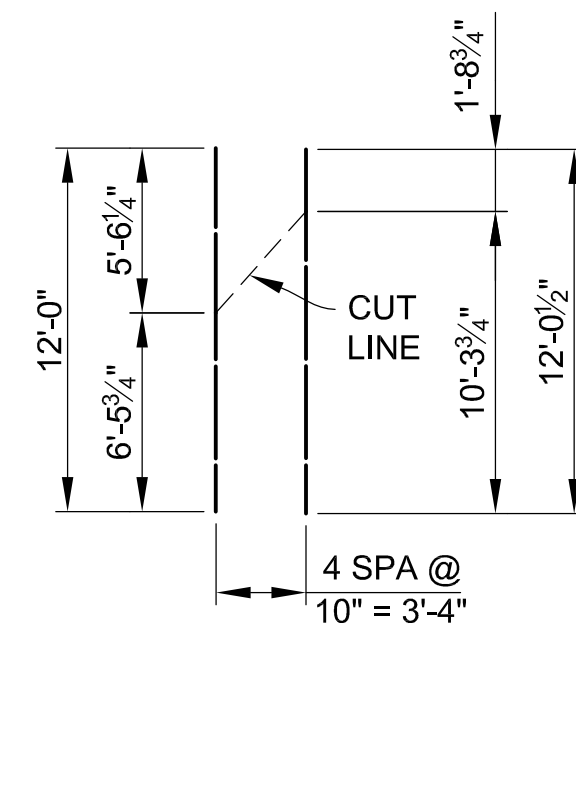
BAR GROUP Y

EA052508 (TOTAL 12 BARS) (BOTT)
EA062508 (TOTAL 12 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 2 CONSTRUCTION)



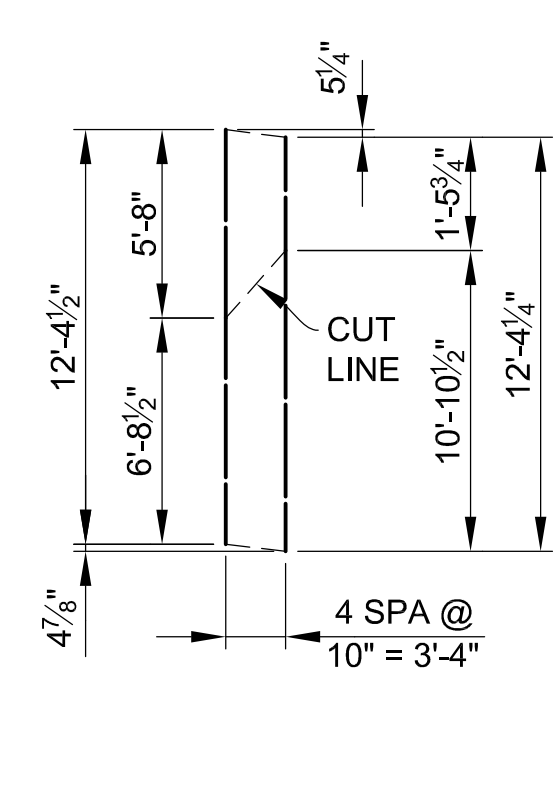
BAR GROUP Z

EA052105 (TOTAL 11 BARS) (BOTT)
EA062105 (TOTAL 11 BARS) (TOP)
(QUANTIFIED IN DECK,
SPAN 3, STAGE 2 CONSTRUCTION)



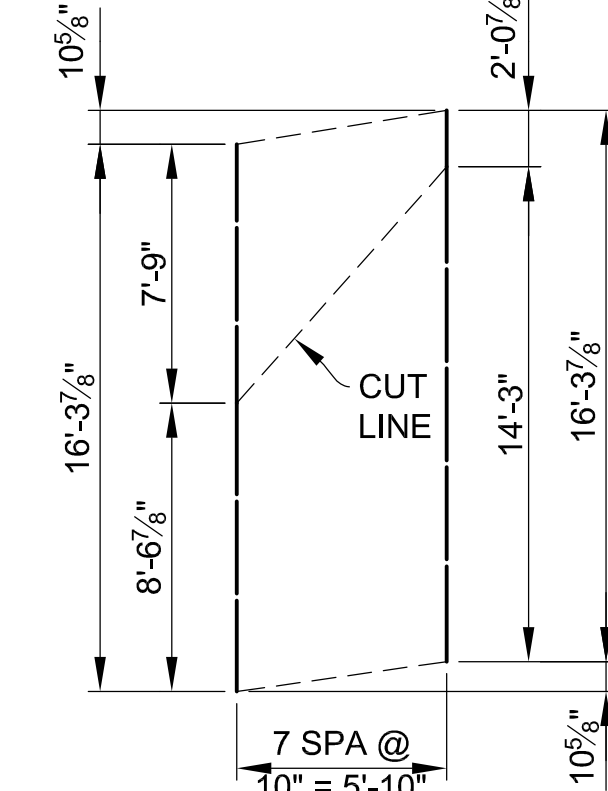
BAR GROUP AA

EA061201 (TOTAL 5 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 1, STAGE 2 CONSTRUCTION)



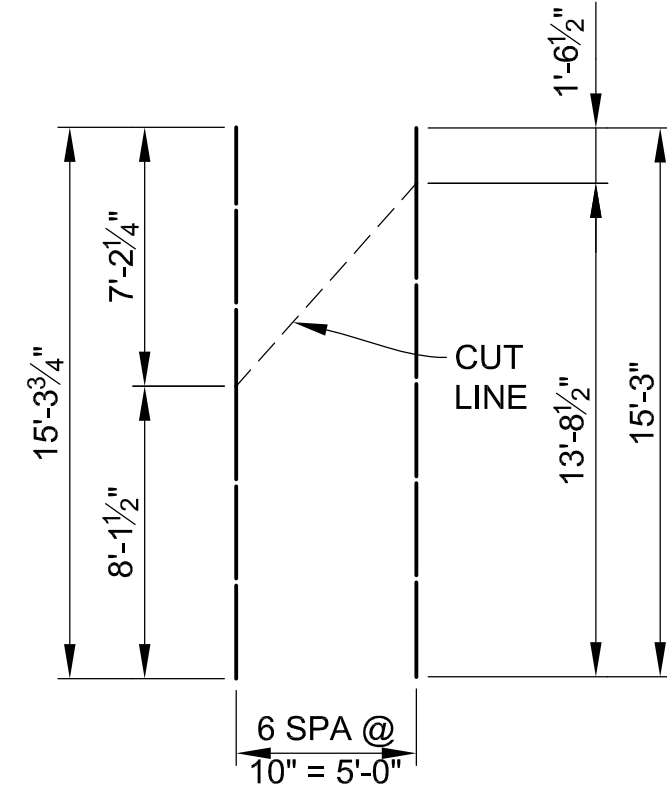
BAR GROUP BB

EA061205 (TOTAL 5 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 1, STAGE 2 CONSTRUCTION)



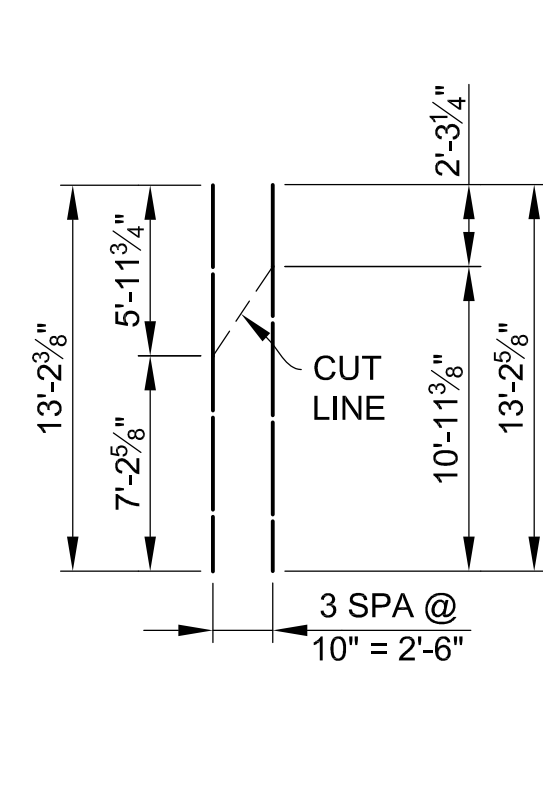
BAR GROUP CC

EA061604 (TOTAL 8 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 1, STAGE 3 CONSTRUCTION)



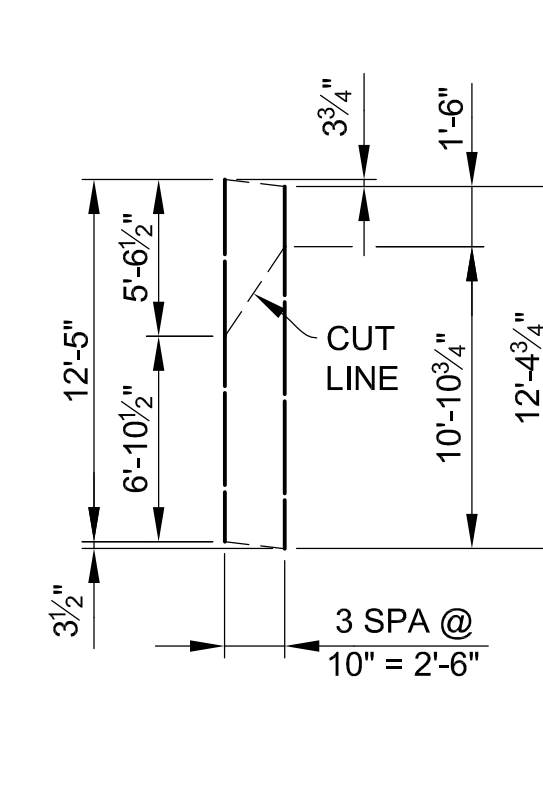
BAR GROUP DD

EA061504 (TOTAL 7 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 1, STAGE 3 CONSTRUCTION)



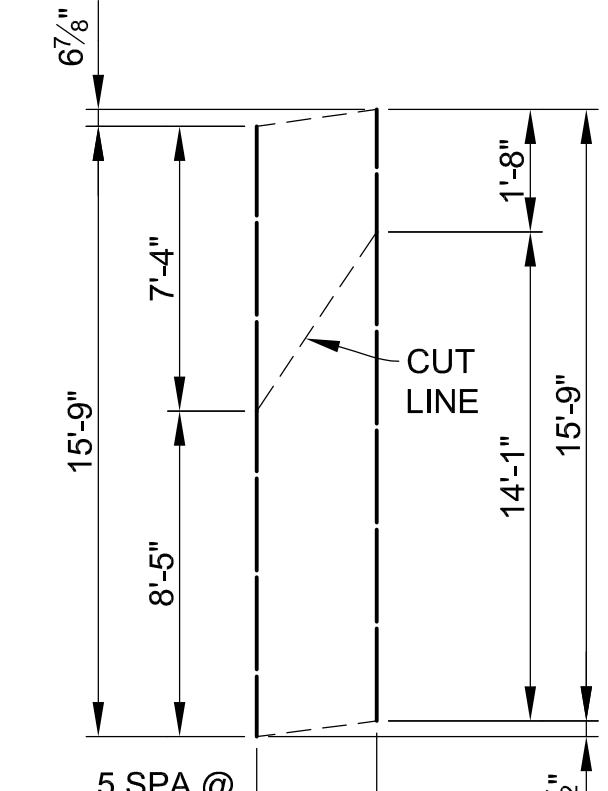
BAR GROUP EE

EA061303 (TOTAL 4 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 2, STAGE 2 CONSTRUCTION)



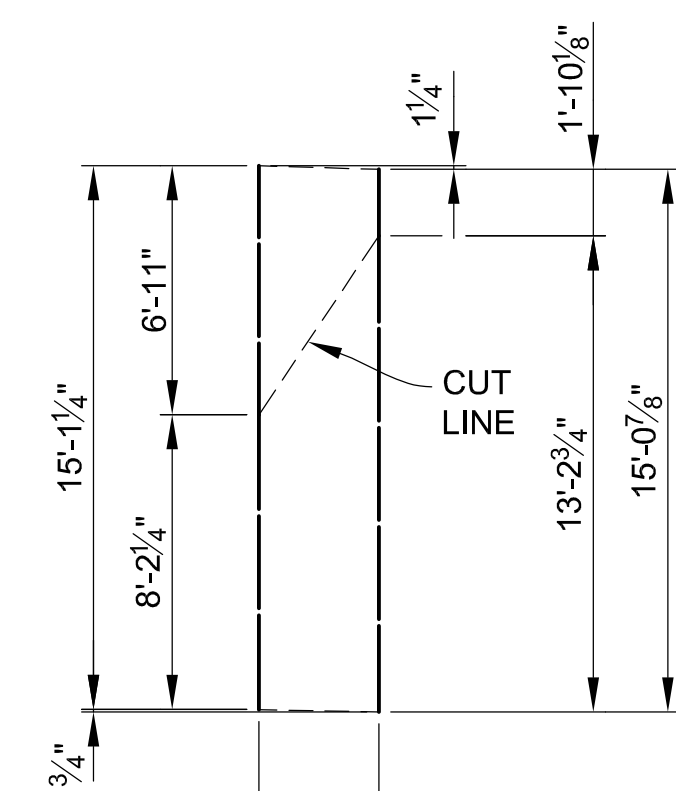
BAR GROUP FF

EA061205 (TOTAL 4 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 2, STAGE 2 CONSTRUCTION)



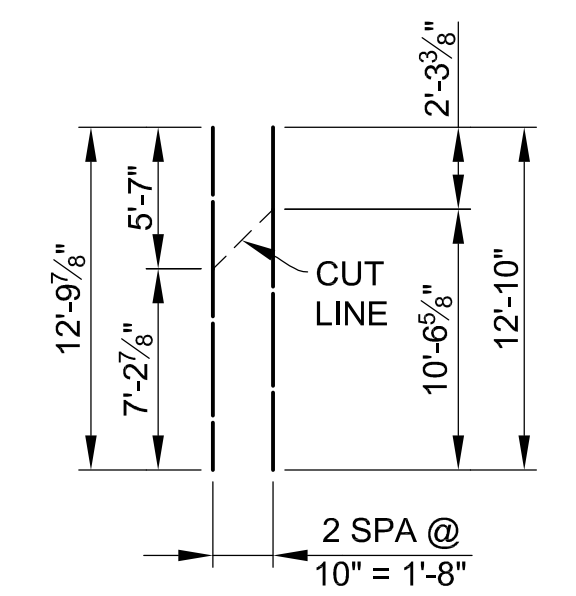
BAR GROUP GG

EA061509 (TOTAL 6 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 2, STAGE 3 CONSTRUCTION)



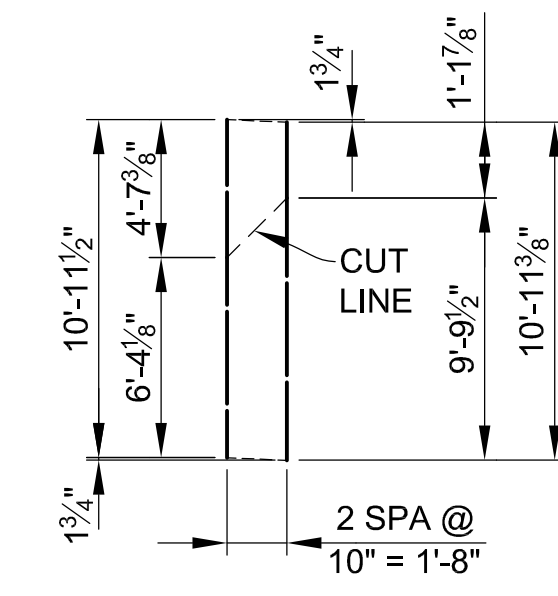
BAR GROUP HH

EA061502 (TOTAL 5 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 2, STAGE 3 CONSTRUCTION)



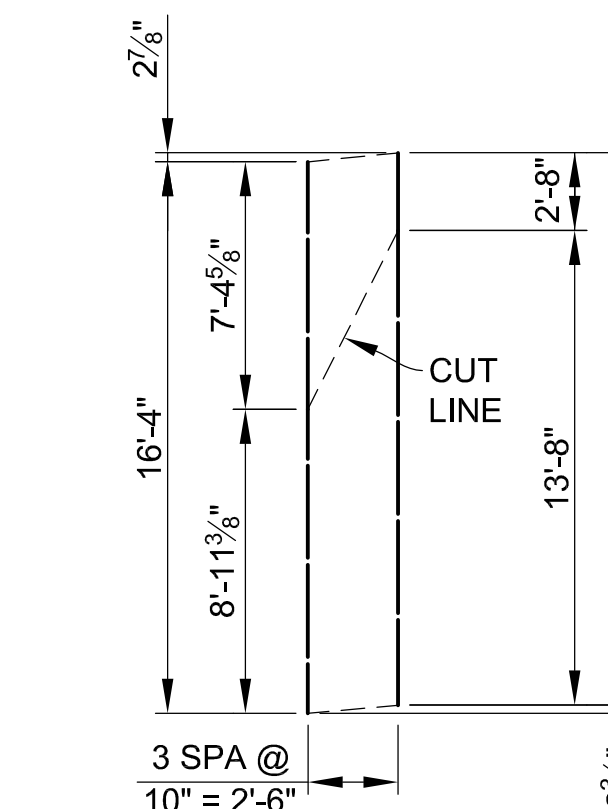
BAR GROUP JJ

EA061210 (TOTAL 3 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 3, STAGE 2 CONSTRUCTION)



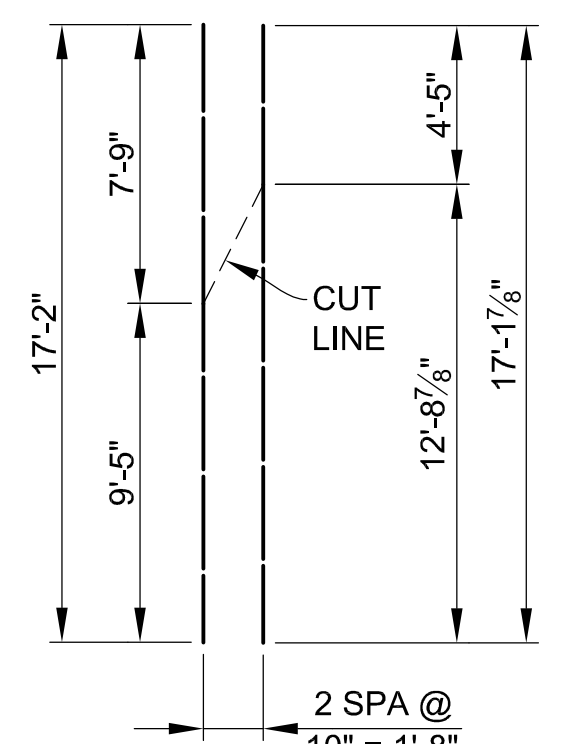
BAR GROUP KK

EA061100 (TOTAL 3 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 3, STAGE 2 CONSTRUCTION)



BAR GROUP LL

EA061604 (TOTAL 4 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 3, STAGE 3 CONSTRUCTION)



BAR GROUP MM

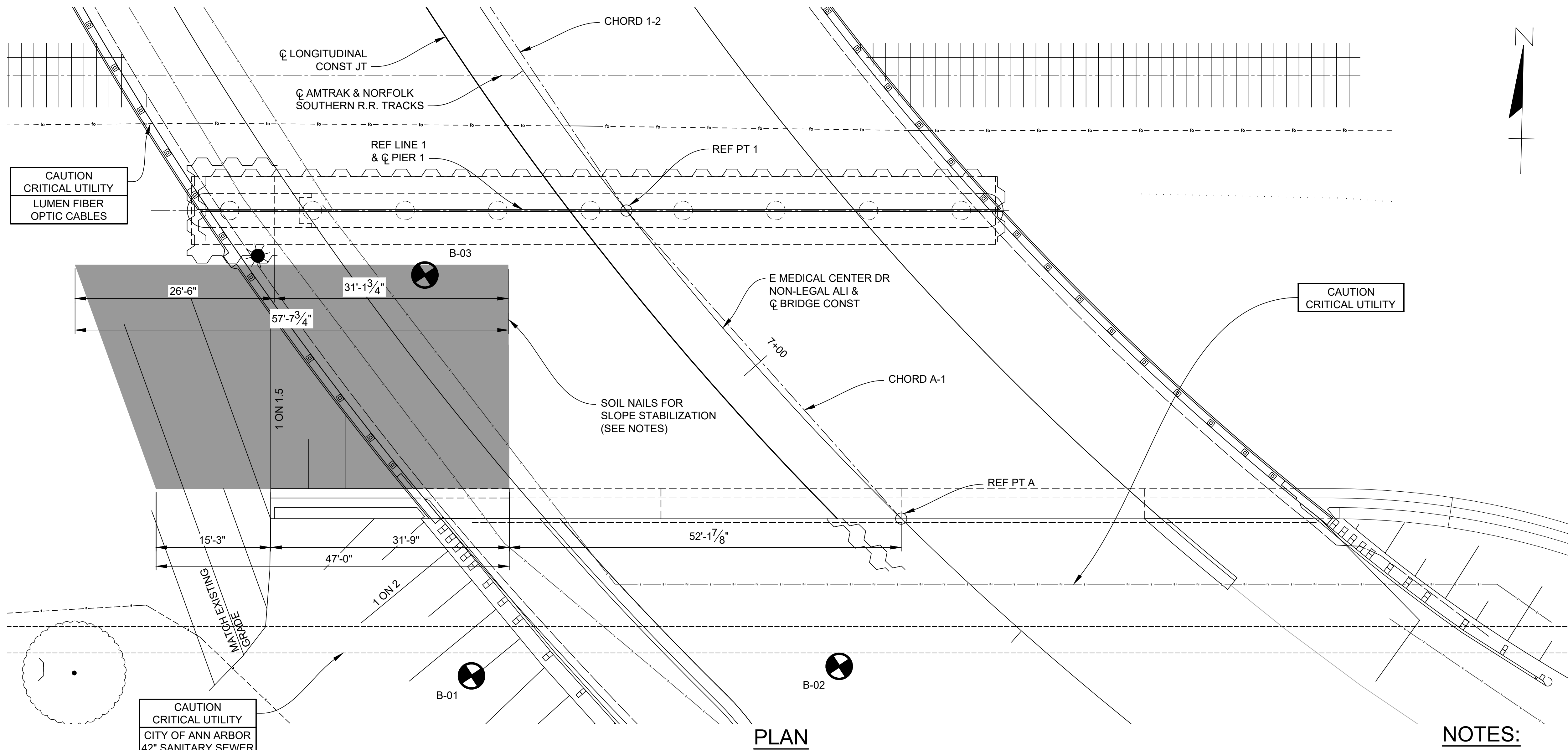
EA061702 (TOTAL 3 BARS) (TOP & BOTT)
(QUANTIFIED IN SIDEWALK,
SPAN 3, STAGE 3 CONSTRUCTION)

NOTE:

REINFORCEMENT IS TO BE SHOP CUT AS SHOWN. THE EPOXY COATING SHALL BE REPAIRED ACCORDING TO SECTION 706.03E.8 OF THE MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

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DLZ					PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
EAST MEDICAL CENTER DRIVE					SCALE			
STEEL REINFORCEMENT DETAILS					HOR. 1"=40'			
DRAWING NO.					VERT. 1"=4'			
2021-008-BR59					DRAWING NO.			
SHEET NO. 122 OF 155					DRAWING NO.			
APPROVED BY					DRAWING NO.			
CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734					DRAWING NO.			
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY				
	ORIGINAL ISSUE	10-6-23	DAF	CLH				



PLAN

NOTES:

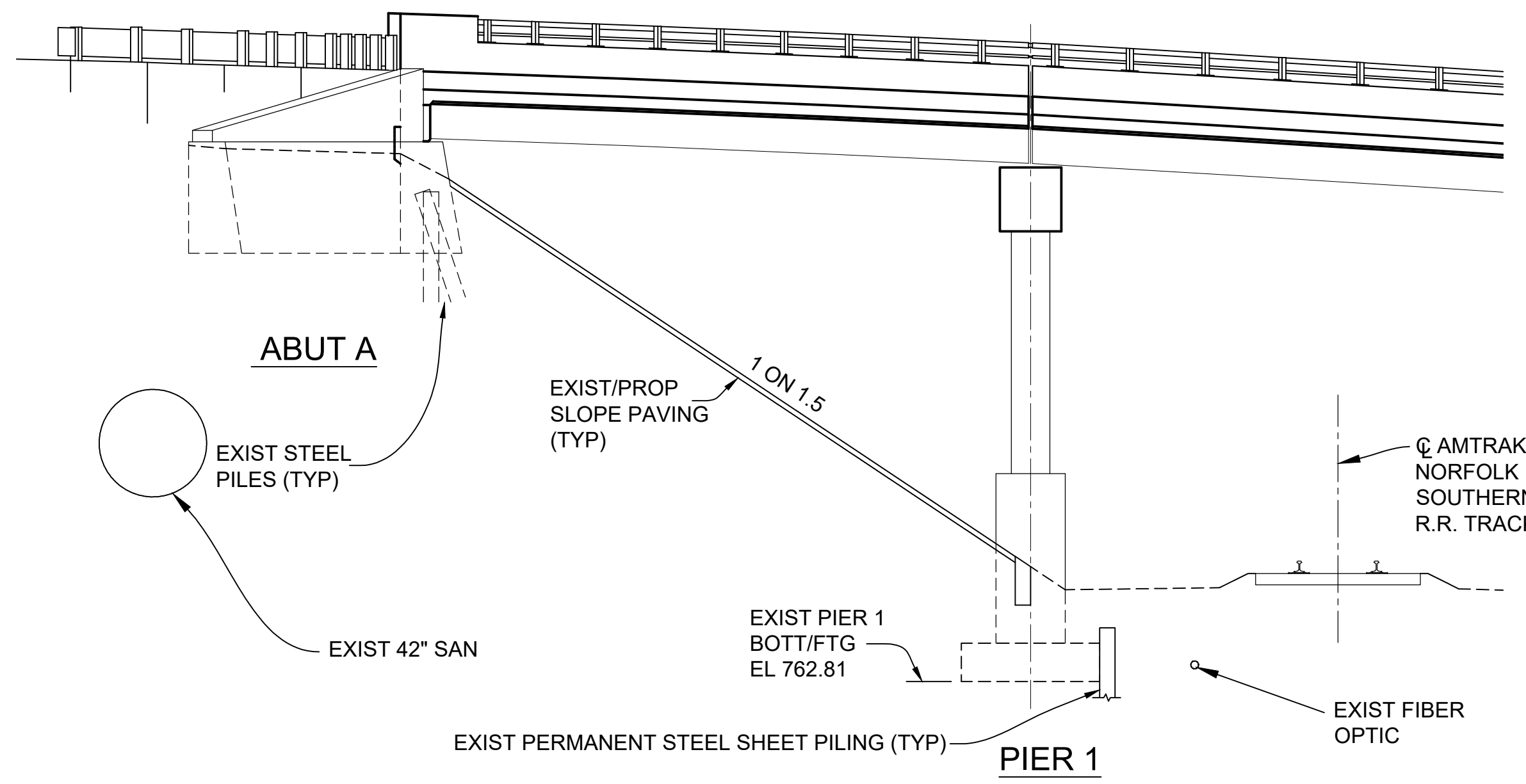
SOIL NAILS FOR SLOPE STABILIZATION SHALL BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION AND THE REQUIREMENTS IN THE SPECIAL PROVISIONS 813 SOIL NAILS FOR SLOPE STABILIZATION.

CONSTRUCTION TO STABILIZE THE REQUIRED PORTION OF SLOPE SHALL BE CONSTRUCTED SO AS TO NOT DISTURB OR IMPACT THE PERFORMANCE OF EXISTING UTILITIES, EXISTING STRUCTURAL ELEMENTS, PROPOSED STRUCTURAL ELEMENTS, AND THE EXISTING RAILROAD.

COBBLES AND BOULDERS WERE ENCOUNTERED IN THE SUBSURFACE EXPLORATIONS FOR THE SITE. THE CONTRACTOR SHALL SELECT APPROPRIATE MEANS AND METHODS FOR INSTALLATION THROUGH COBBLES AND BOULDERS. THIS WORK SHALL INCLUDE OFFSETTING AND REDRILLING FOR OBSTRUCTIONS, INCLUDING ASSOCIATED ENGINEERING, FOR AN ADDITIONAL QUANTITY EQUIVALENT TO 10 PERCENT OF THE TOTAL NAILS ESTIMATED.

PROVIDE THE FINISH GRADE SHOWN ON THE PLANS. ANY BACKFILL REQUIRED TO ACHIEVE THE FINISH GRADE SHALL BE STRUCTURE, BACKFILL, C.I.P. AND IS CONSIDERED INCIDENTAL TO THE WORK.

ESTIMATED QUANTITIES THIS SHEET					
DESCRIPTION	UNITS	CATG 0001	CATG 0002	CATG 0003	TOTAL
Soil Nails for Slope Stabilization	Sft		2,831		2,831



ELEVATION

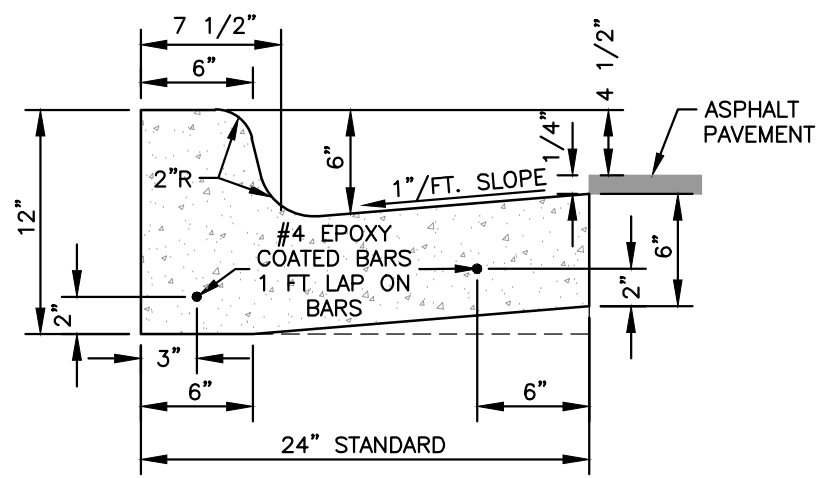
DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23	DML	CLH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
GENERAL PLAN OF SLOPE STABILIZATION	
SCALE HOR. 1/8"=1'-0"	DRAWING NO. 2021-008-BR60
SHEET NO. 123 OF 155	

APPROVED BY: CARRIE L. HAMEL, P.E. MICHIGAN NO. 6201056734

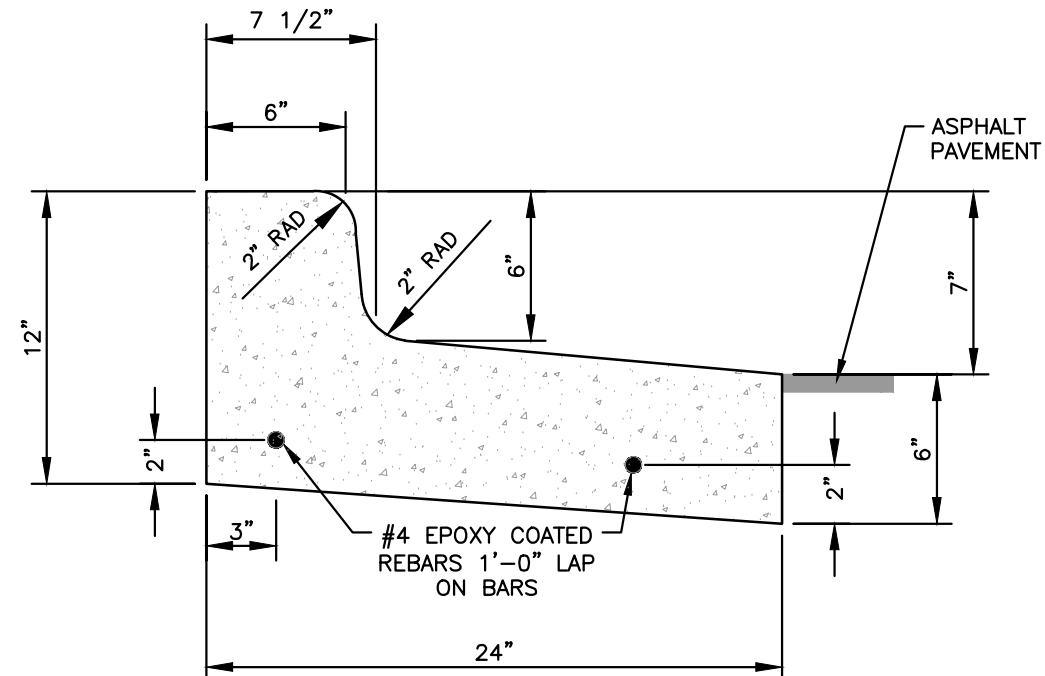
X:\Projects\2021\214\736300 AA - EMCD Bridge\01_Constr\Does\CAD\EMCD_snw_001

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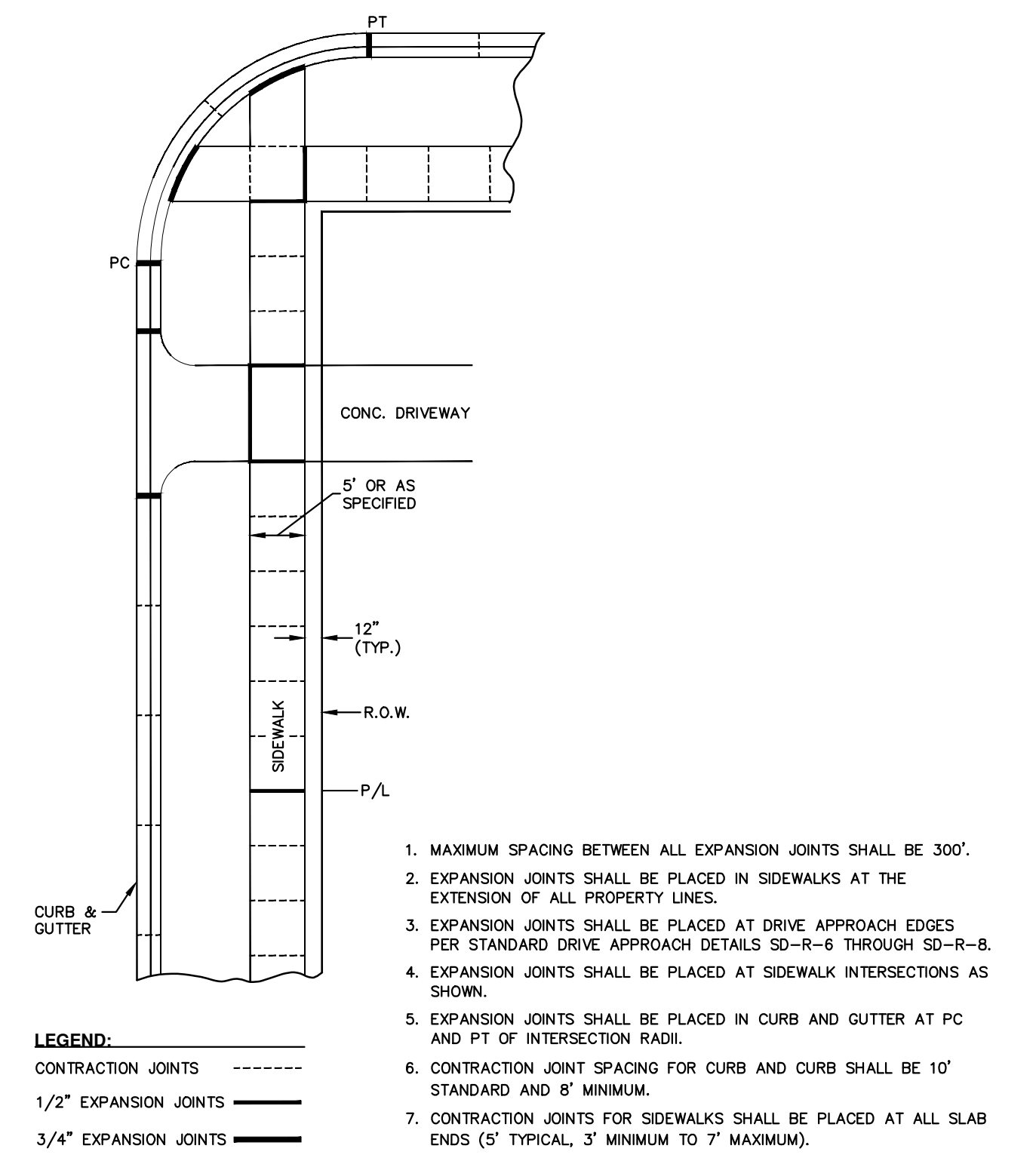


- NOTES:
1. BARRIER CURB AND GUTTER ON ASPHALT STREETS SHALL CONFORM TO THIS DETAIL.
 2. BARRIER CURB AND GUTTER ON CONCRETE STREETS SHALL CONFORM TO MDOT CURB AND GUTTER DETAIL F3.

BARRIER CURB AND GUTTER SD-R-1

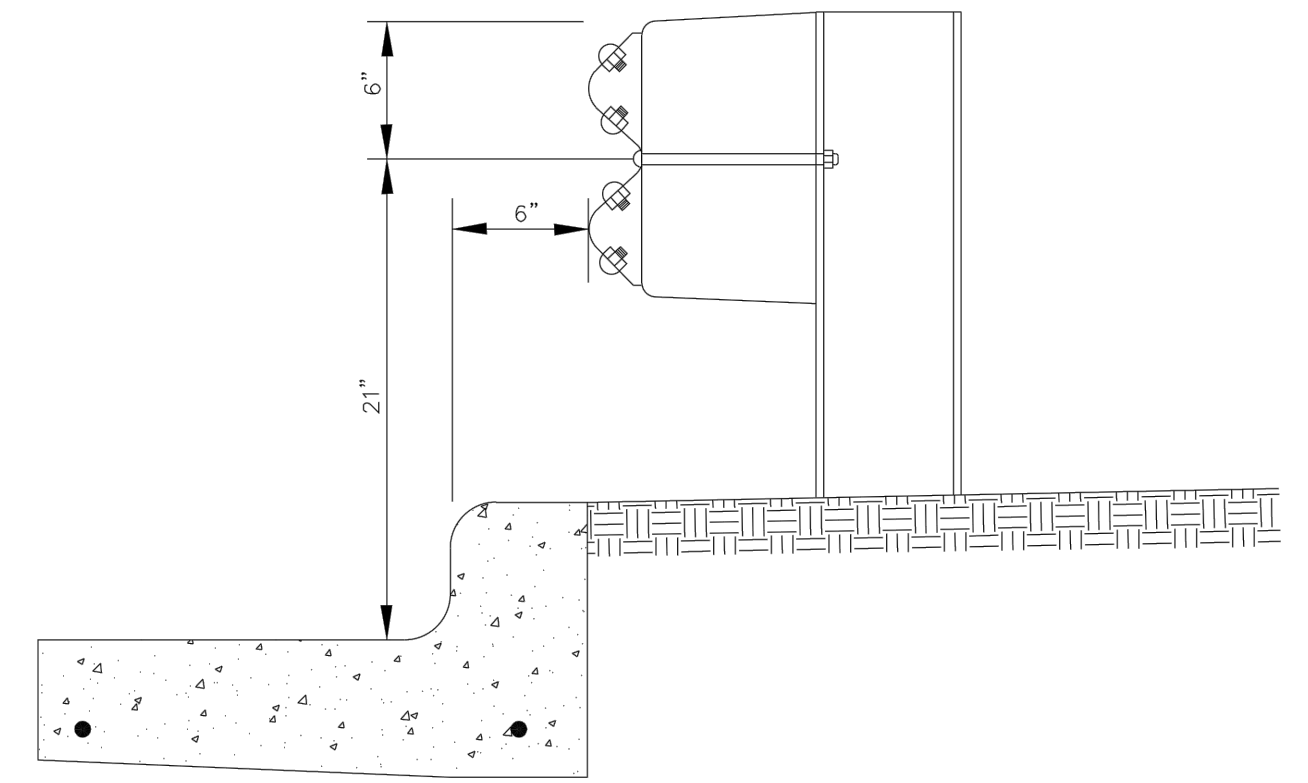


SPILL-OUT BARRIER CURB & GUTTER SD-R-4



1. MAXIMUM SPACING BETWEEN ALL EXPANSION JOINTS SHALL BE 300'.
2. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALKS AT THE EXTENSION OF ALL PROPERTY LINES.
3. EXPANSION JOINTS SHALL BE PLACED AT DRIVE APPROACH EDGES PER STANDARD DRIVE APPROACH DETAILS SD-R-6 THROUGH SD-R-8.
4. EXPANSION JOINTS SHALL BE PLACED AT SIDEWALK INTERSECTIONS AS SHOWN.
5. EXPANSION JOINTS SHALL BE PLACED IN CURB AND GUTTER AT PC AND PT OF INTERSECTION RADI.
6. CONTRACTION JOINT SPACING FOR CURB AND CURB SHALL BE 10' STANDARD AND 8' MINIMUM.
7. CONTRACTION JOINTS FOR SIDEWALKS SHALL BE PLACED AT ALL SLAB ENDS (5' TYPICAL, 3' MINIMUM TO 7' MAXIMUM).

SIDEWALK AND CURB & GUTTER JOINTS SD-R-10



REVISIONS		REV. NO.	DR. BY	CH. BY	DATE
PUBLIC SERVICES DEPARTMENT CITY OF ANN ARBOR					
URBAN GUARDRAIL LOCATION					
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SCALE	NONE	DATE	1-31-94	SD-R-15	
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BARRIER CURB & GUTTER

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SPILL-OUT BARRIER CURB & GUTTER

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SCALE: N.T.S. DATE: 7/1/2022 SD-R-4

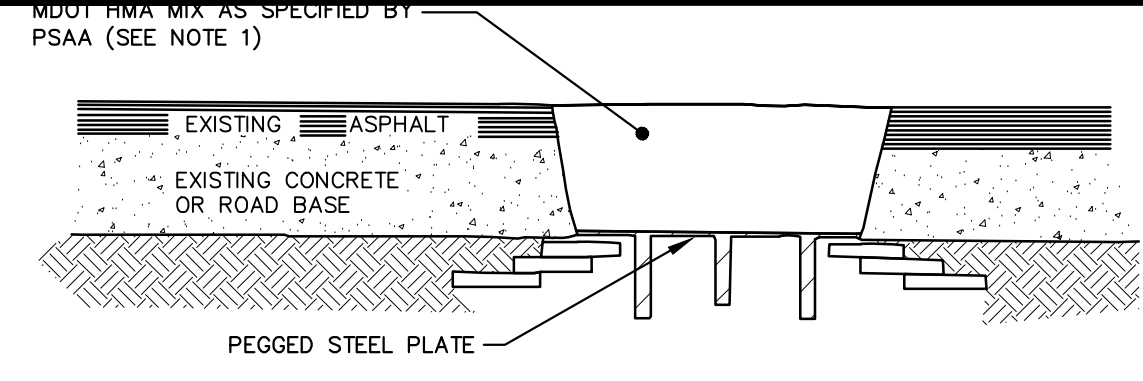


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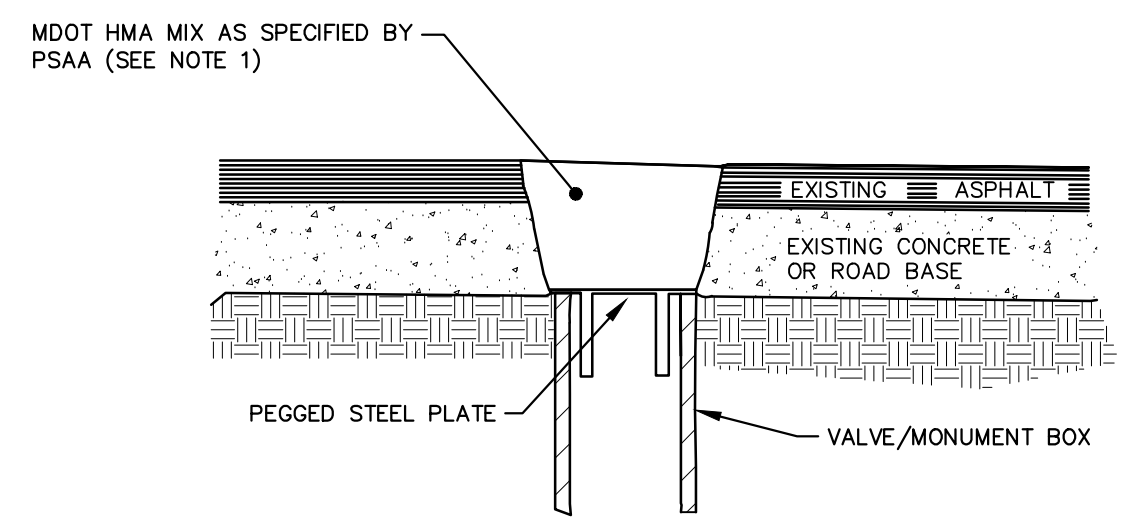
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SIDEWALK AND CURB & GUTTER JOINT SPACING

DR. ENG. CH. ENG. DRAWING NO.
SCALE: N.T.S. DATE: 7/1/2022 SD-R-10



MANHOLE LOWERING DETAIL



VALVE BOX/MONUMENT BOX LOWERING DETAIL (SEE NOTE 3)

- NOTES:
1. IF TRAFFIC IS TO BE MAINTAINED ON THE ROADWAY BEFORE OR AFTER THE COLD MILLING OPERATION, THE STRUCTURE SHALL BE LOWERED TO THE EXTENT THAT A MINIMUM OF THREE(3) INCHES ASPHALT MATERIAL MDOT HMA MIX AS SPECIFIED BY PSAA. OR ENGINEER APPROVED EQUAL, REMAINS TO SUPPORT TRAFFIC.
 2. IF THE ROADWAY BEING MILLED IS CLOSED TO TRAFFIC, THE STRUCTURE SHALL BE LOWERED SUCH THAT THE STEEL PLATE IS A MINIMUM OF FOUR(4) INCHES BELOW THE PROPOSED ROAD GRADE AND THE RESULTING VOID SHALL BE FILLED WITH MDOT HMA MIX AS SPECIFIED BY PSAA OR ENGINEER APPROVED EQUAL.
 3. WHERE A MONUMENT IS TO BE LOWERED, THE CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF 48 HOURS WRITTEN NOTICE SO THAT THE MONUMENT CAN BE PROPERLY WITNESSED OR PROTECTED. FAILURE TO DO SO SHALL RESULT IN THE ENGINEER REPLACING SAID MONUMENT AT THE CONTRACTOR'S EXPENSE.

MANHOLE & VALVE/MONUMENT BOX LOWERING SD-GU-8



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MANHOLE & VALVE/MONUMENT BOX LOWERING

DR. ENG. CH. ENG. DRAWING NO.
SCALE: N.T.S. DATE: 7/1/2022 SD-GU-8



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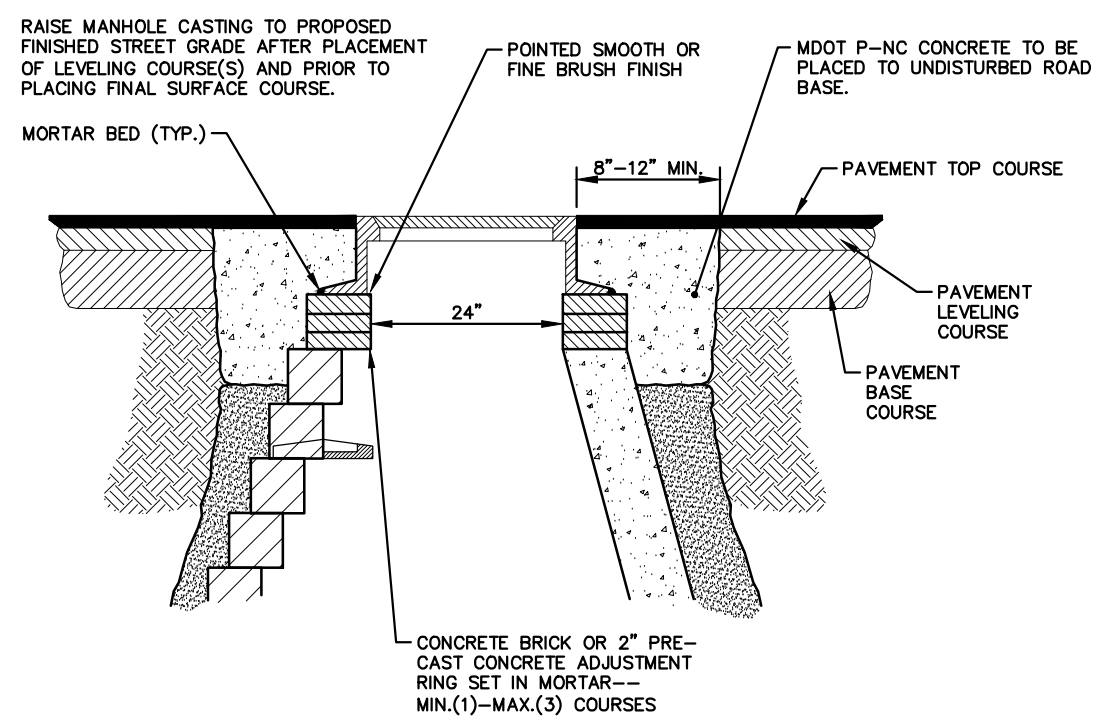
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STANDARD CASTING SCHEDULE

DR. ENG. CH. ENG. DRAWING NO.
SCALE: N.T.S. DATE: 10/1/2022 SD-GU-4

TYPE OF CASTING	MDOT DESIGNATION	EJ CASTING NO.	NEENAH CASTING NO.
MANHOLE AND GATE WELL FRAME AND COVER	Q/B	1040Z W/ TYPE A COVER*	R-1642 W/ TYPE C COVER*
BARRIER CURB INLET FRAME AND COVER	K	7045Z W/ TYPE M1 GRATE	R-3031-B W/ TYPE S GRATE
BARRIER CURB DOUBLE INLET FRAME AND COVER	K	7035Z W/ TYPE M2 GRATE	N/A
GUTTER INLET FRAME AND COVER	R	5080Z W/ TYPE 5000M2 GRATE	R-3448C, W/ TYPE S GRATE
GUTTER DOUBLE INLET FRAME AND COVER	R	7034Z W/ TYPE M GRATE	N/A
MOUNTABLE CURB INLET ASSEMBLY		7065	N/A
YARD DRAIN (BEE HIVE) FRAME AND COVER	G	1040Z, TYPE O2 GRATE	R-2560-E1
WATER VALVE BOX ASSEMBLY IN PAVEMENT		8560	N/A
MONUMENT BOX ASSEMBLY		8360	N/A

- NOTES:
 *EACH COVER SHALL HAVE "SANITARY", "STORM", OR "WATER" CAST IN THE SURFACE, WHICHEVER IS APPLICABLE. SANITARY SEWER COVERS SHALL BE GASKETED IN FLOOD PRONE AREAS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE PSAA. FRAMES AND COVERS MUST HAVE MACHINED BEARING SURFACES.



MANHOLE CASTING ADJUSTMENT SD-GU-5

- NOTE:
1. IF MANHOLE WILL BE PLACED IN GRAVEL ROAD, CASTING TO BE SET 6" TO 8" BELOW ROADWAY GRADE. ALL CONSTRUCTION METHODS SHALL REMAIN AS SHOWN ABOVE.
 2. P-NC CONCRETE MIXTURE SHALL CONTAIN 658 POUNDS PER CUBIC YARD (7 SACKS) OF CEMENT WHEN THE FORECASTED AIR TEMPERATURE IS ABOVE 59-F AND 752 POUNDS PER CUBIC YARD (8 SACKS) OF CEMENT WHEN THE FORECASTED AIR TEMPERATURE IS 59-F OR LESS.



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MANHOLE CASTING ADJUSTMENT

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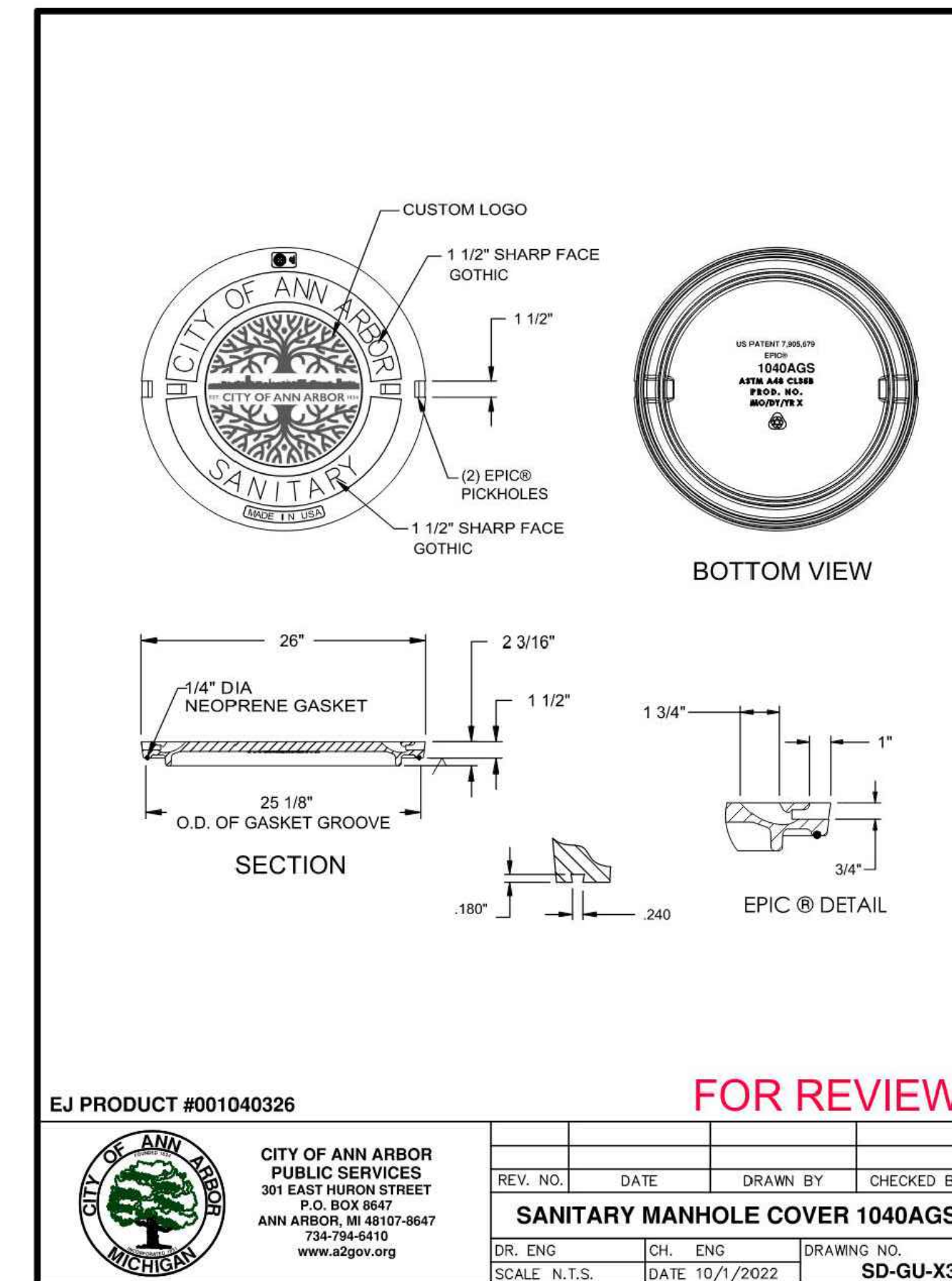
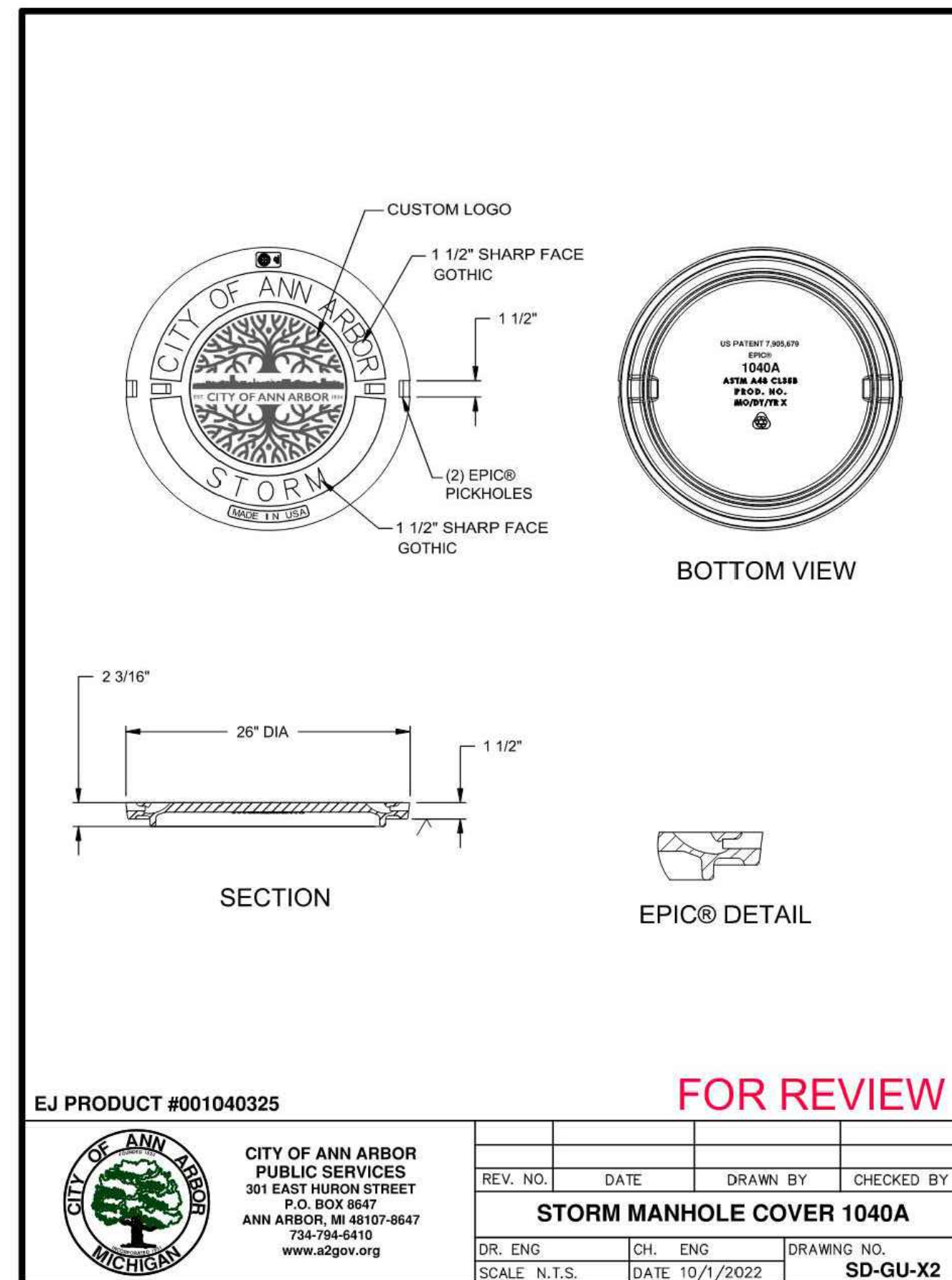
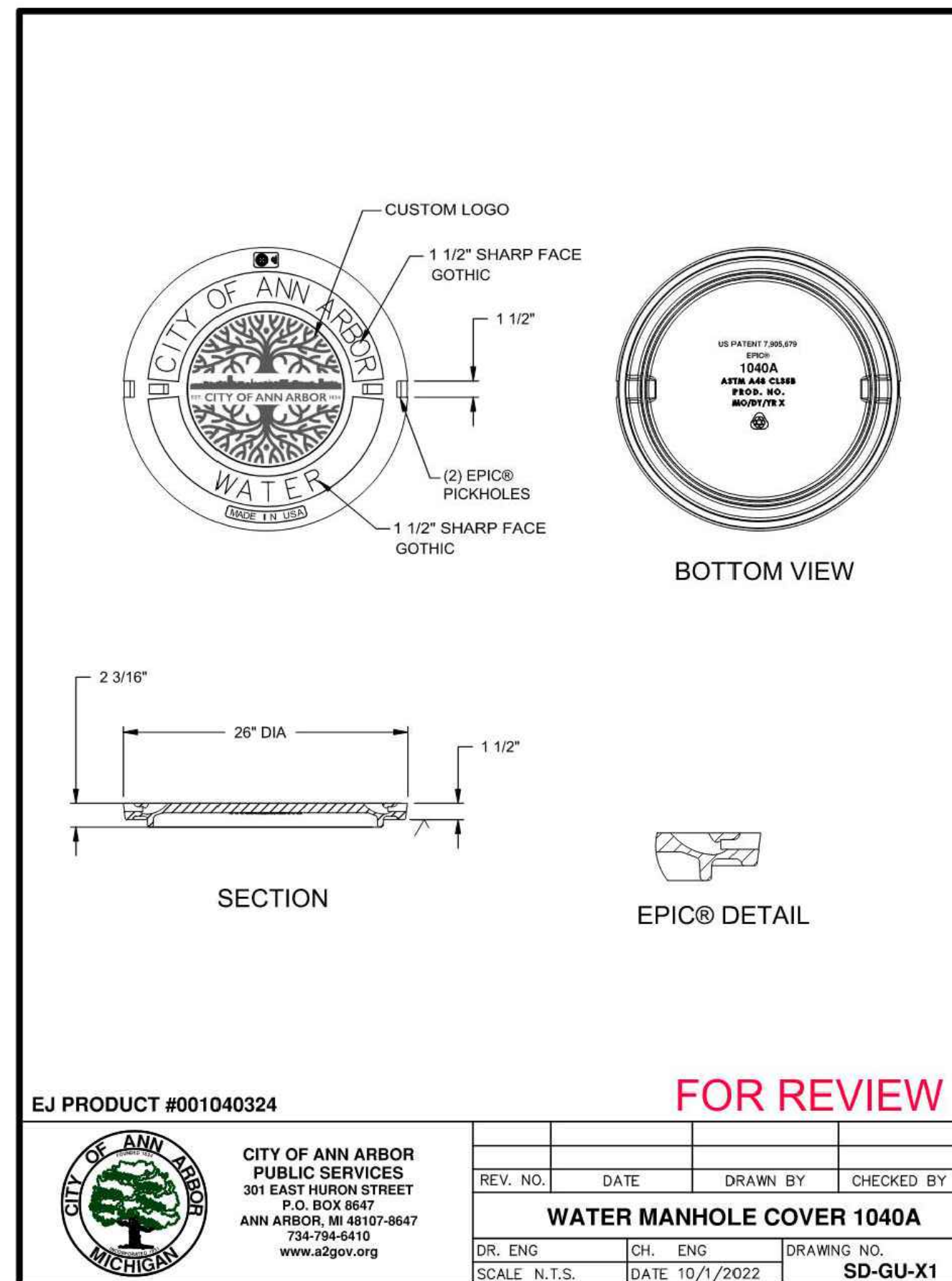
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
ANN ARBOR STANDARD DETAILS**

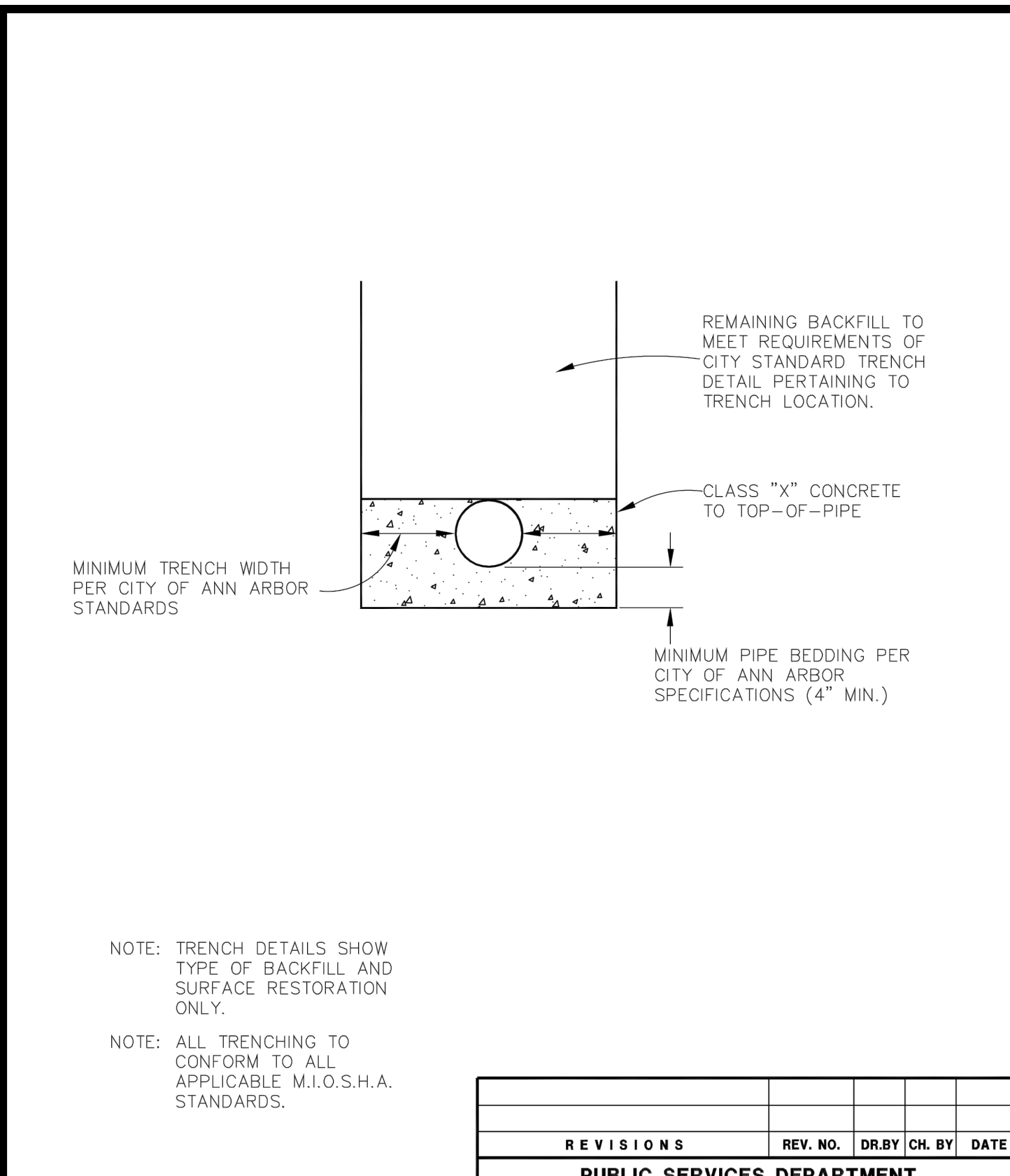
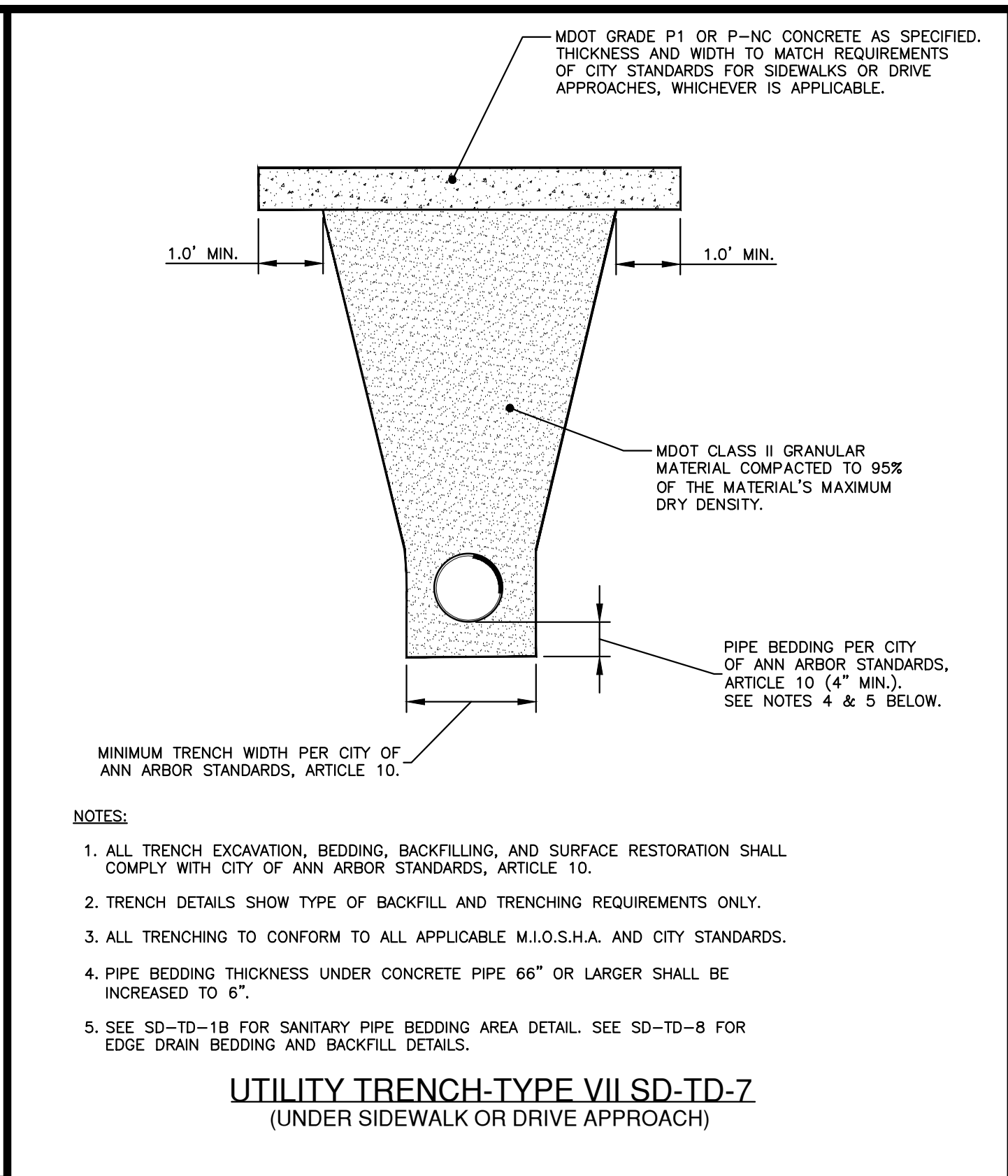
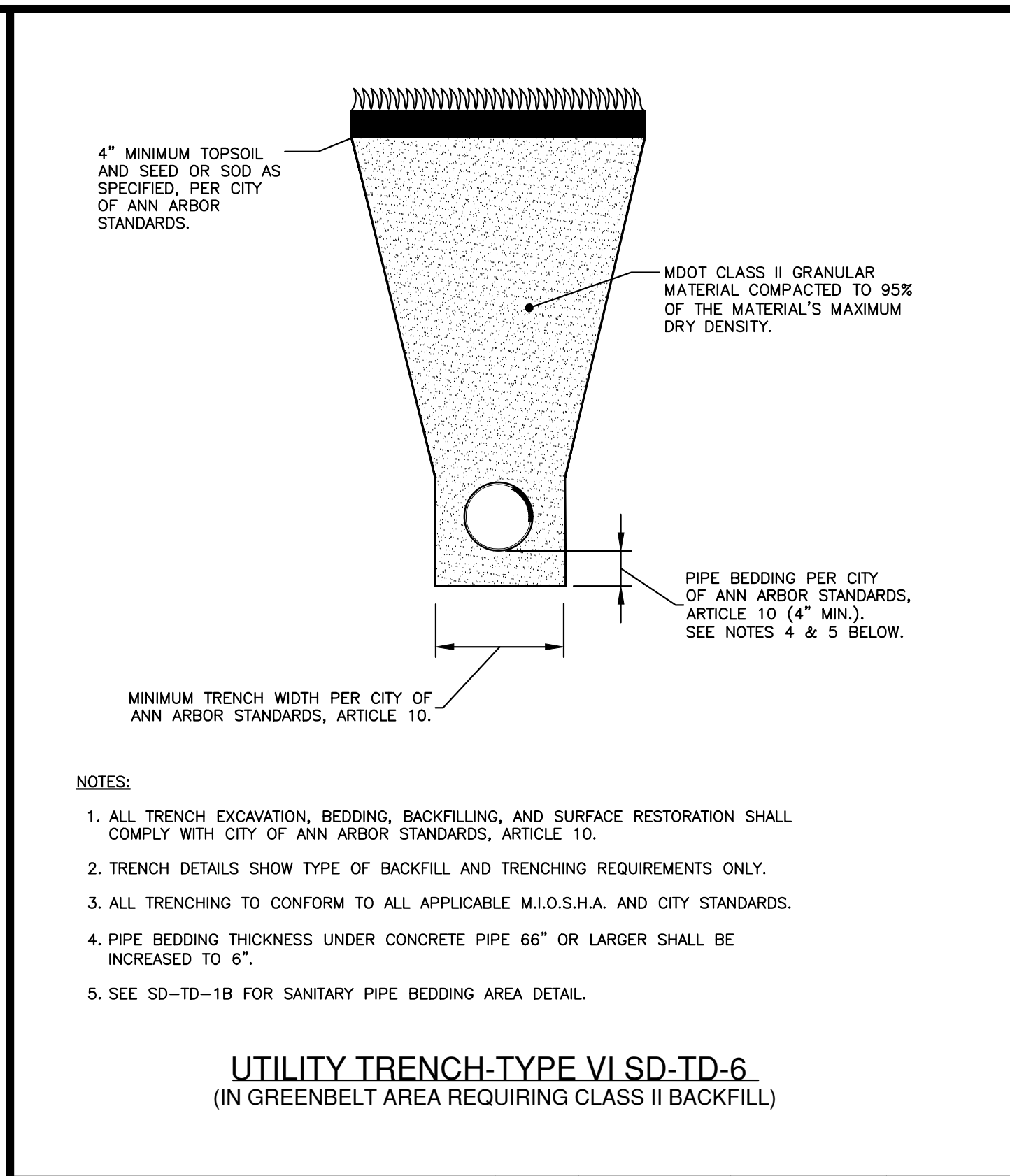
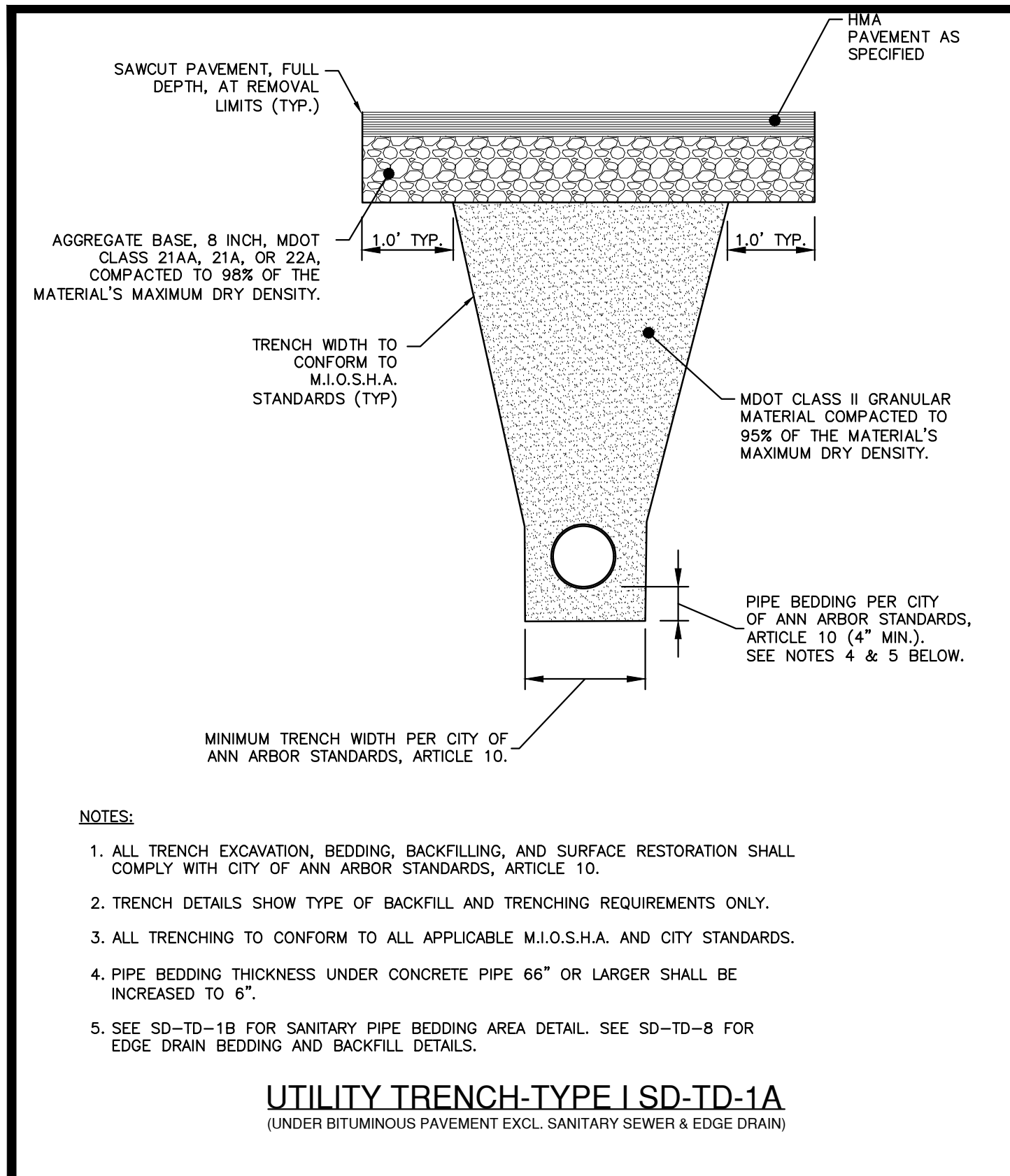
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DRAWING NO.
2021-008-STD1

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E. MEDICAL CENTER DRIVE ANN ARBOR STANDARD DETAILS					SCALE N/A		INCH 0 1		
					DRAWING NO. 2021-008-STD2				
					SHEET NO. 125 OF 155				
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UTILITY TRENCH - TYPE I
(UNDER BITUMINOUS PAVEMENT EXCL. SANITARY SEWER & EDGE DRAIN)

DR. ENG: CH. ENG: DATE: 7/1/2022 DRAWING NO. SD-TD-1A

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UTILITY TRENCH - TYPE VI

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UTILITY TRENCH - TYPE VII

DR. ENG: CH. ENG: DATE: 7/1/2022 DRAWING NO. SD-TD-7

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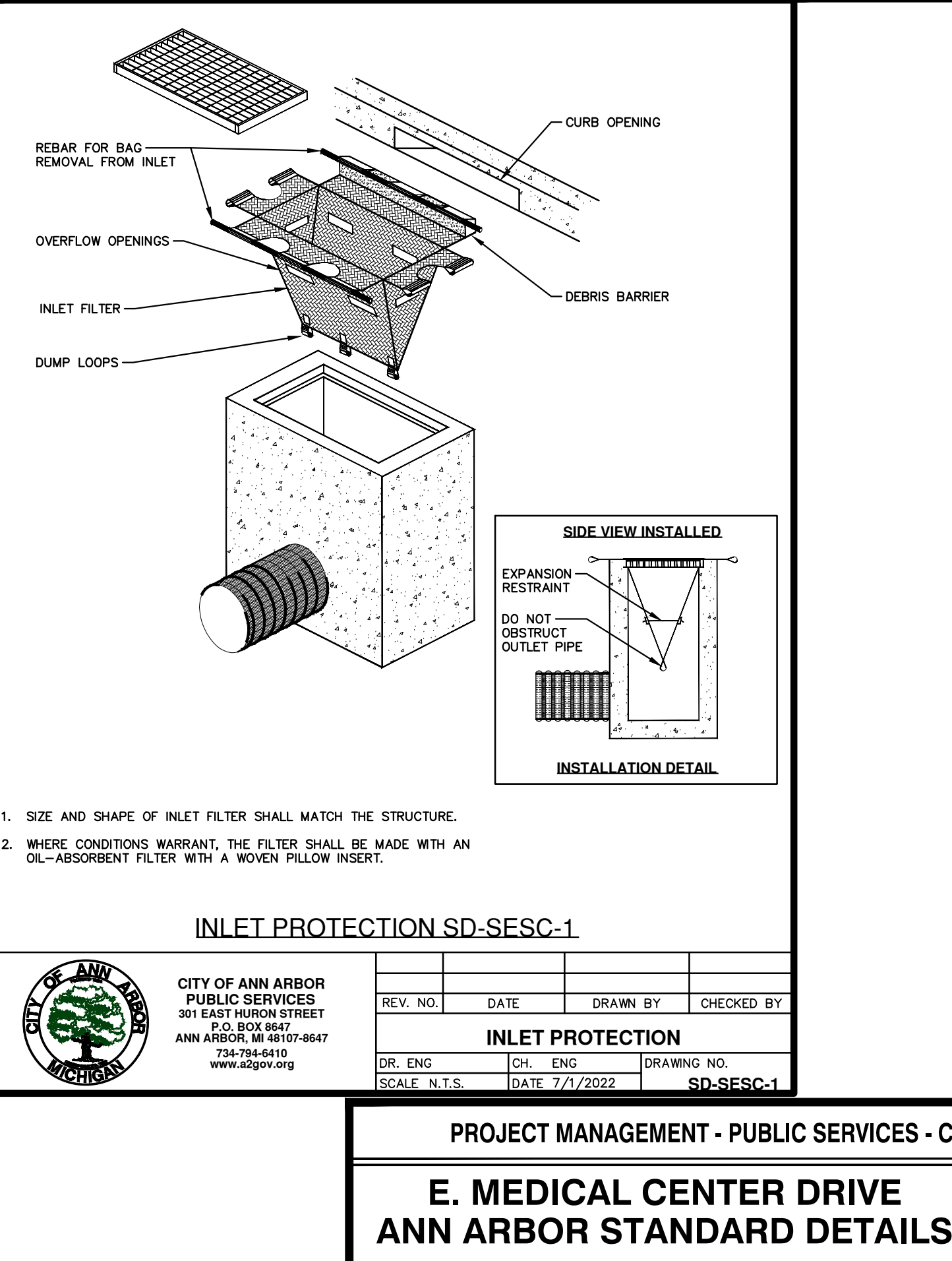
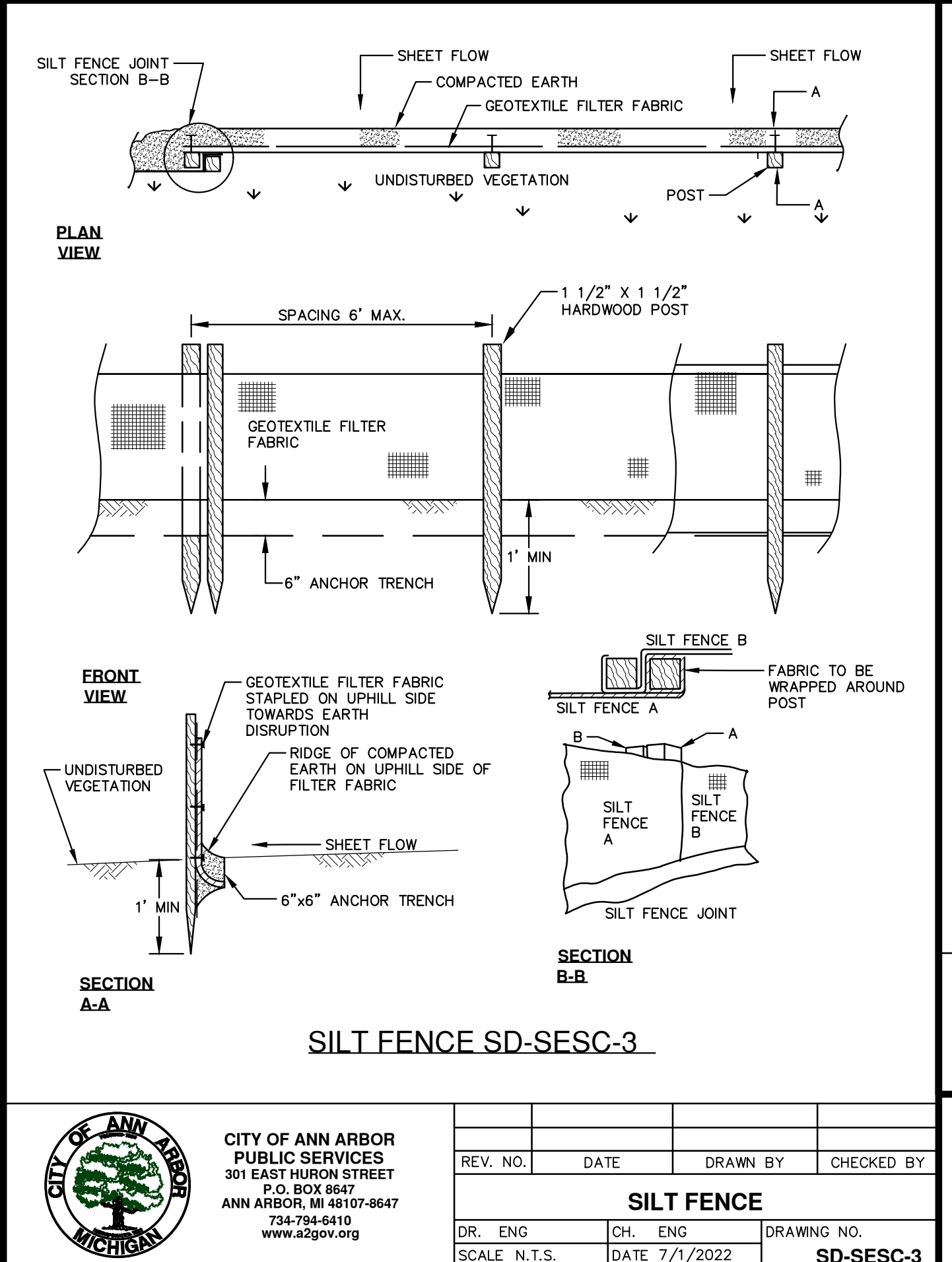
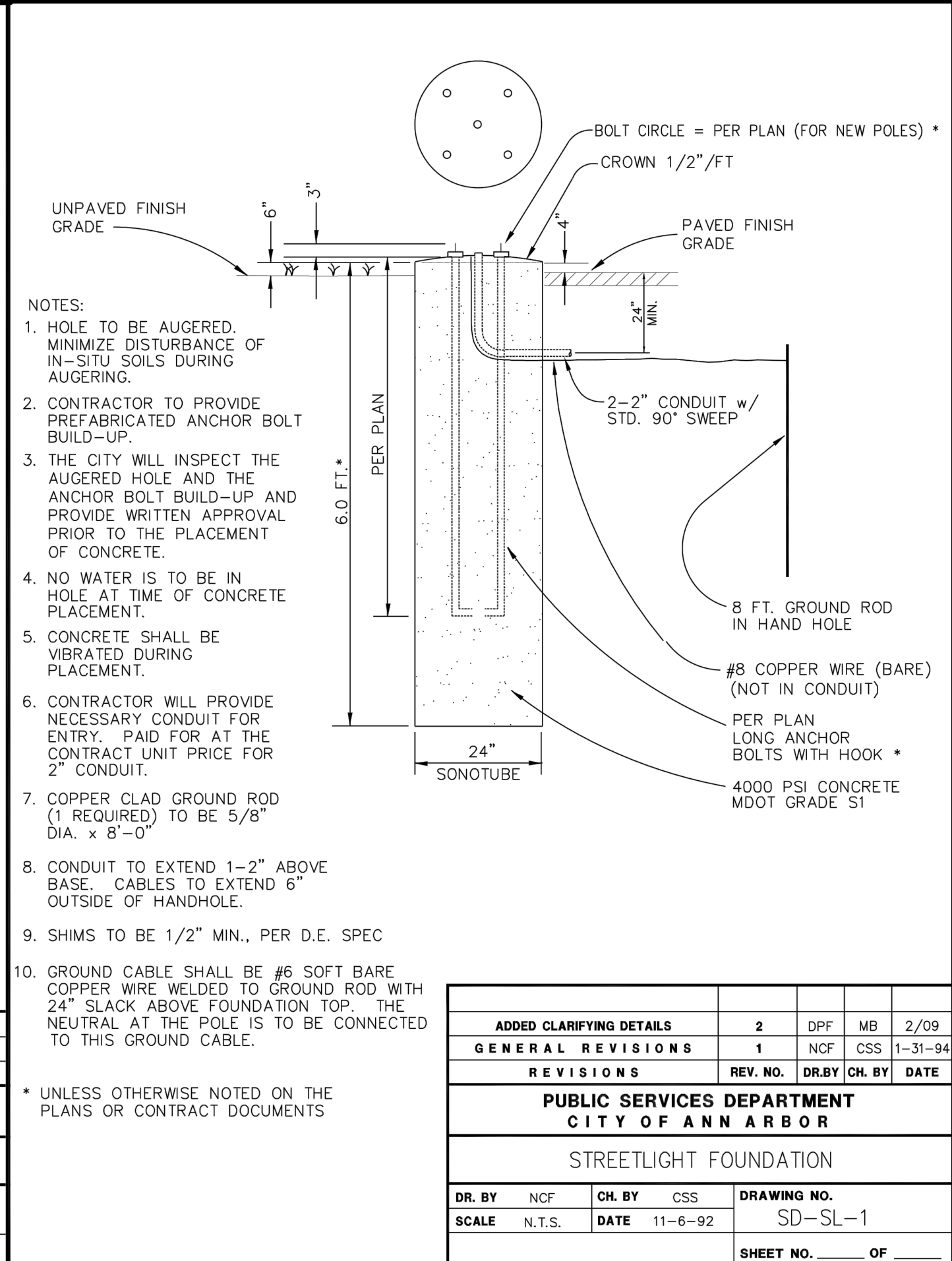
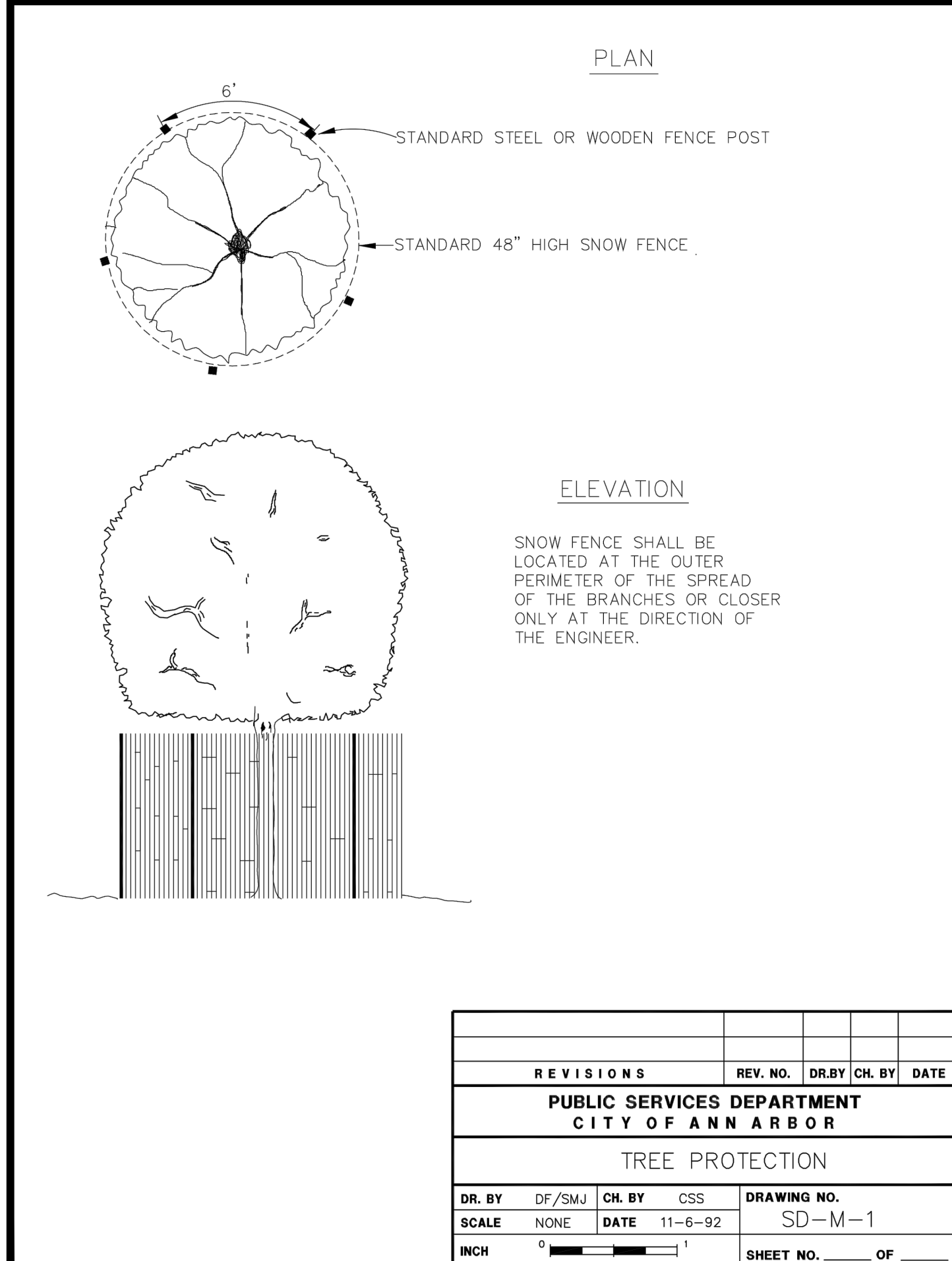
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UTILITY TRENCH-TYPE IX (CONCRETE ENGAGEMENT)

DR. BY: D.F. CH. BY: C.S.S. DRAWING NO. SD-TD-9

SCALE: NONE DATE: 11-6-92

SHEET NO. OF



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E. MEDICAL CENTER DRIVE
ANN ARBOR STANDARD DETAILS

SCALE: N/A INCH 1

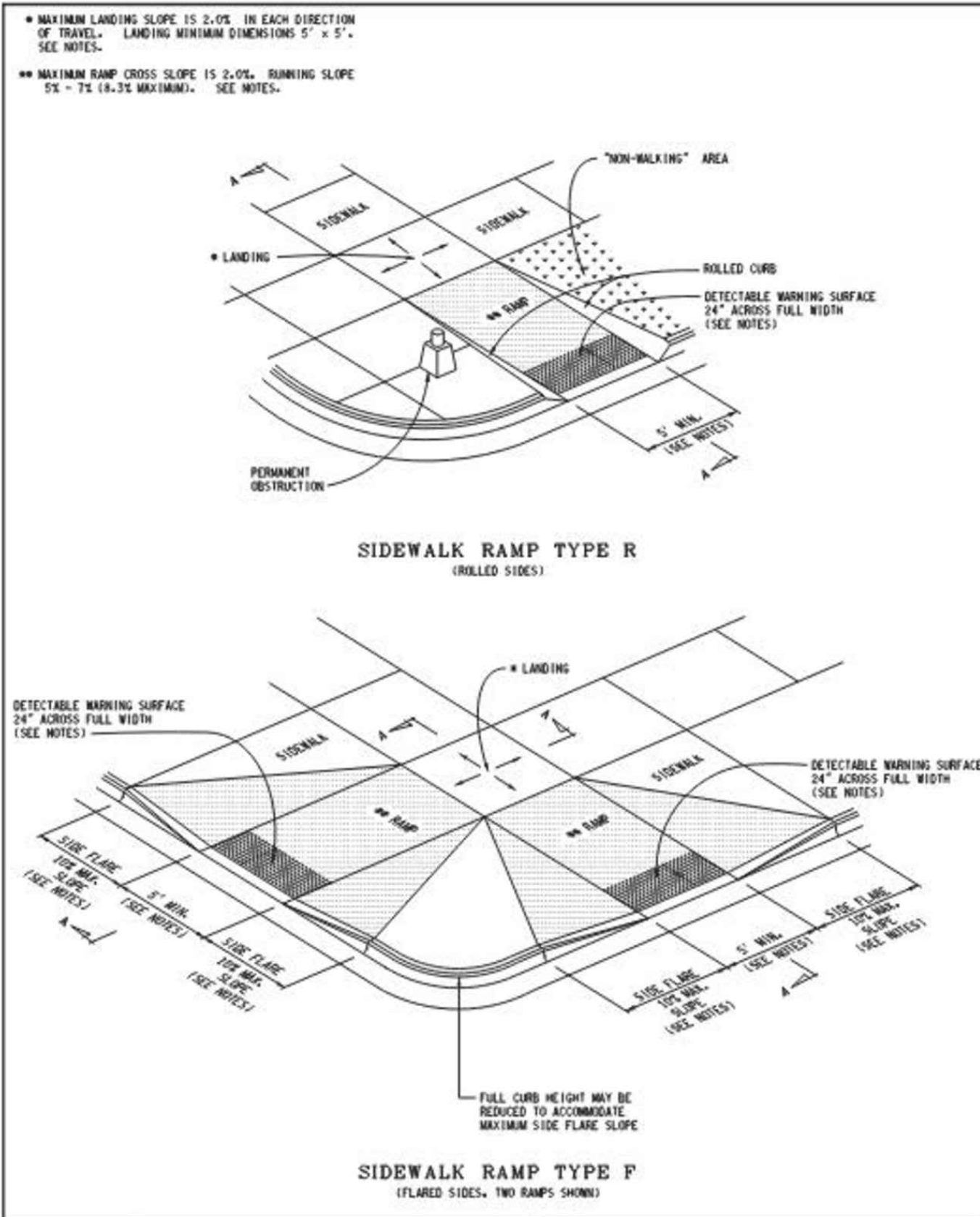
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SHEET NO. 126 OF 155

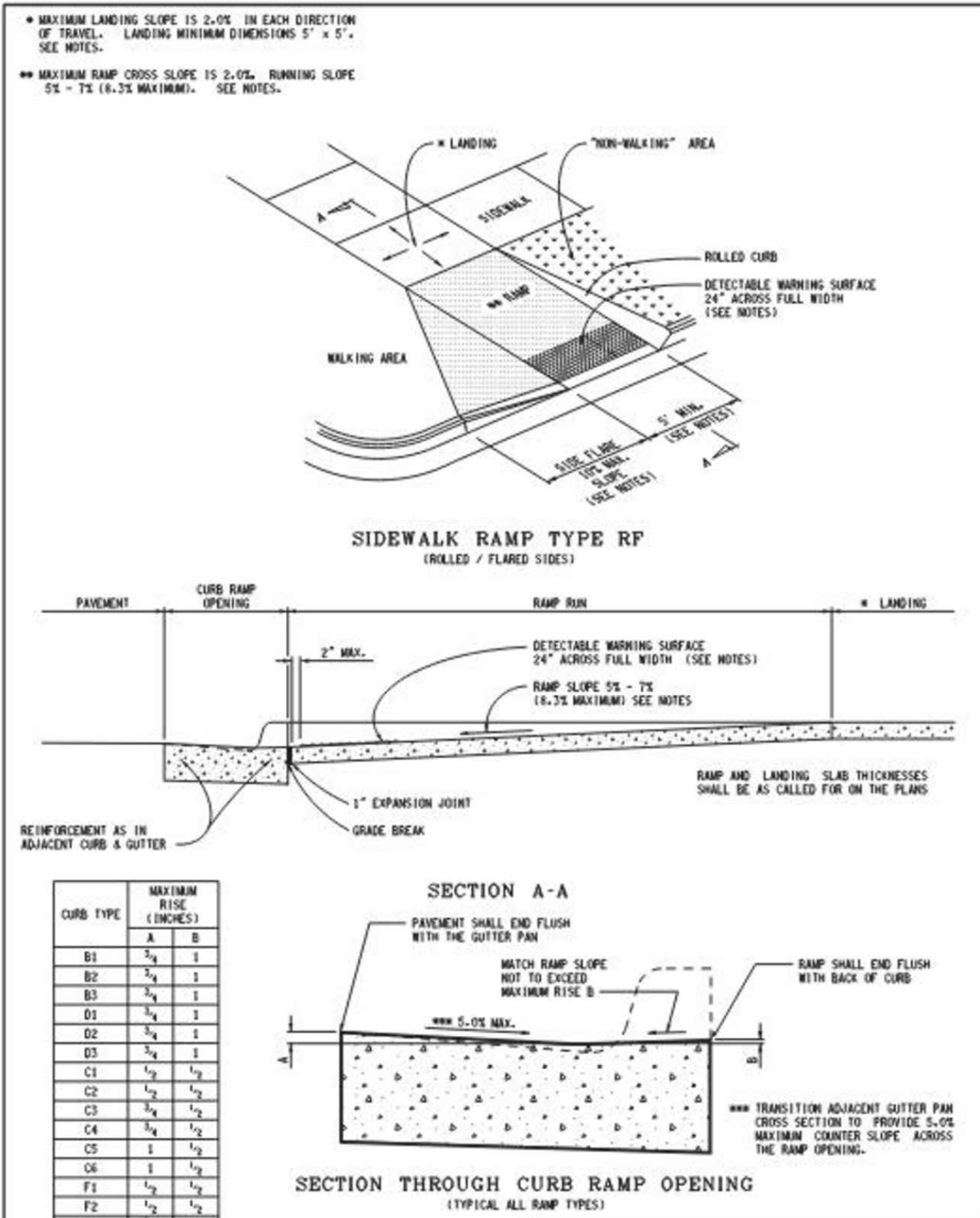
APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025

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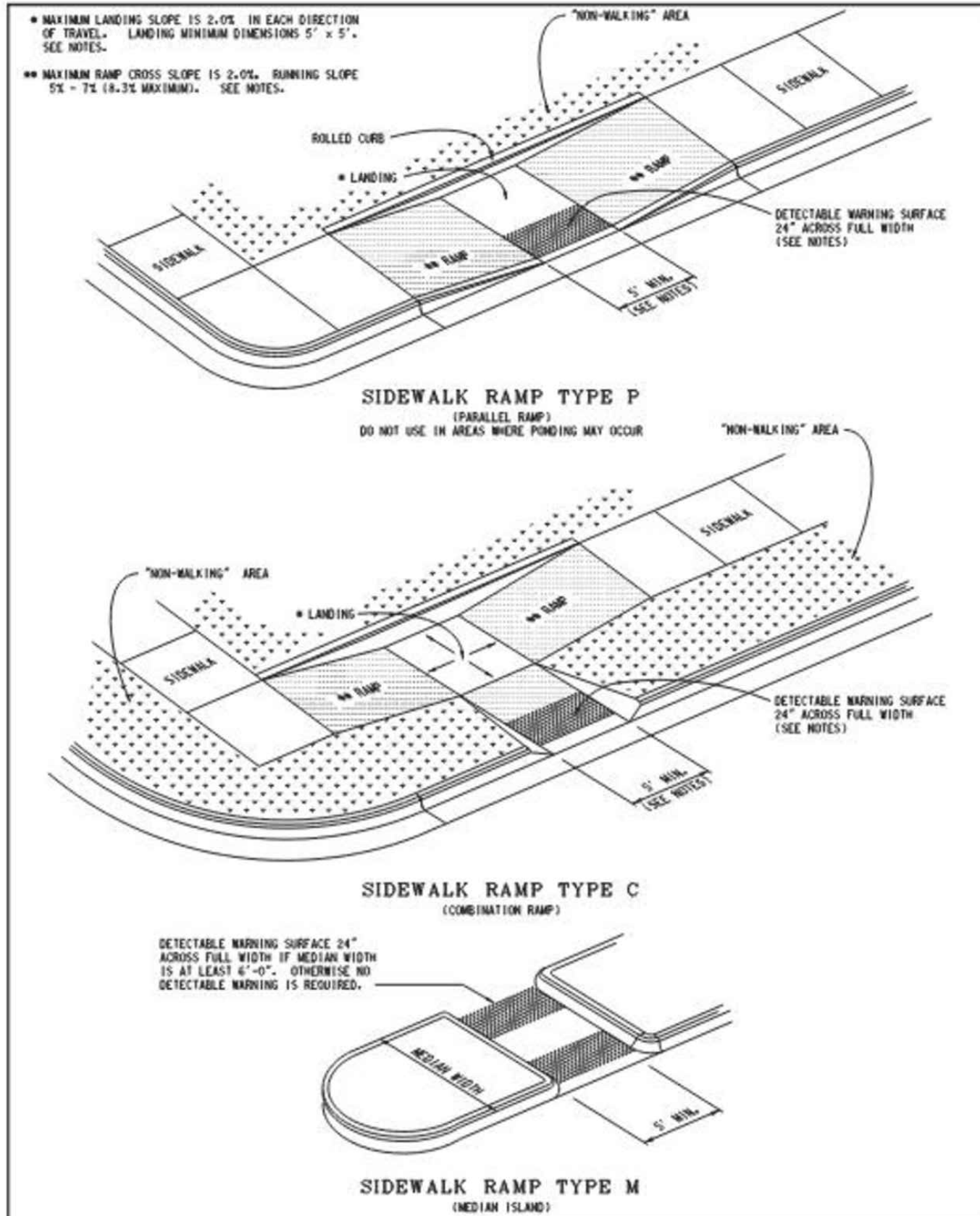
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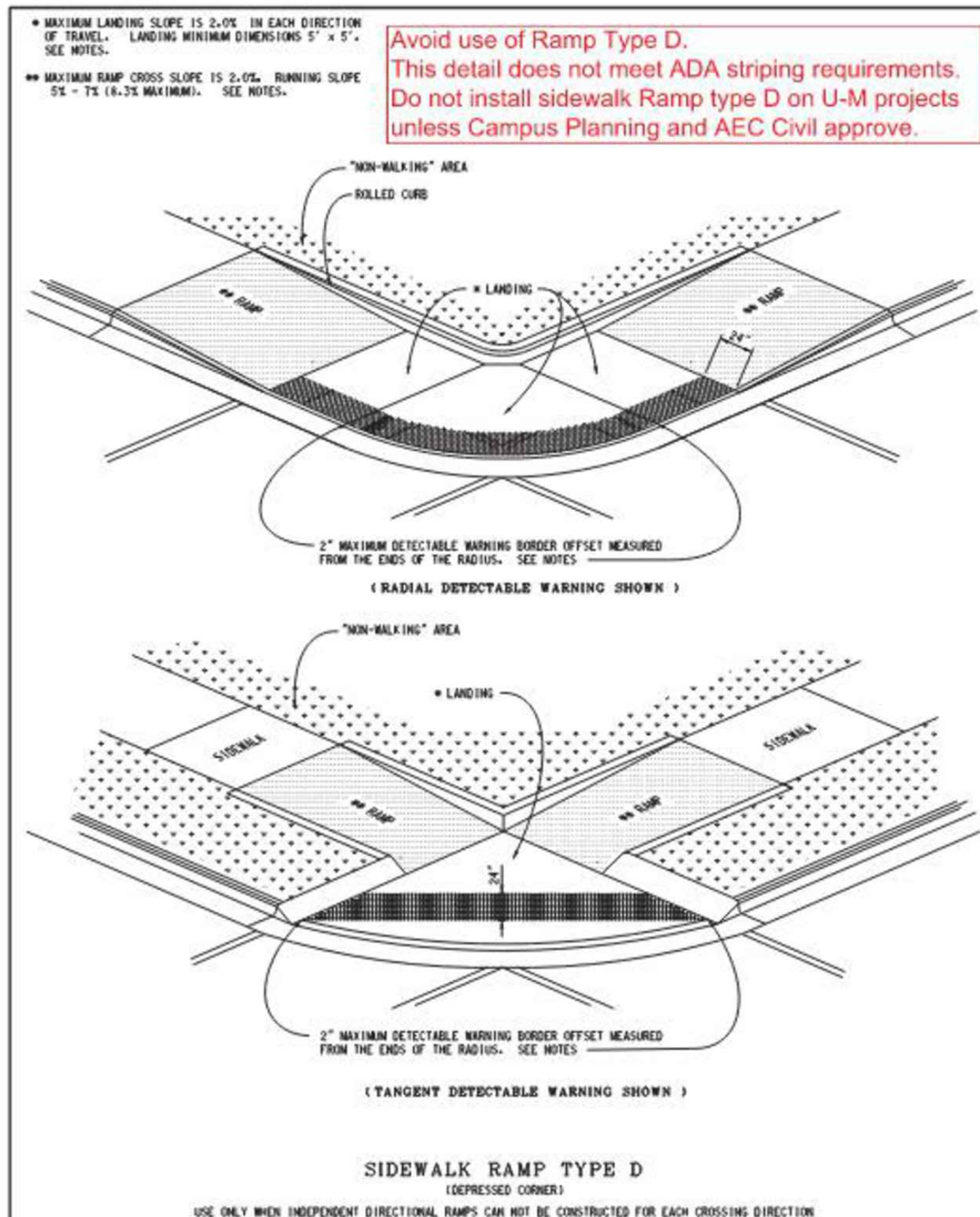
MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
 PREPARED BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES
 DRAWN BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT
 SHEET 1 OF 7
 F.A.S.L. APPROVE 12-11-2017 PLAN DATE R-28-J



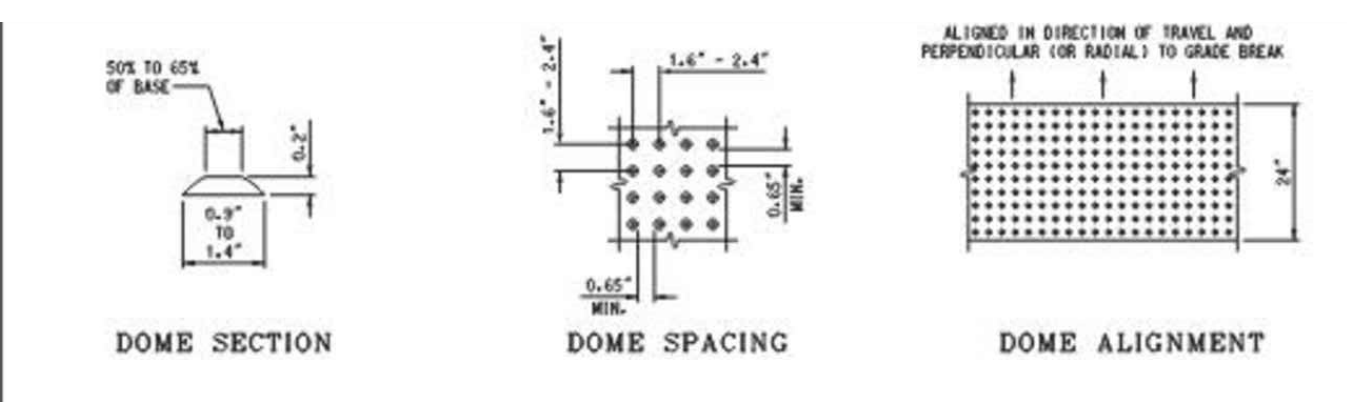
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 DRAWN BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT
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 SHEET 3 OF 7
 F.A.S.L. APPROVE 12-11-2017 PLAN DATE R-28-J

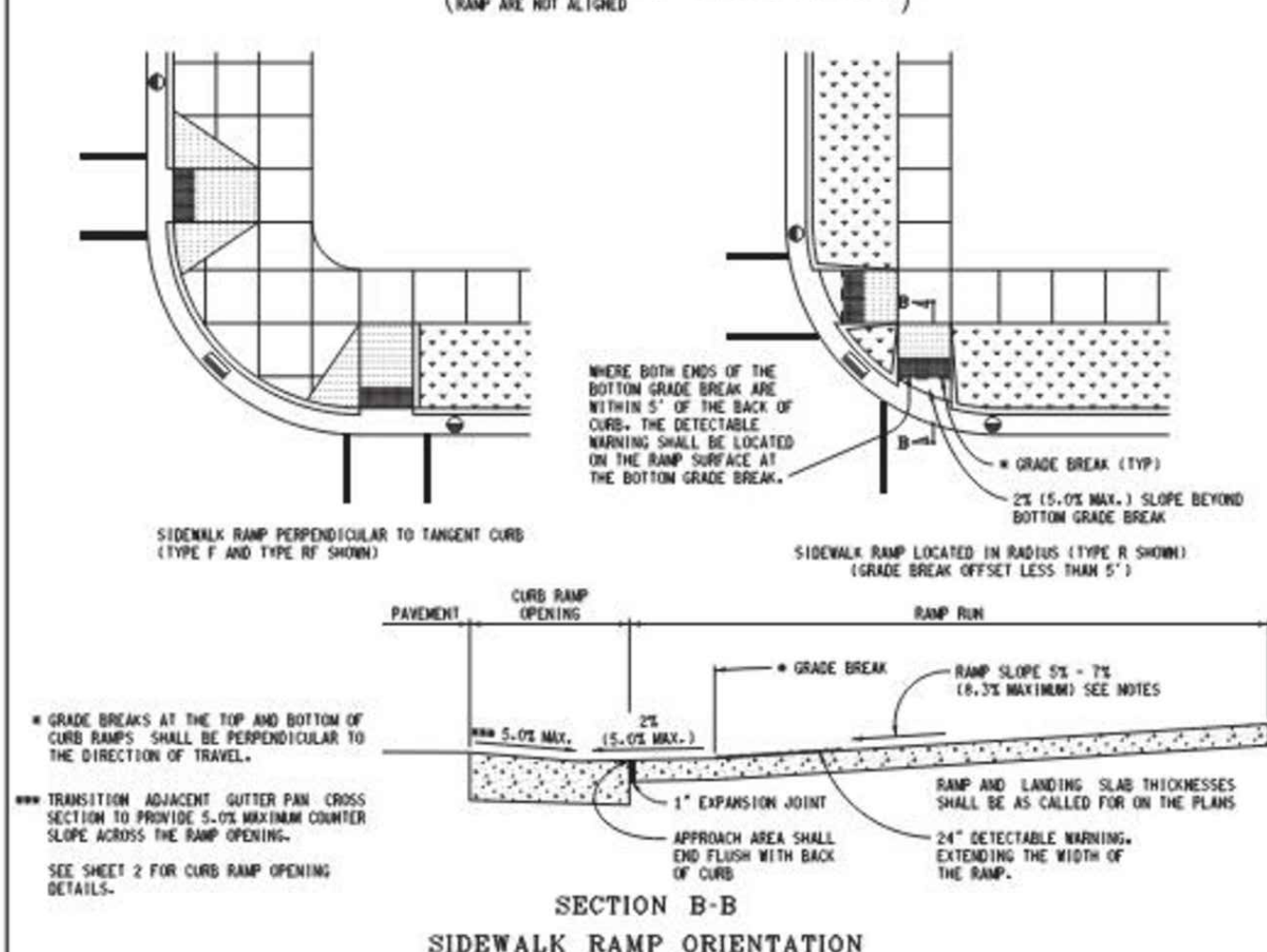
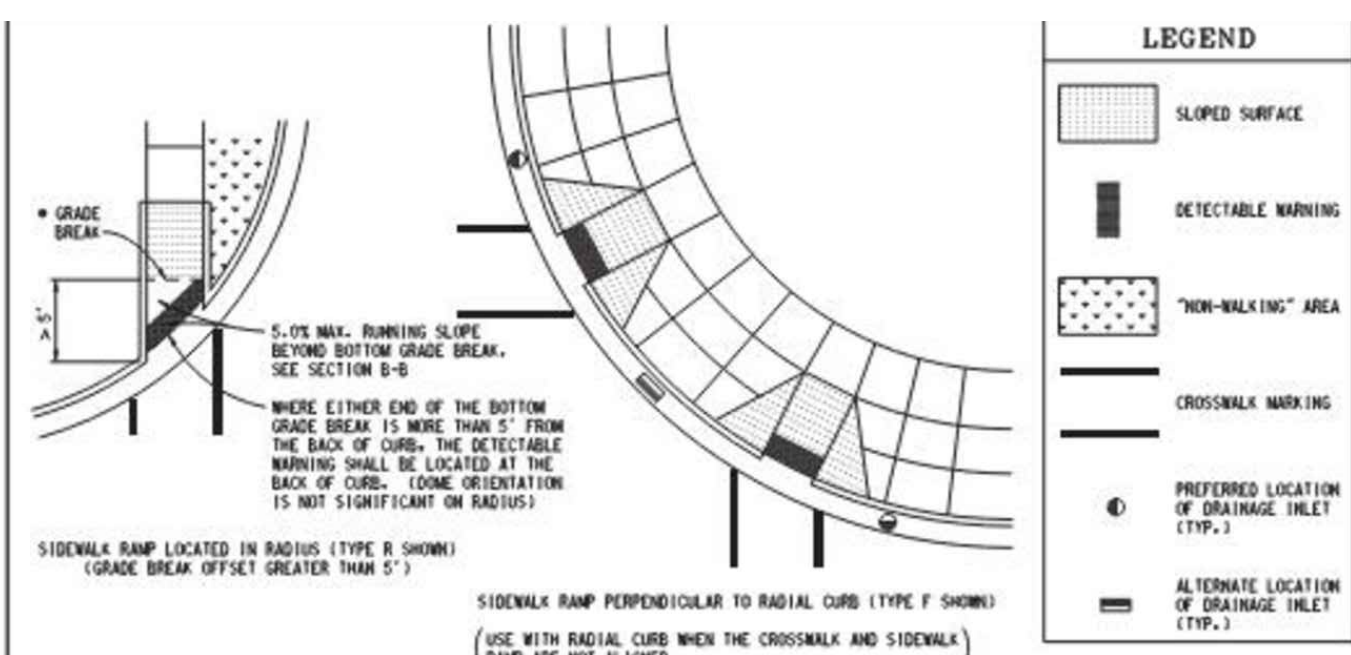


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 DRAWN BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT
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 F.A.S.L. APPROVE 12-11-2017 PLAN DATE R-28-J

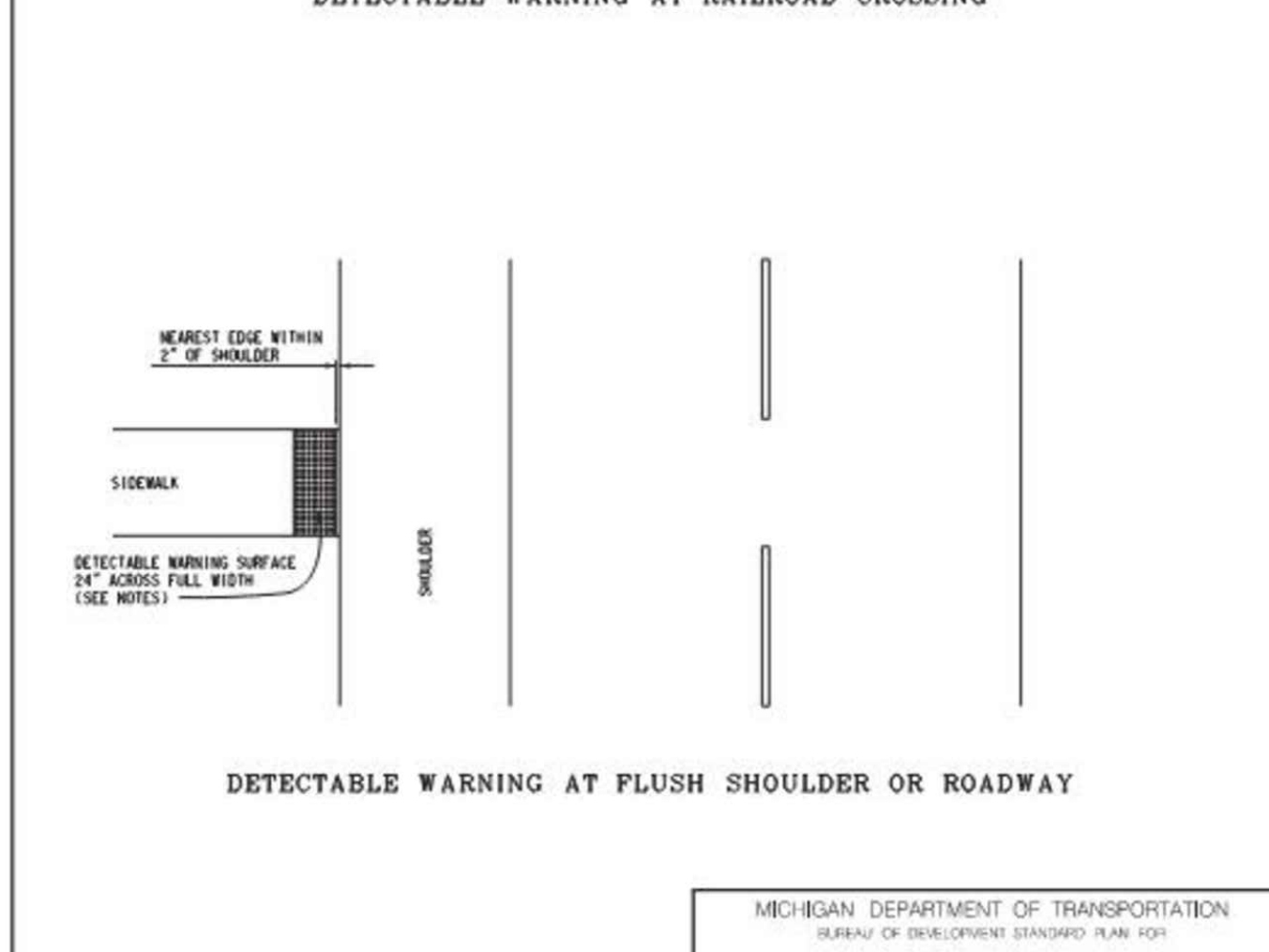
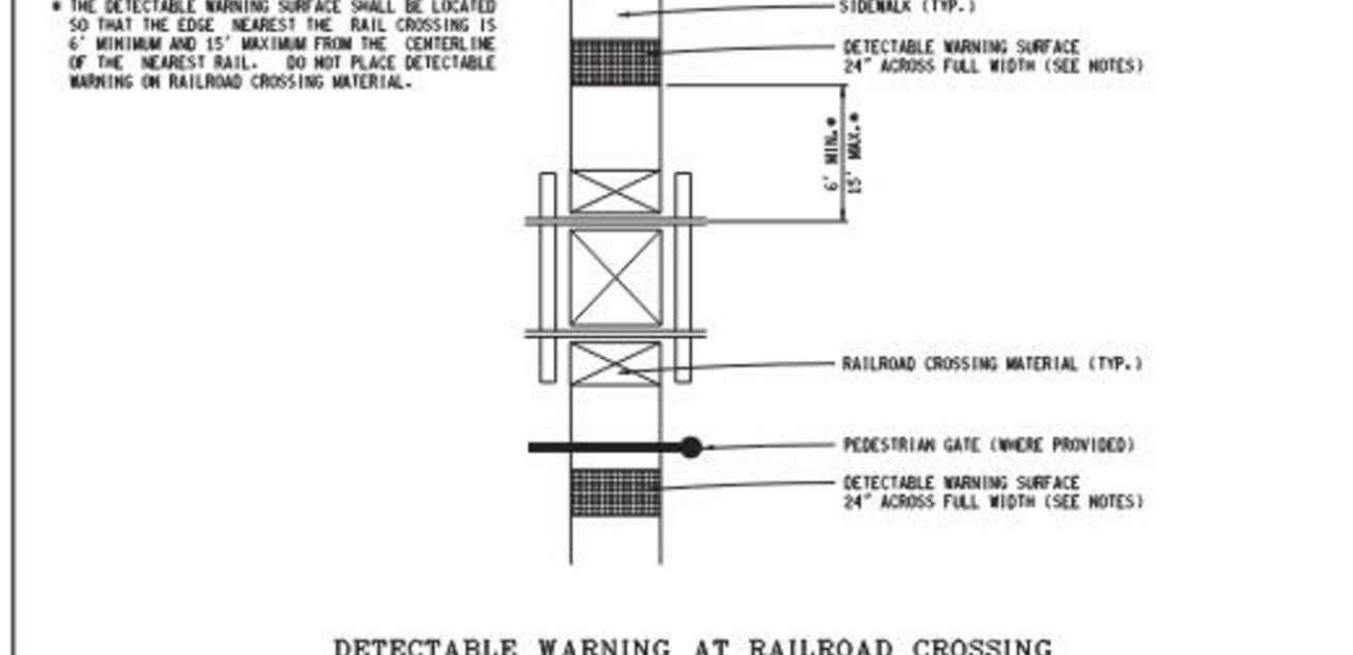


NOTES:
 DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.
 SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED WID-BLOCK CROSSINGS.
 SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COURSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.
 SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.
 CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, WHERE CONFLICTING PERMITS, IT IS DESIRABLE THAT THE GRADE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.
 RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SHOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.
 WHEN 5' MINIMUM WIDTHS ARE NOT PRACTICABLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' x 4'.
 CURB RAMPS WITH A RUNNING SLOPE 5% DO NOT REQUIRE A TOP LANDING. HOWEVER, ANY CONTINUOUS SIDEWALK OR PEDESTRIAN ROUTE CROSSING THROUGH OR INTERSECTING THE CURB RAMP MUST INDEPENDENTLY MAINTAIN A CROSS SLOPE NOT GREATER THAN 2% PERPENDICULAR TO ITS OWN DIRECTION(S) OF TRAVEL.
 DETECTABLE WARNING SURFACE CONCRESE IS 24" MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL AND THE FULL WIDTH OF THE RAMP/PATH OPENING EXCLUDING CURBS OR FLARED CURB TRANSITION AREAS. A BORDER OFFSET NOT GREATER THAN 2" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADII.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.
 THE MAXIMUM RUNNING SLOPE OF 6.7% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH NOT INCLUDING LANDINGS OR TRANSITIONS.
 DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN 1/4". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
 THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
 CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
 FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE ROADSIDE CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, IMPAVED SURFACE OR PERMANENT FIXED OBJECTS, WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.
 DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT BRITS CAST AND/OR BACHED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.



MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
 PREPARED BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES
 DRAWN BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT
 SHEET 6 OF 7
 F.A.S.L. APPROVE 12-11-2017 PLAN DATE R-28-J



MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
 PREPARED BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES
 DRAWN BY: [Signature] APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT
 SHEET 5 OF 7
 F.A.S.L. APPROVE 12-11-2017 PLAN DATE R-28-J

Avoid use of Ramp Type D.
 This detail does not meet ADA stripping requirements.
 Do not install sidewalk Ramp type D on U-M projects unless Campus Planning and AEC Civil approve.



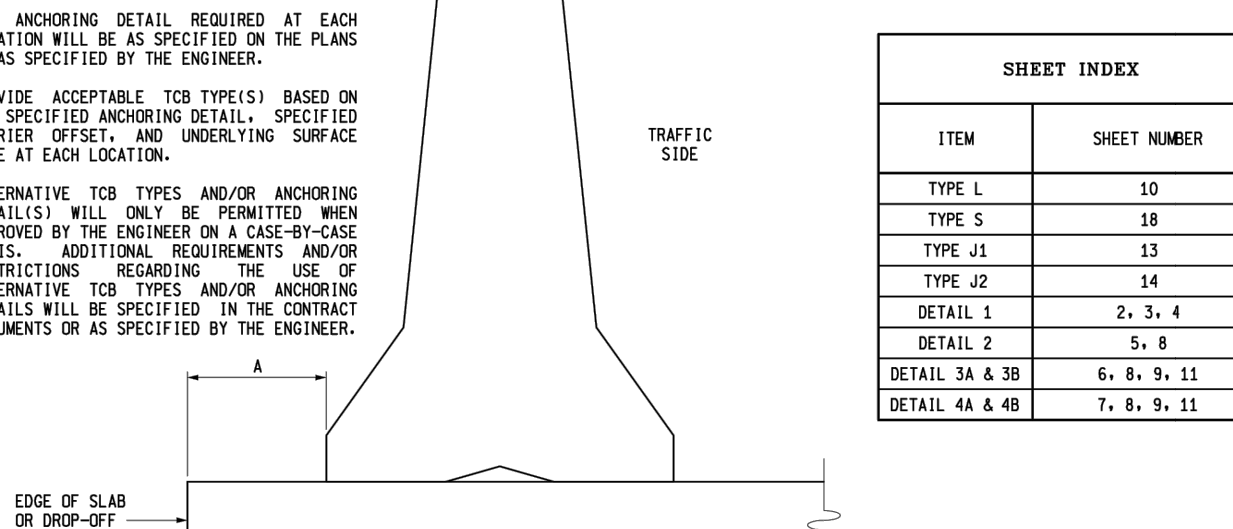
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
E. MEDICAL CENTER DRIVE
MDOT STANDARD DETAILS
 SCALE: N/A 0 INCH 1
 DRAWING NO. 2021-008-STD6
 SHEET NO. 129 OF 155
 APPROVED BY: LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025

UNDERLYING SURFACE	ACCEPTABLE TEMPORARY CONCRETE BARRIER (TCB) TYPES AND ANCHORING DETAILS BASED ON UNDERLYING SURFACE TYPE AND BARRIER OFFSET FROM DROP-OFF							
	BARRIER OFFSET							
	0' ≤ A < 6'		6' ≤ A < 12'		12' ≤ A < 26'		A ≥ 26'	
TCB TYPE	DETAIL	TCB TYPE	DETAIL	TCB TYPE	DETAIL	TCB TYPE	DETAIL	
BRIDGE DECK (CONCRETE)	L OR S *	3A OR 4A *	L OR S *	3A OR 4A *	L	1	***	N/A
BRIDGE DECK (CONCRETE WITH HMA OVERLAY)	L OR S *	3B *	L OR S *	3B *	L	1	***	N/A
ROADWAY (CONCRETE)	L OR S *	4A *	L OR S *	4A *	L	1	***	N/A
ROADWAY (HMA)	****	****	L OR S	2	L	1	***	N/A
ROADWAY (CONCRETE WITH HMA OVERLAY)	L OR S *	4B *	L OR S *	4B *	L	1	***	N/A

IN REGARDS TO BARRIER OFFSET, "A" IS THE DISTANCE FROM THE OUTSIDE EDGE OF THE TCB TO THE DROP OFF OR THE EDGE OF SLAB.

NOTES:
 THE CLEAR DIMENSION, A, BETWEEN THE TIE OF THE TCB AND THE DROP-OFF OR EDGE OF SLAB WILL BE AS SPECIFIED ON THE PLANS OR AS SPECIFIED BY THE ENGINEER.



- USE TYPE J1 AND J2 TCB SECTIONS OVER BRIDGE DECK EXPANSION JOINTS WITH THERMAL EXPANSION FROM 1/2" TO 4". DO NOT USE DETAILS 3A, 3B, OR 4A, OVER BRIDGE DECK EXPANSION JOINTS WITH THERMAL EXPANSION GREATER THAN 4". INSTEAD, USE DETAIL 1 AND TYPE 1 TCB SECTIONS WITH "A" NOT BEING ≥ 12'7" OVER THE ENTIRE BRIDGE SPAN WHEN PLACING LIMITED DEFLECTION TCB SECTIONS OVER BRIDGE DECK EXPANSION JOINTS WITH THERMAL EXPANSION GREATER THAN 4". REFER TO TCB SECTION OVER BRIDGE EXPANSION JOINT DETAILS. FOR ADDITIONAL INFORMATION CONTACT THE TRAFFIC AND SAFETY CRASH BARRIER ENGINEER.
- PROVIDE THE ANCHORING DETAIL SPECIFIED ON THE PLANS OR AS SPECIFIED BY THE ENGINEER.
- USE OF LIMITED DEFLECTION TCB IS NOT REQUIRED WHEN "A" ≥ 26". TYPE L OR TYPE S TCB MAY BE USED WITHOUT ANCHORING TO THE UNDERLYING SURFACE OR BOX-BEAM STIFFENERS. OTHER MOST APPROVED STANDARD TEMPORARY BARRIER TYPES MAY ALSO BE USED WHEN "A" ≥ 26".
- DO NOT INSTALL LIMITED DEFLECTION TCB ON HMA ROADWAYS WHEN "A" < 6".

DEPARTMENT DIRECTOR
Kirk T. Shultz

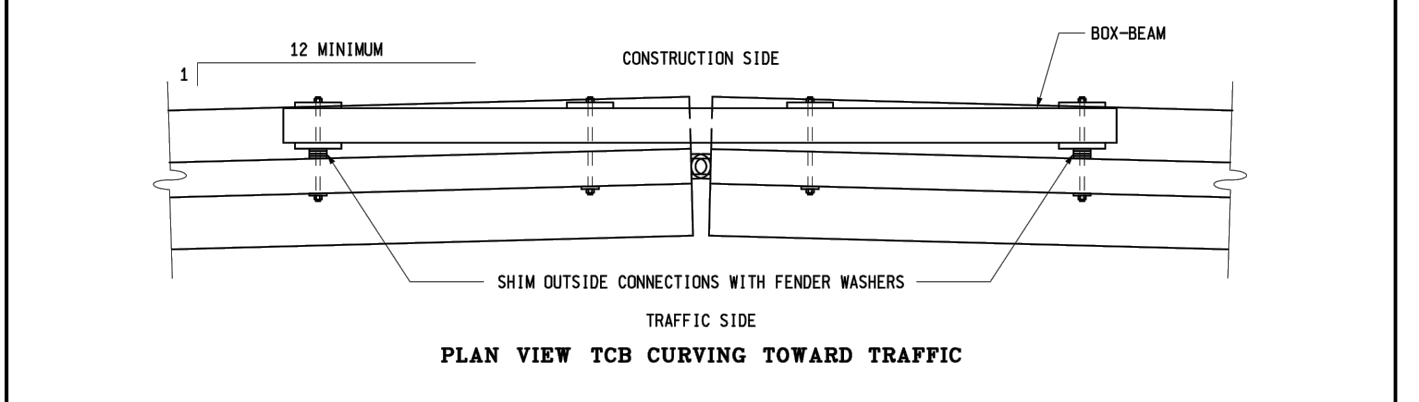
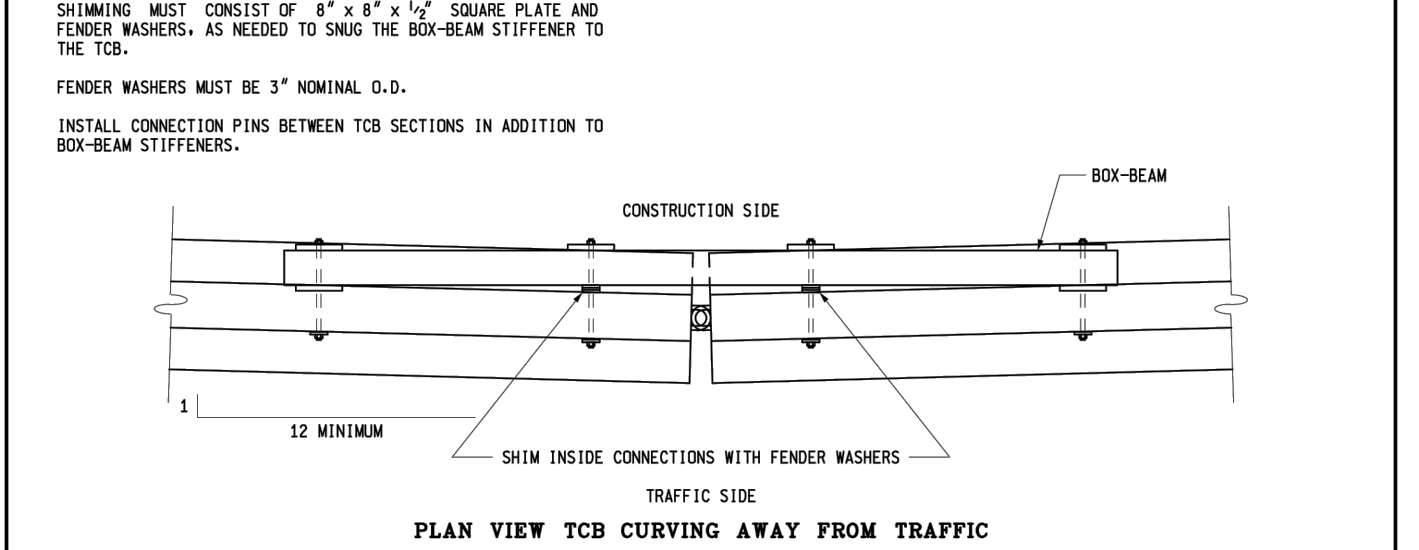
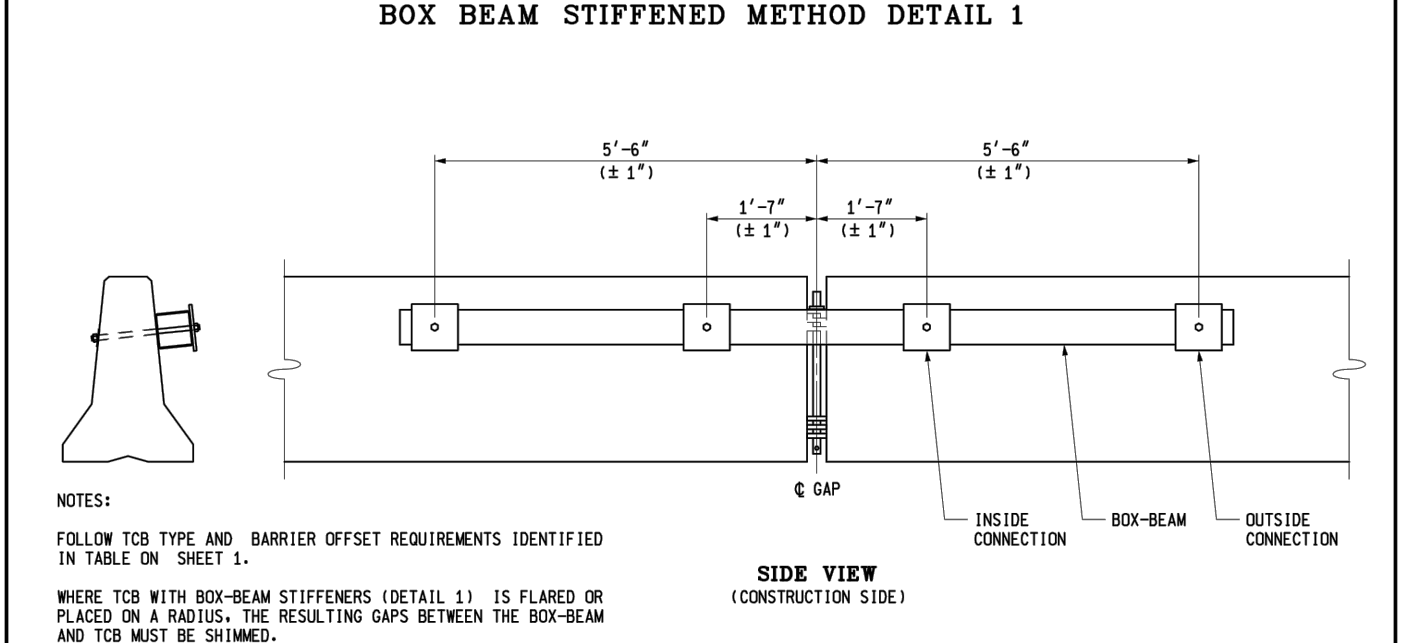
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

PREPARED BY: [Signature]
DESIGN DIVISION

APPROVED BY: [Signature]
DIRECTOR, BUREAU OF FIELD SERVICES

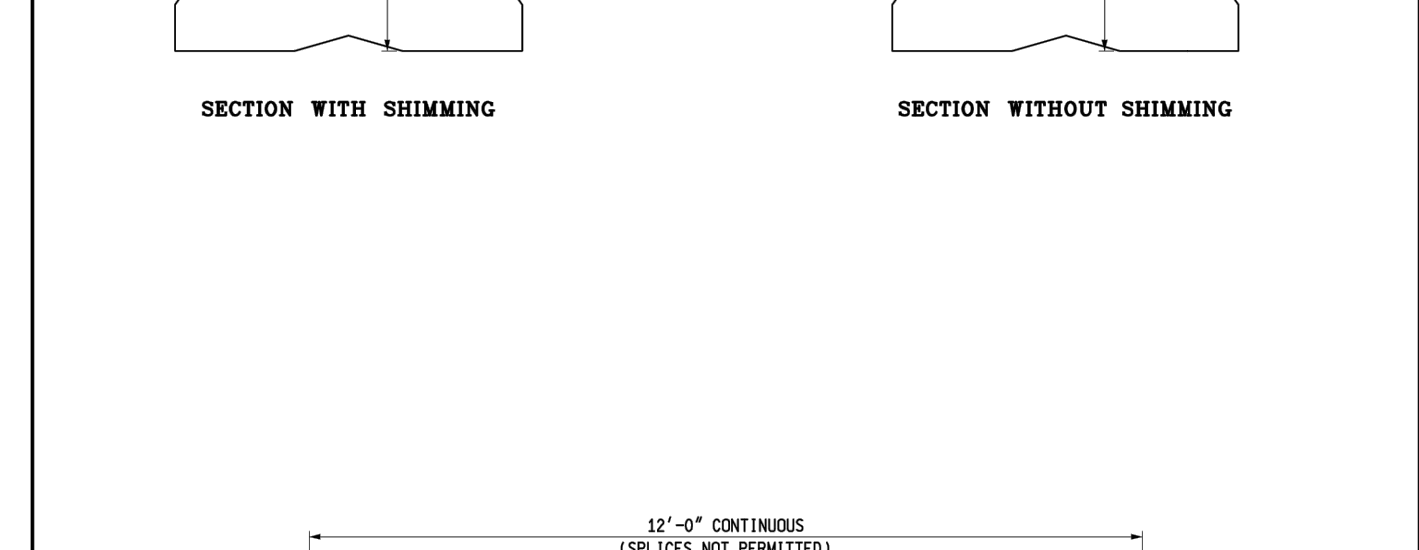
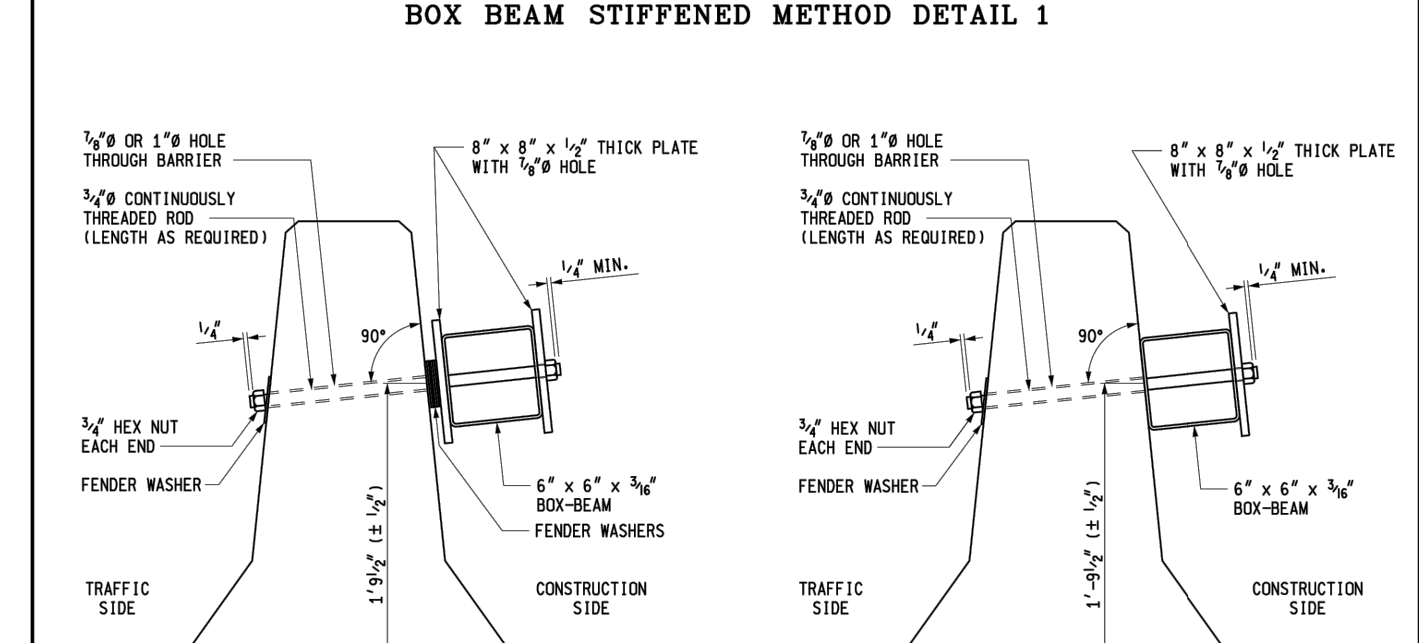
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DIRECTOR, BUREAU OF DEVELOPMENT

F.H.W.A. APPROVAL PLAN DATE 8-14-2015 R-53-A SHEET 1 OF 22



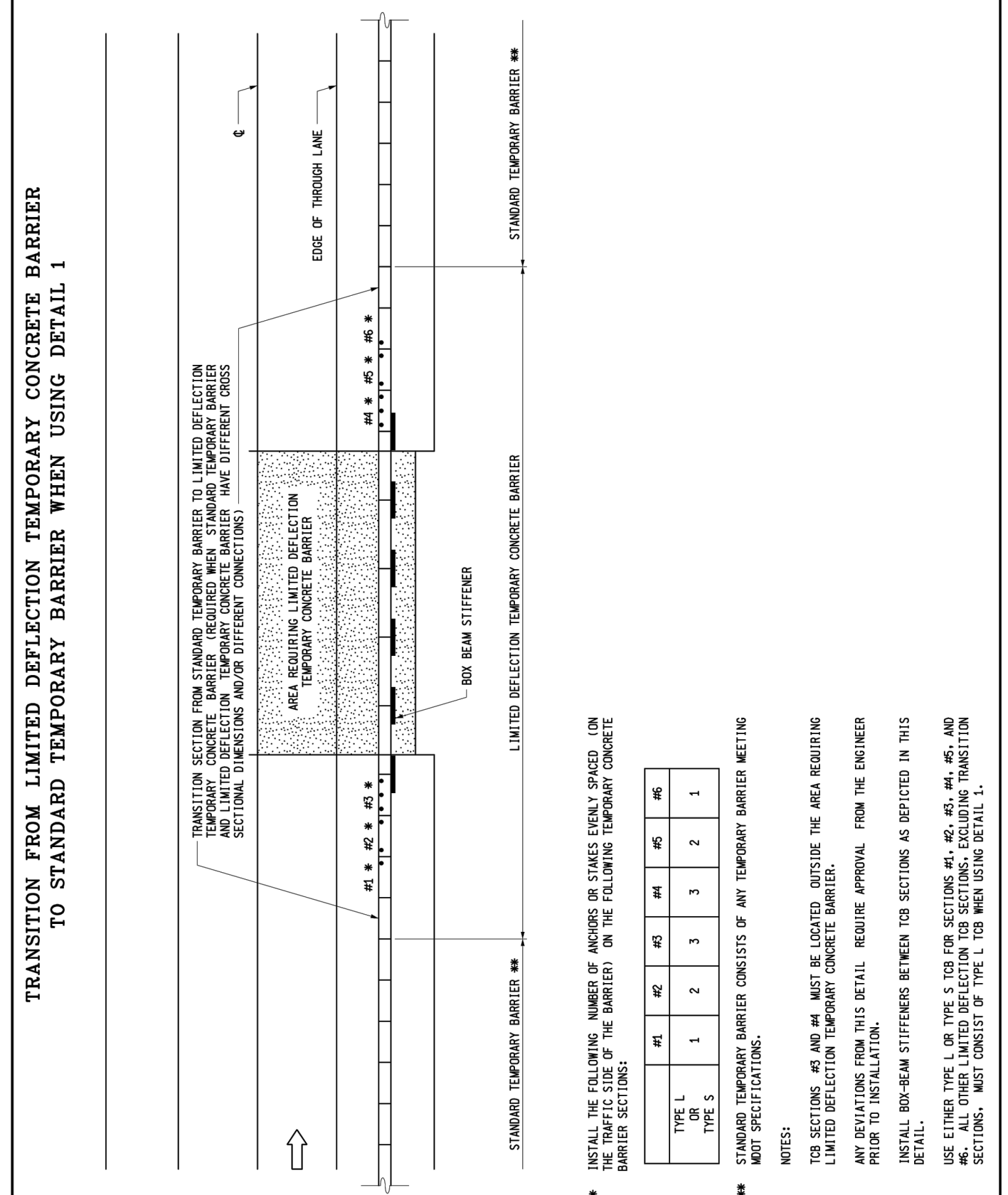
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.H.W.A. APPROVAL PLAN DATE 8-14-2015 R-53-A SHEET 2 OF 22



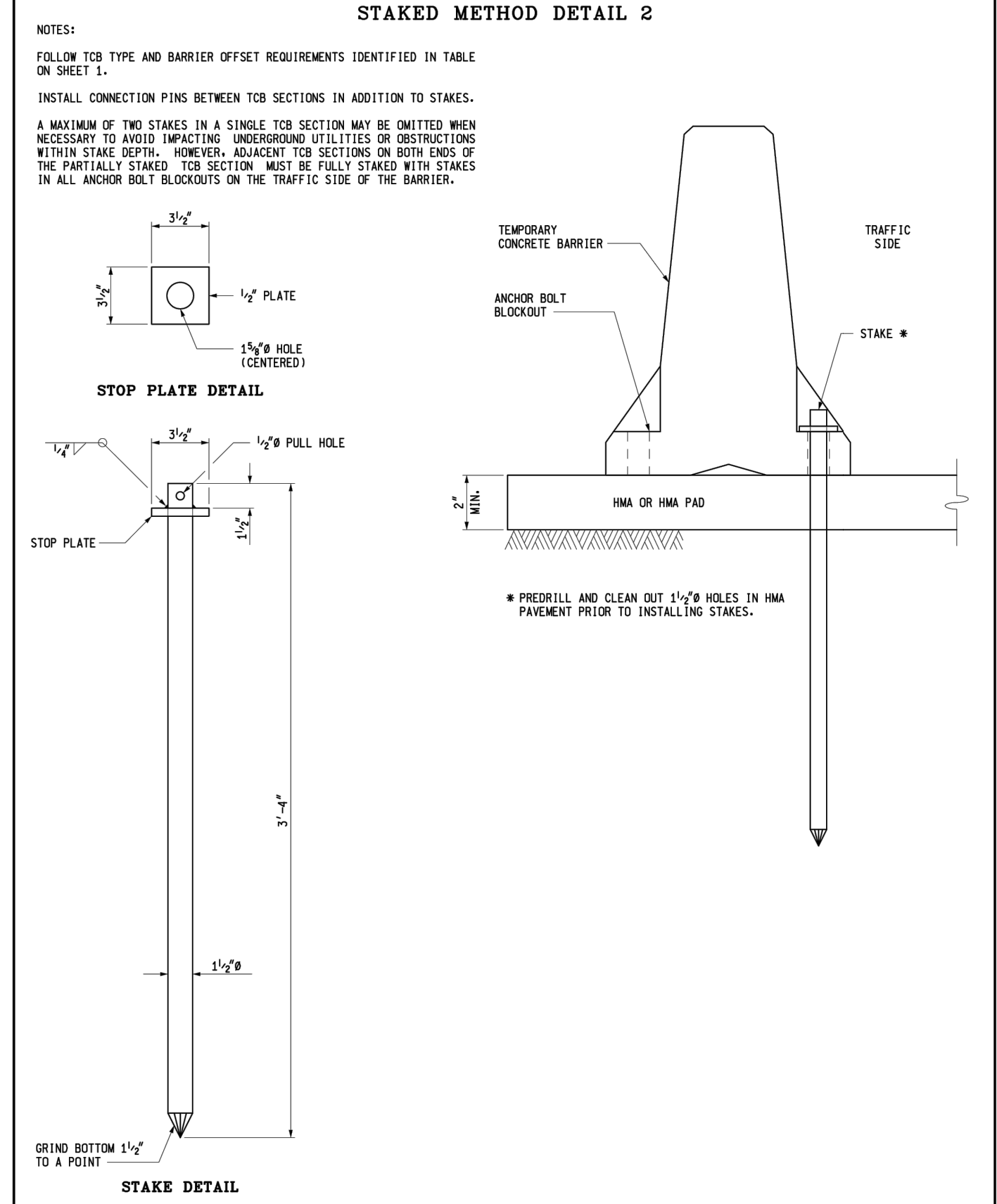
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.H.W.A. APPROVAL PLAN DATE 8-14-2015 R-53-A SHEET 3 OF 22



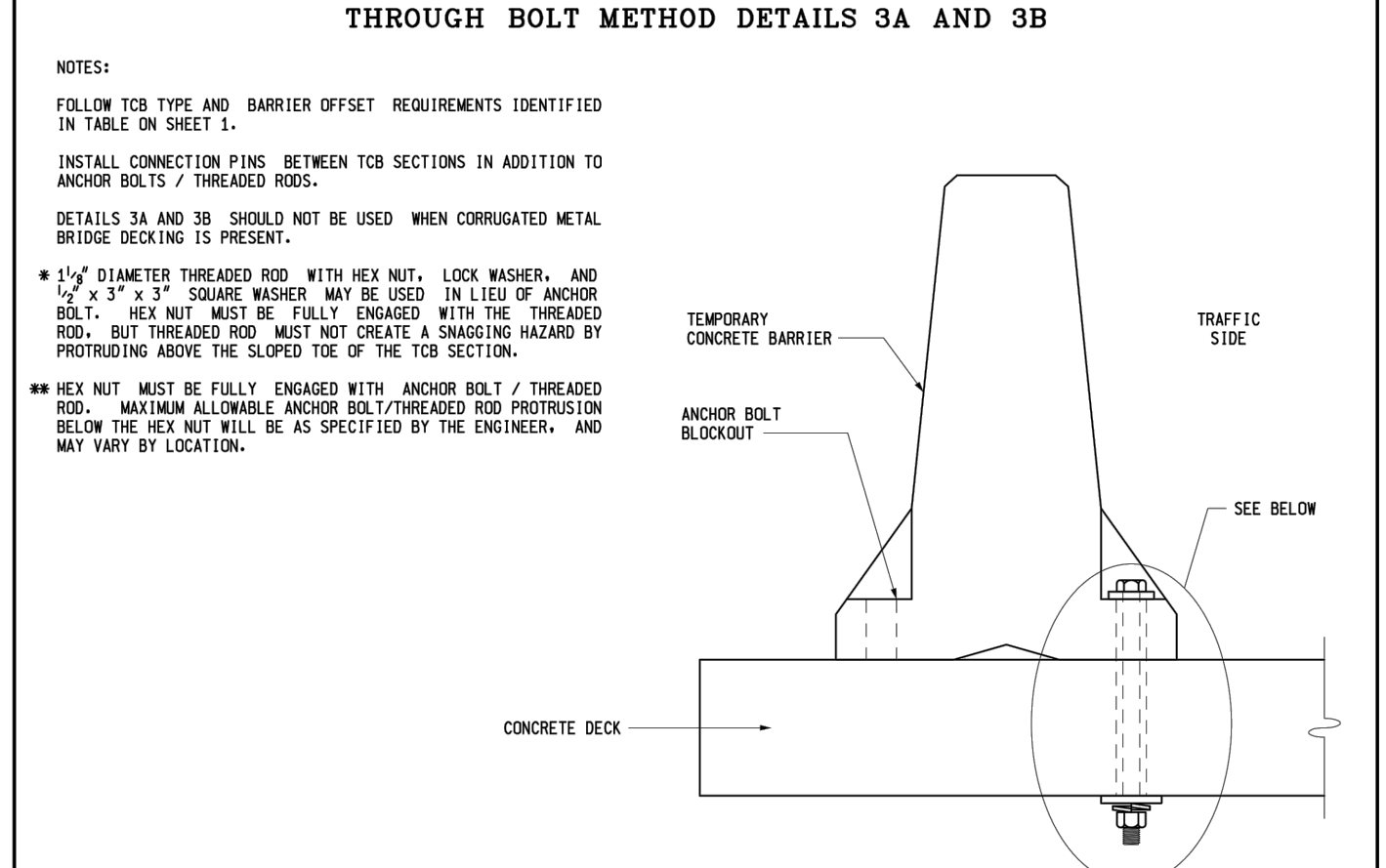
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.H.W.A. APPROVAL PLAN DATE 8-14-2015 R-53-A SHEET 4 OF 22



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.H.W.A. APPROVAL PLAN DATE 8-14-2015 R-53-A SHEET 5 OF 22



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.H.W.A. APPROVAL PLAN DATE 8-14-2015 R-53-A SHEET 6 OF 22

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			LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

MDOT STANDARD DETAILS

SCALE
HOR. 1"=40'
VERT. 1"=4'

DRAWING NO.
2021-008-STD7

SHEET NO. 130 OF 155

APPROVED BY: [Signature]

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DRILLED AND GROUTED METHOD DETAILS 4A AND 4B

NOTES:
FOLLOW TCB TYPE AND BARRIER OFFSET REQUIREMENTS IDENTIFIED IN TABLE ON SHEET 1.
INSTALL CONNECTION PINS BETWEEN TCB SECTIONS IN ADDITION TO THREADED RODS.

DETAIL 4A
CONCRETE ROADWAY OR CONCRETE BRIDGE DECK
(DO NOT USE THIS DETAIL ON CONCRETE BRIDGE DECKS WITH HMA OVERLAY)

DETAIL 4B
CONCRETE ROADWAY WITH HMA OVERLAY
(DO NOT USE THIS DETAIL ON CONCRETE BRIDGE DECKS WITH HMA OVERLAY)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.I.K.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 7 OF 22
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TRANSITION FROM LIMITED DEFLECTION TEMPORARY CONCRETE BARRIER TO STANDARD TEMPORARY BARRIER WHEN USING DETAIL 2, 3A, 3B, 4A, OR 4B

NOTES:
TCB SECTIONS 4B AND 4A MUST BE LOCATED OUTSIDE THE AREA REQUIRING LIMITED DEFLECTION TEMPORARY CONCRETE BARRIER.
ALL LIMITED DEFLECTION TCB SECTIONS, EXCLUDING TRANSITION SECTIONS AND SECTIONS WITH TYPICAL SPACING, MUST BE FULLY ANCHORED TO THE TRAFFIC SIDE OF THE TCB SECTION. ALL LIMITED DEFLECTION TCB SECTIONS WITH TYPICAL SPACING MUST BE FULLY ANCHORED TO THE TRAFFIC SIDE OF THE TCB SECTION.
ANY REGULATIONS FROM THIS LANDLOT REQUIRE APPROVAL FROM THE ENGINEER PRIOR TO INSTALLATION.

F.I.K.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 8 OF 22
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TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

ELEVATION VIEW
TYPE 5 TCB PLACED OVER BRIDGE EXPANSION JOINT WITH THERMAL EXPANSION LESS THAN 1/2"

ELEVATION VIEW
TYPE 5 TCB PLACED OVER BRIDGE EXPANSION JOINT WITH THERMAL EXPANSION LESS THAN 1/2"

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.I.K.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 9 OF 22
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TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

PLAN VIEW
TEMPORARY CONCRETE BARRIER TYPE L

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.I.K.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 10 OF 22
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TCB SECTION OVER BRIDGE DECK EXPANSION JOINT 1/2" TO 4" WHEN USING DETAIL 3A, 3B, OR 4A

ELEVATION VIEW

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.I.K.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 11 OF 22
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TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

STEEL CAP PLATE DETAILS

WIRE ROPE ASSEMBLY DETAIL

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION

F.I.K.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 12 OF 22
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

EAST MEDICAL CENTER DRIVE

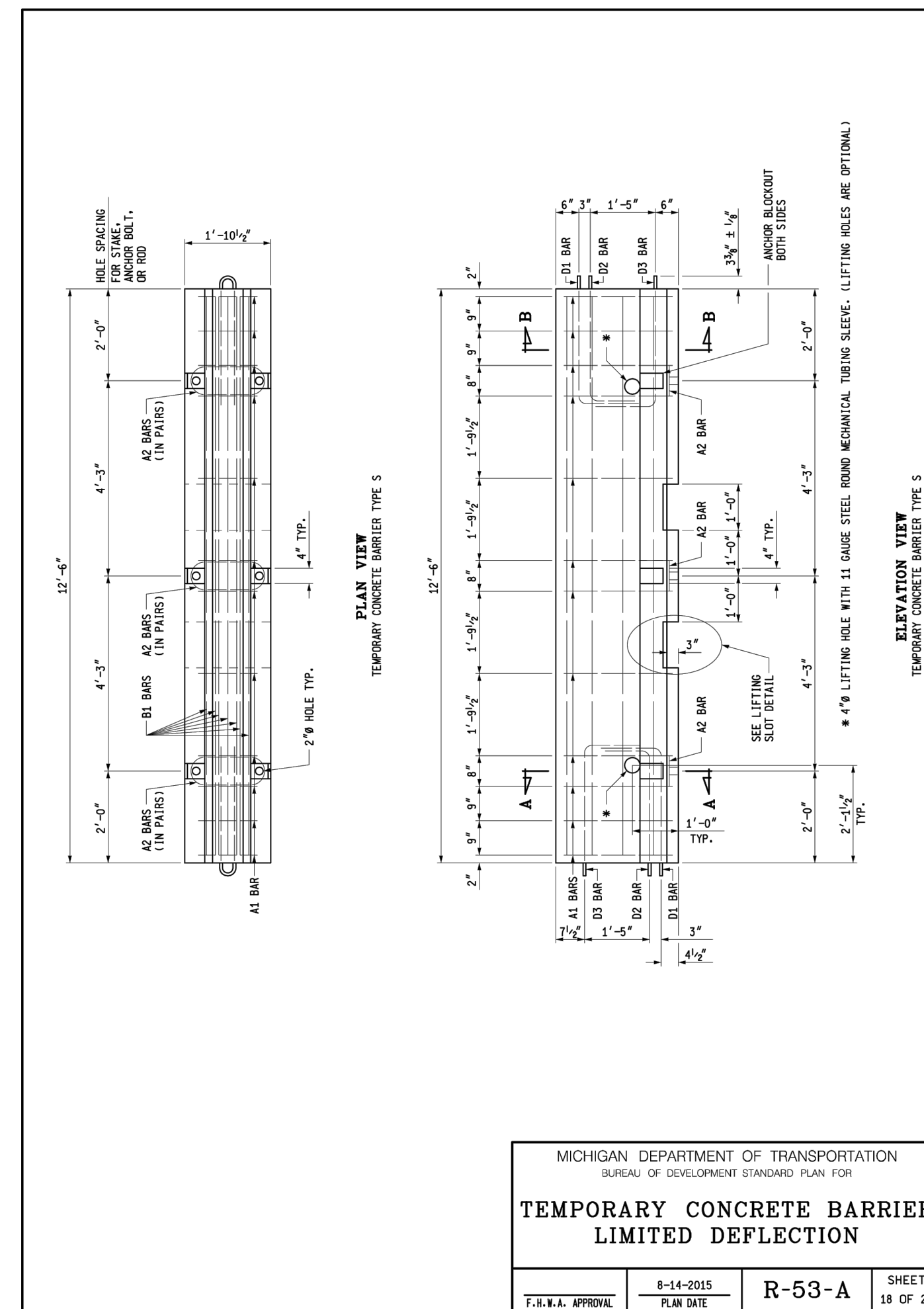
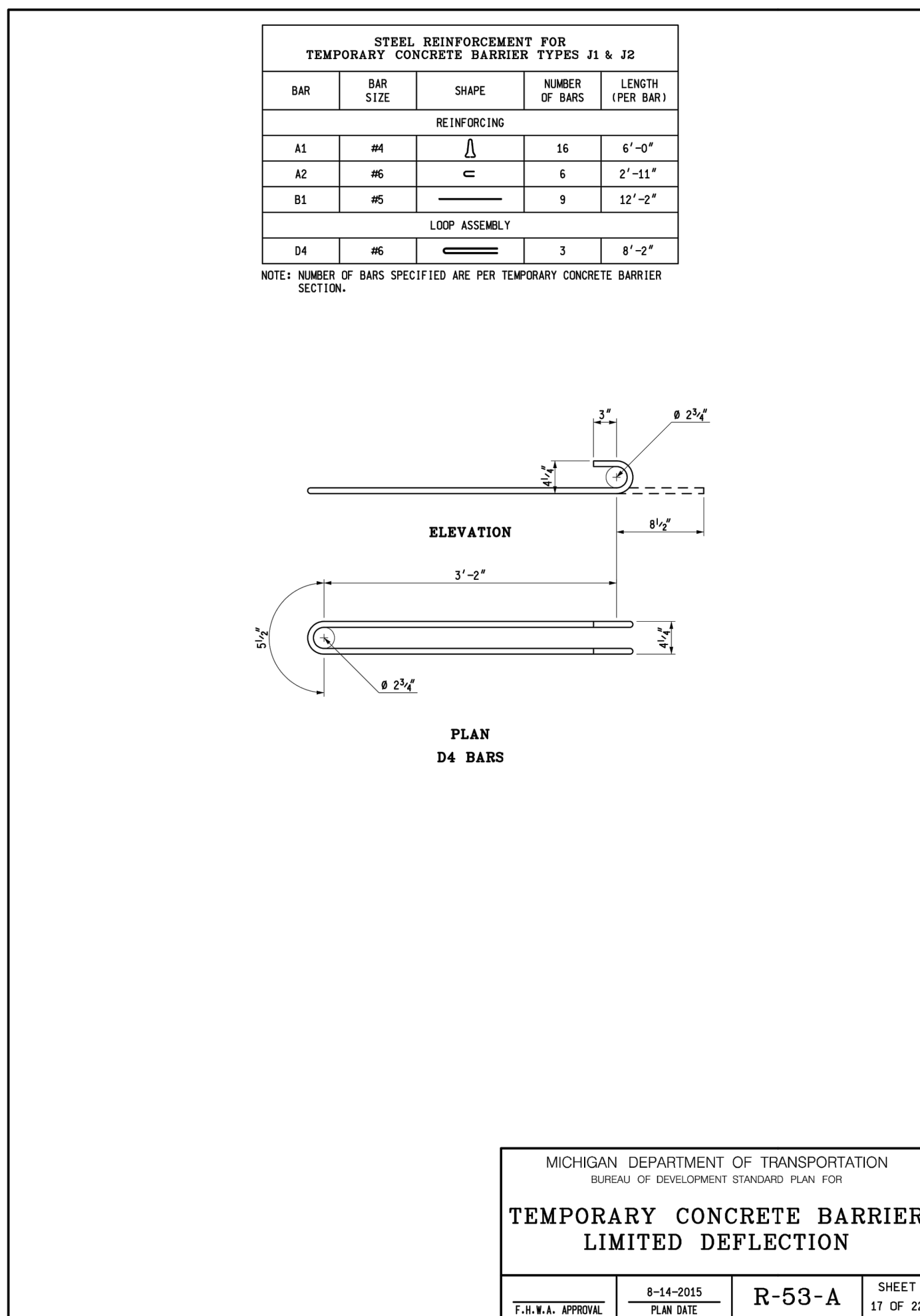
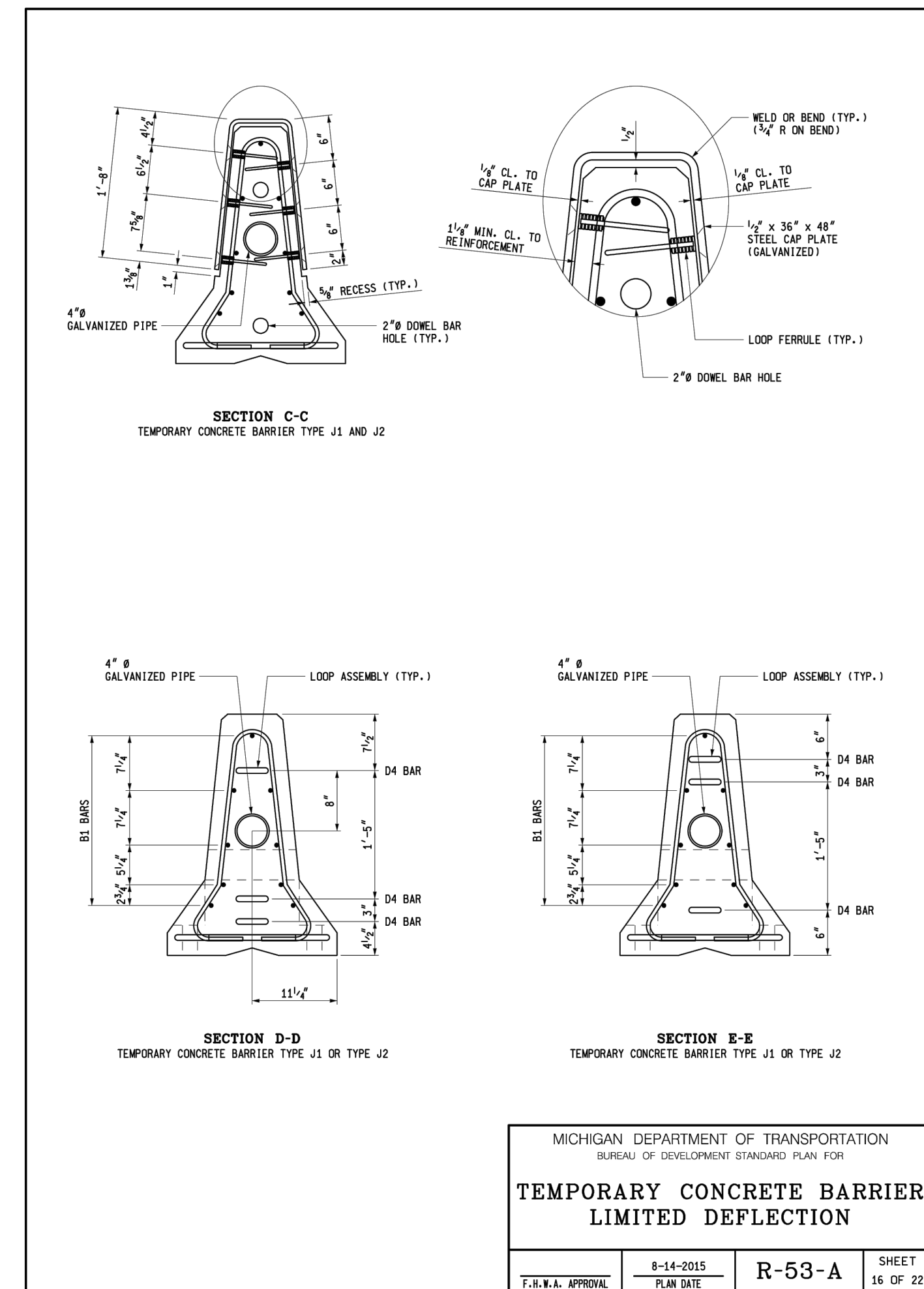
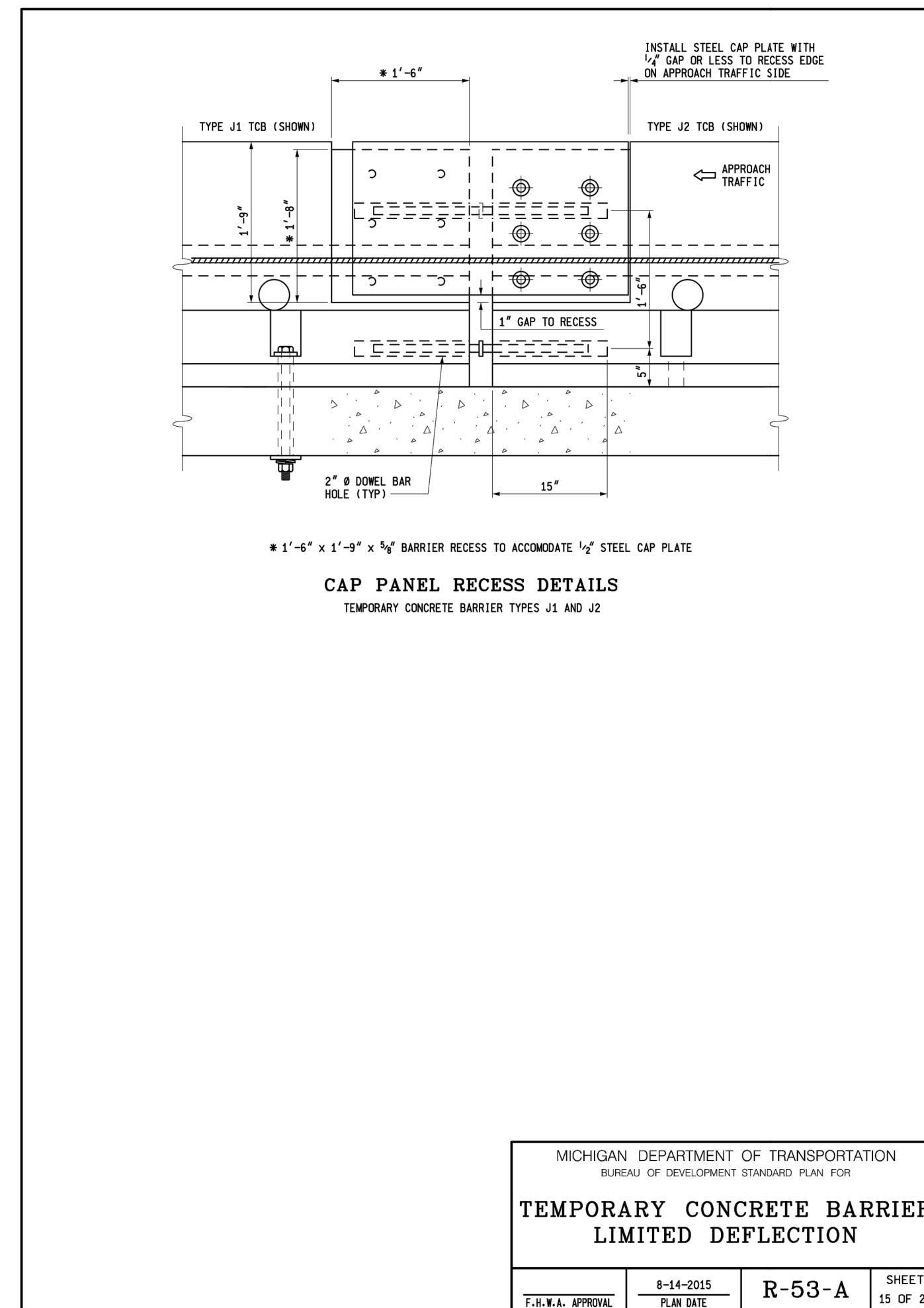
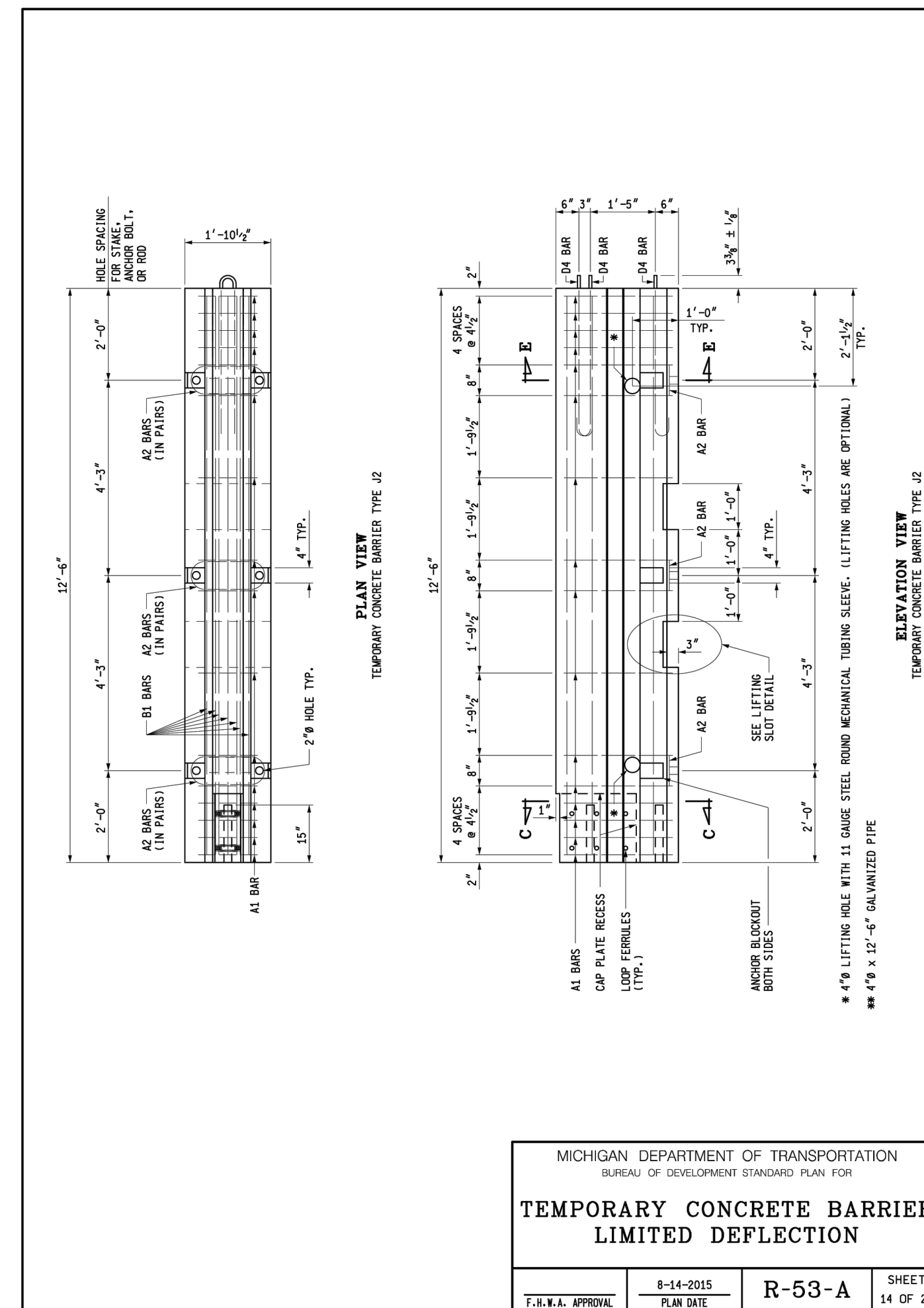
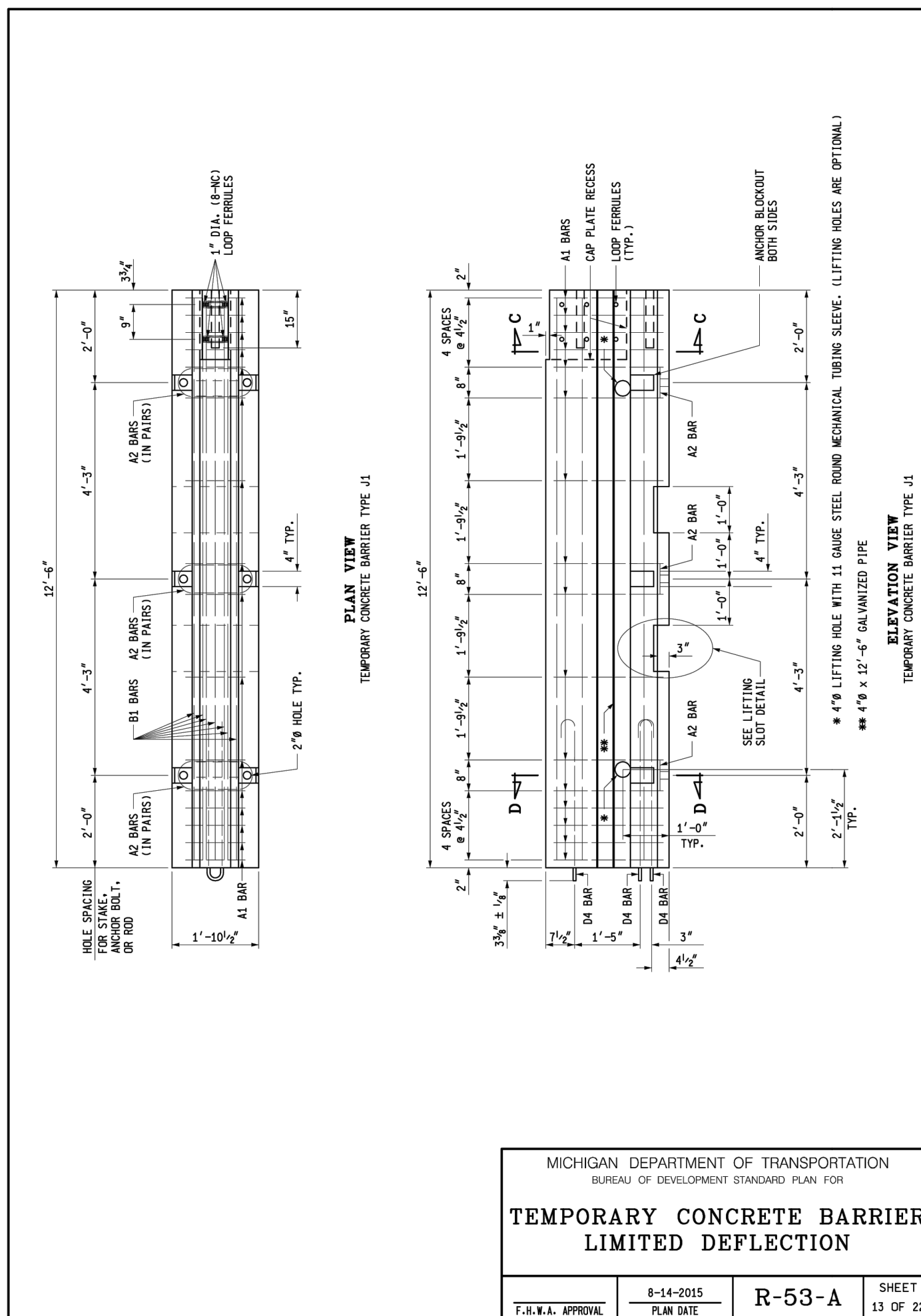
MDOT STANDARD DETAILS

SCALE
HOR. 1"=40'
VERT. 1"=4'

DRAWING NO.
2021-008-STD8

SHEET NO. 131 OF 155

APPROVED BY:



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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
MDOT STANDARD DETAILS	
SCALE NTS	0 INCH 1
DRAWING NO. 2021-008-STD9	
SHEET NO. 132 OF 155	

END VIEW
TEMPORARY CONCRETE BARRIER TYPE L OR TYPE S

SECTION A-A
TEMPORARY CONCRETE BARRIER TYPE L OR TYPE S

SECTION B-B
TEMPORARY CONCRETE BARRIER TYPE L OR TYPE S

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION			
F.I.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 19 OF 22

BARrier CONNECTION DETAIL
TEMPORARY CONCRETE BARRIER TYPE L OR TYPE S

TOP PLATE DETAIL

LIFTING SLOT DETAIL
1" CHAMFER TO PREVENT SPALLING

ANCHOR BLOCKOUT DETAIL
SEE TYPE L / TYPE S TOB PLAN AND ELEVATION VIEWS FOR WIDTH AND LOCATION OF ANCHOR BLOCKOUTS

CONNECTION PIN DETAIL
* RETAINER BOLT AND NUT ARE INSTALLED AT THE CONTRACTOR'S OPTION.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION			
F.I.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 20 OF 22

STEEL REINFORCEMENT FOR TEMPORARY CONCRETE BARRIER TYPE S			
BAR	BAR SIZE	SHAPE	LENGTH (PER BAR)
REINFORCING			
A1	#4		12 6'-0"
A2	#6		6 2'-11"
B1	#5		7 12'-2"
LOOP ASSEMBLY			
D1	#6		2 8'-5"
D2	#6		2 7'-7"
D3	#6		2 8'-6"

NOTE: NUMBER OF BARS SPECIFIED ARE PER TEMPORARY CONCRETE BARRIER SECTION.

STEEL REINFORCEMENT FOR TEMPORARY CONCRETE BARRIER TYPE L			
BAR	BAR SIZE	SHAPE	LENGTH (PER BAR)
REINFORCING			
A1	#4		18 6'-0"
A2	#6		10 2'-11"
B1	#5		7 15'-8"
LOOP ASSEMBLY			
D1	#6		2 8'-5"
D2	#6		2 7'-7"
D3	#6		2 8'-6"

NOTE: NUMBER OF BARS SPECIFIED ARE PER TEMPORARY CONCRETE BARRIER SECTION.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION			
F.I.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 21 OF 22

NOTES:

DO NOT LIFT OR MOVE THE TOB SECTIONS BY USE OF THE CONNECTING LOOP BARS D1, D2, D3 OR D4. DO NOT APPLY EXCESSIVE FORCE TO THE CONNECTING LOOP BARS D1, D2, D3 OR D4.

CONCRETE CLEAR COVER FOR REINFORCING BARS MUST BE 1 1/2" (MIN.) EXCEPT WHERE OTHERWISE SPECIFIED.

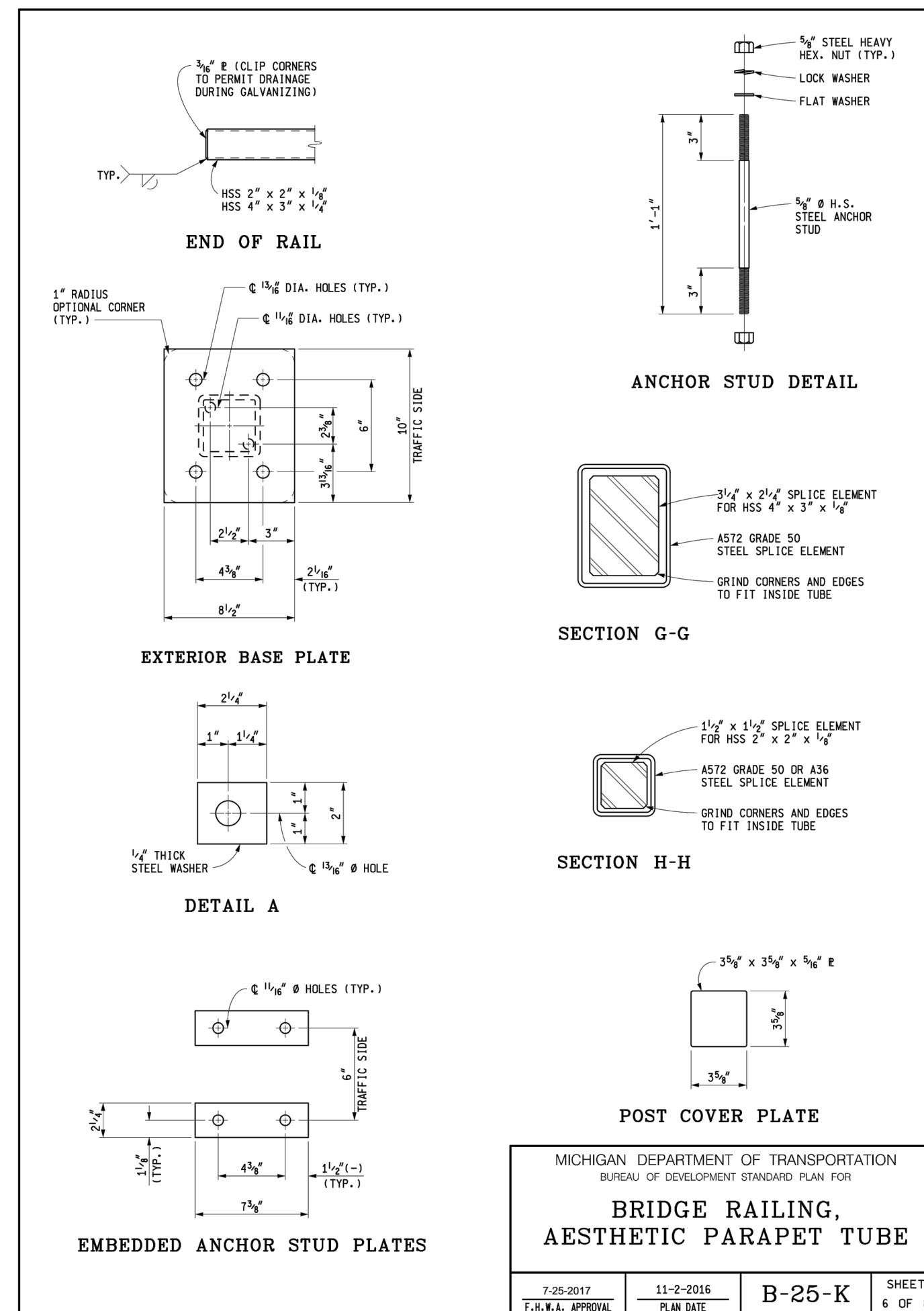
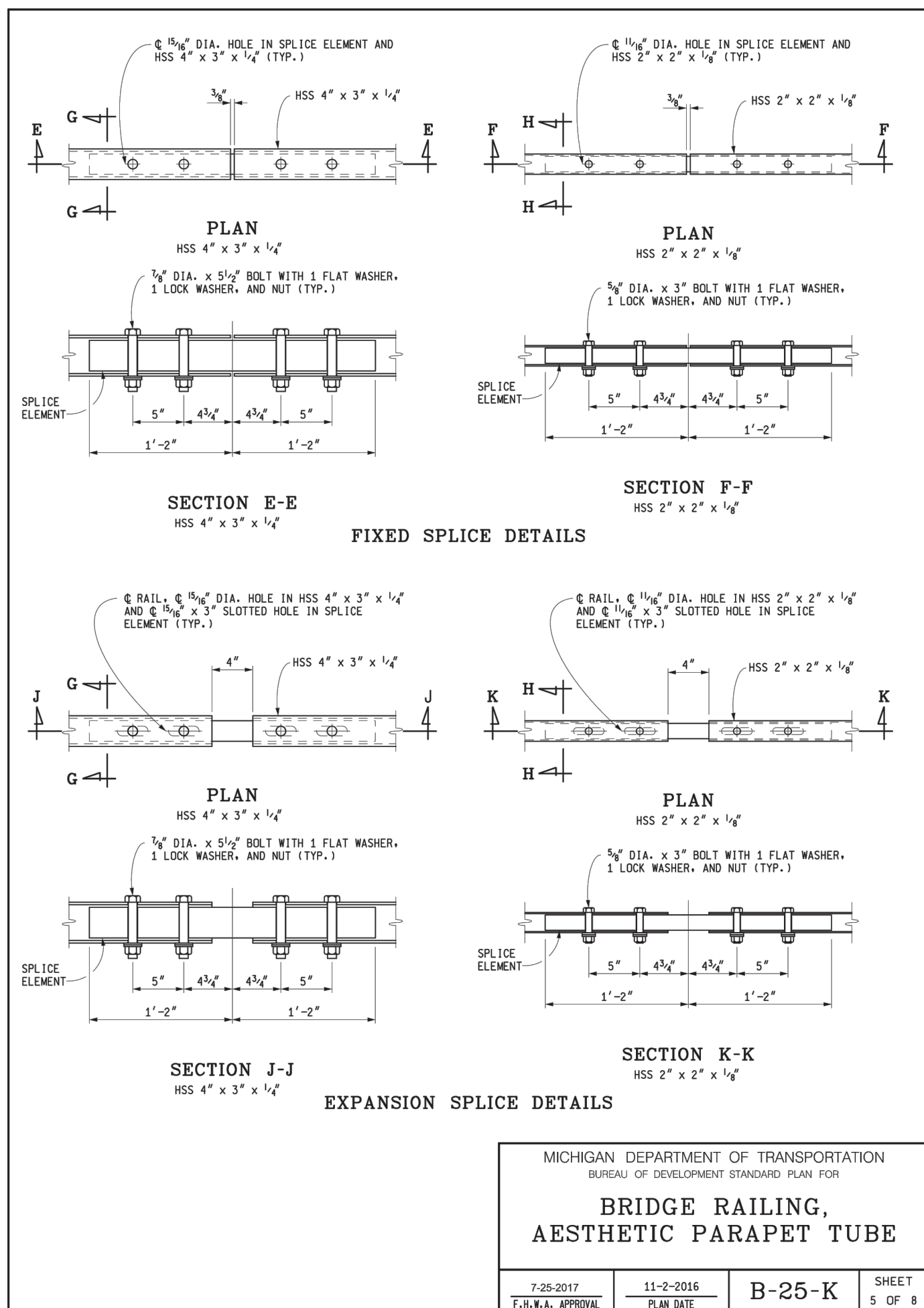
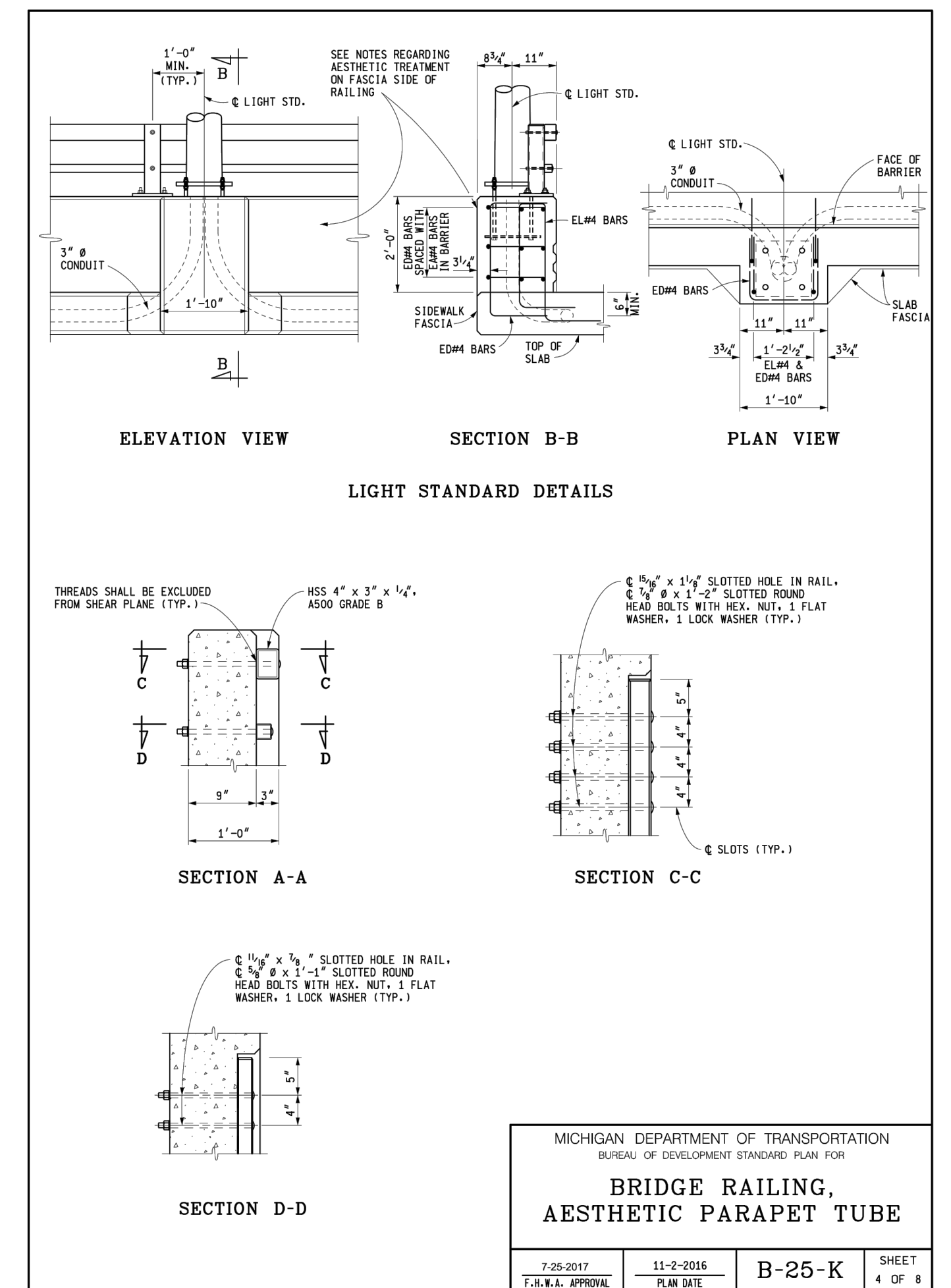
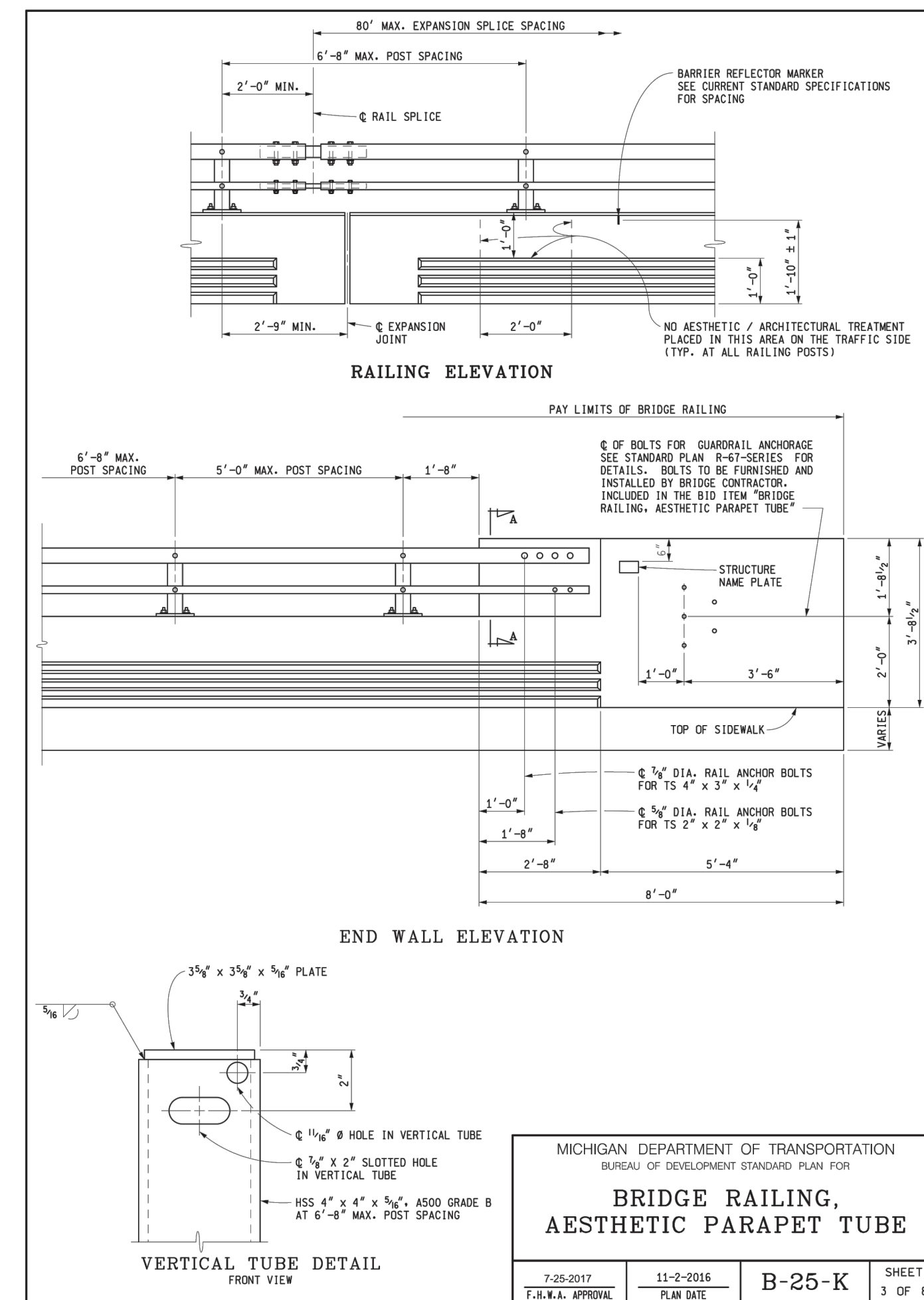
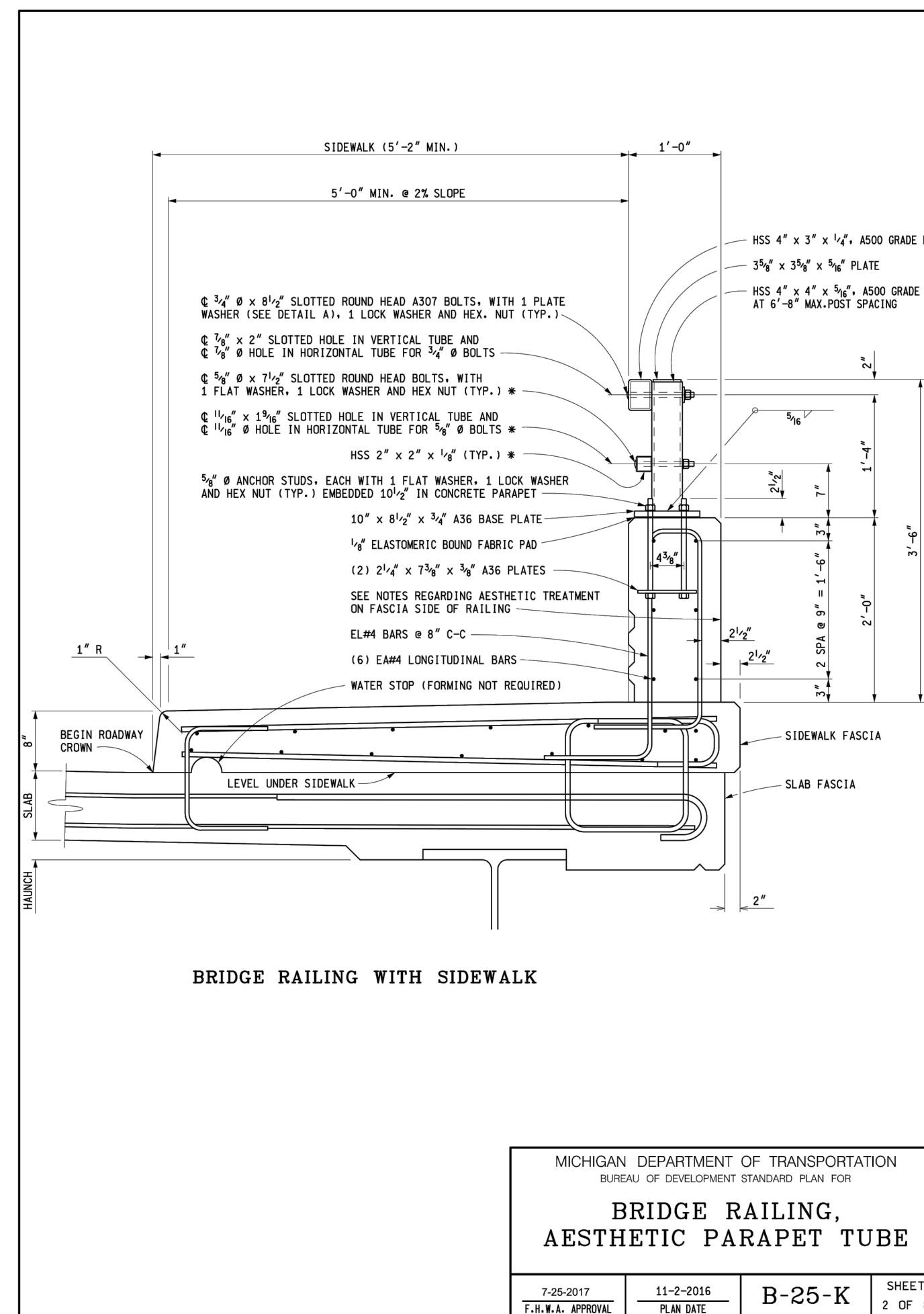
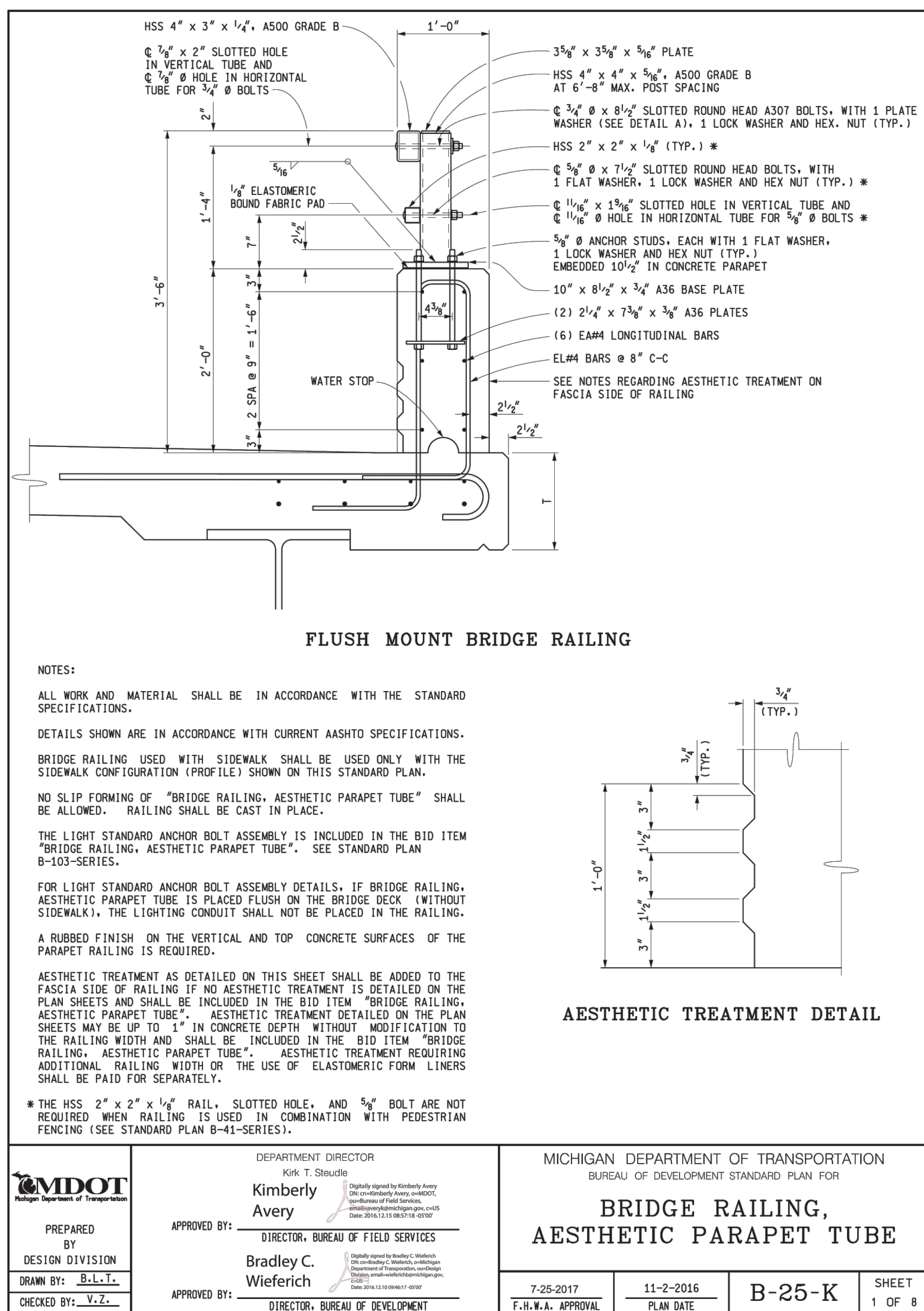
LIFTING SLOTS SHALL BE CONSTRUCTED AS SPECIFIED TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION ON THE ROADWAY.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION			
F.I.W.A. APPROVAL	8-14-2015 PLAN DATE	R-53-A	SHEET 22 OF 22

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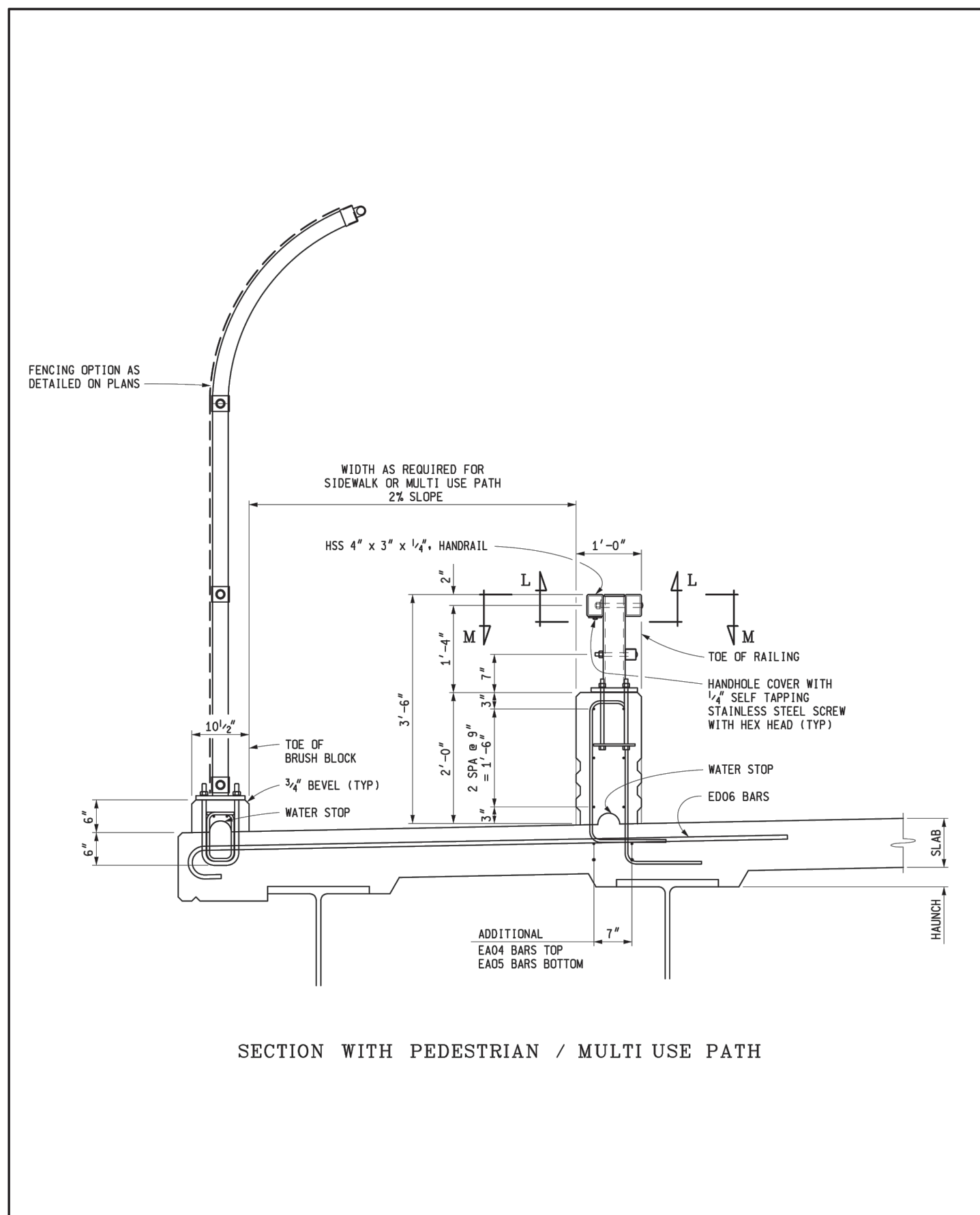
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
MDOT STANDARD DETAILS	
SCALE	HOR. 1"=40' VERT. 1"=4'
DRAWING NO.	2021-008-STD10
SHEET NO.	133 OF 155



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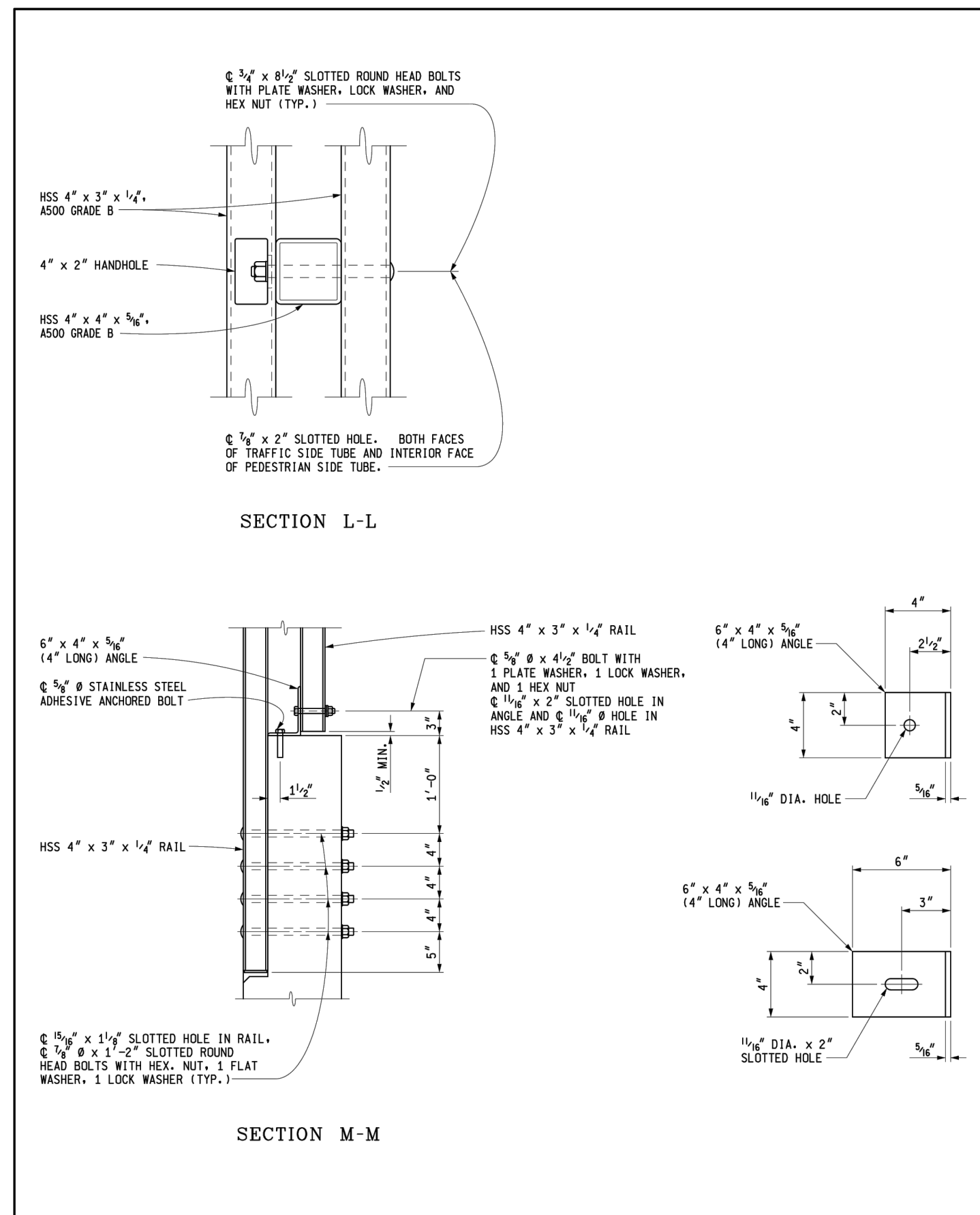
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23		

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
MDOT STANDARD DETAILS	
SCALE	HOR. 1"=40' VERT. 1"=4'
DRAWING NO.	2021-008-STD11
SHEET NO.	134 OF 155



SECTION WITH PEDESTRIAN / MULTI USE PATH

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
BRIDGE RAILING, AESTHETIC PARAPET TUBE			
7-25-2017 F.I.R.W.A. APPROVAL	11-2-2016 PLAN DATE	B-25-K	SHEET 7 OF 8



SECTION L-L

SECTION M-M

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
BRIDGE RAILING, AESTHETIC PARAPET TUBE			
7-25-2017 F.I.R.W.A. APPROVAL	11-2-2016 PLAN DATE	B-25-K	SHEET 8 OF 8

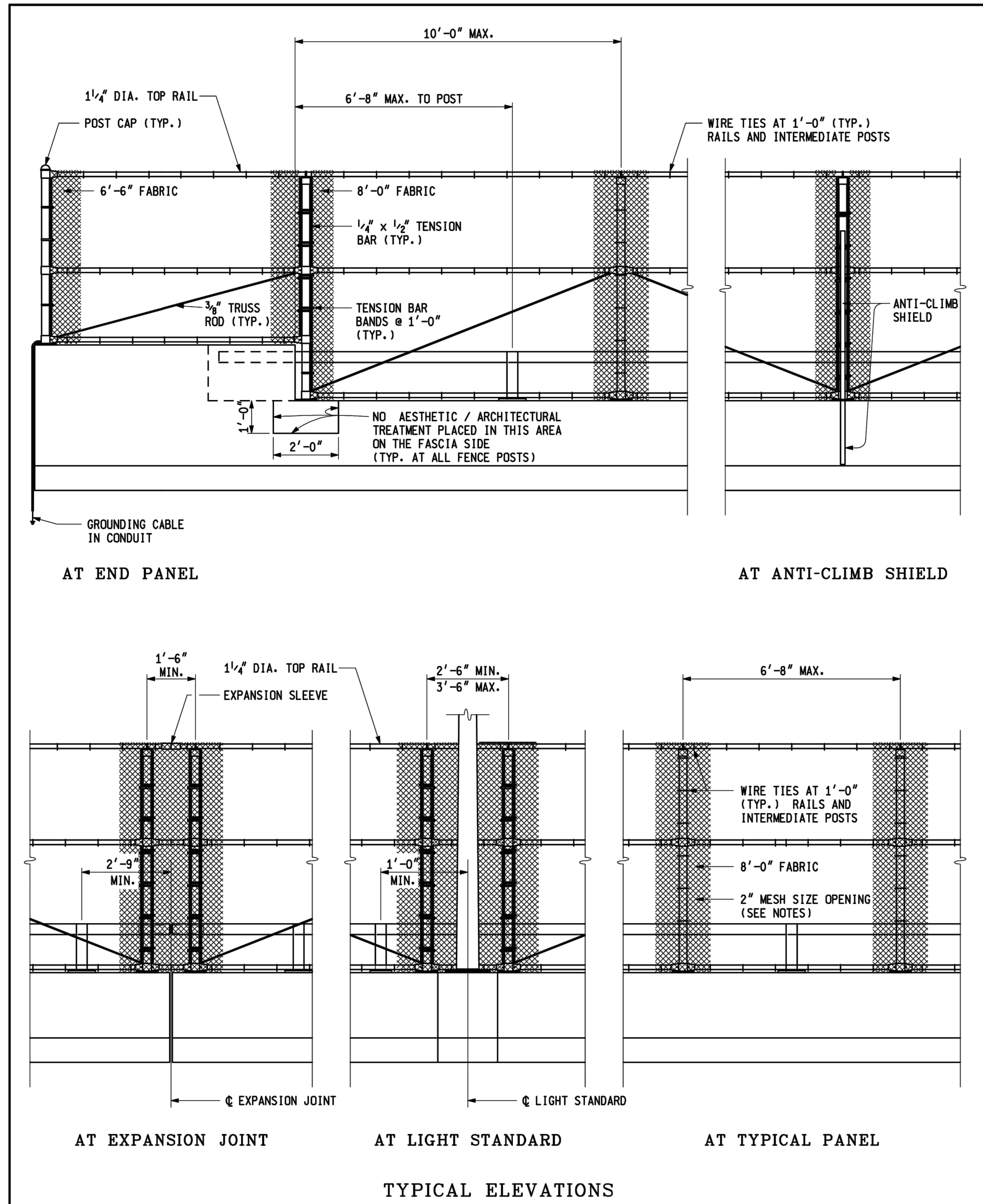
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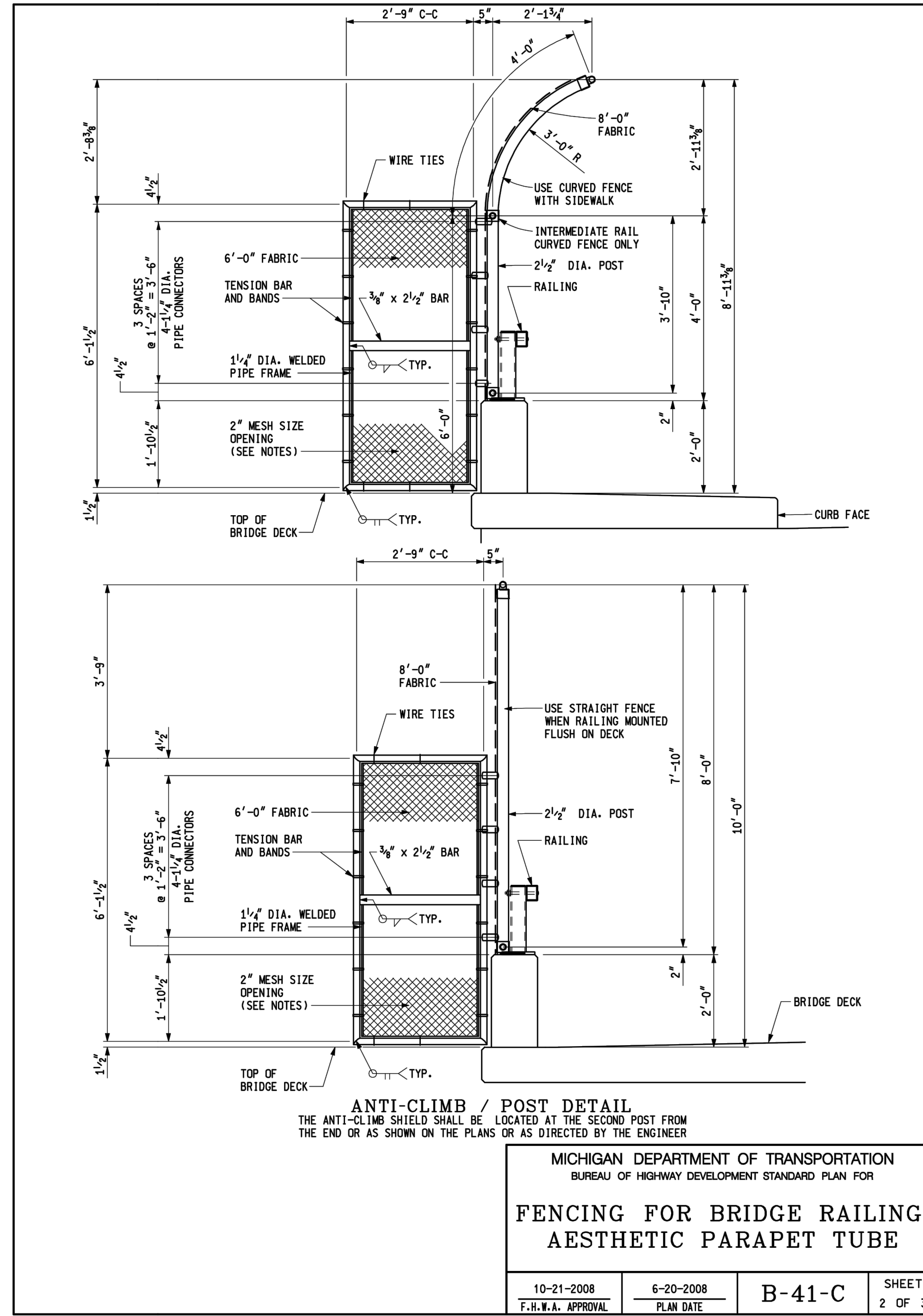
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23		

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
MDOT STANDARD DETAILS	
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DRAWING NO. 2021-008-STD12	
SHEET NO. 135 OF 155	

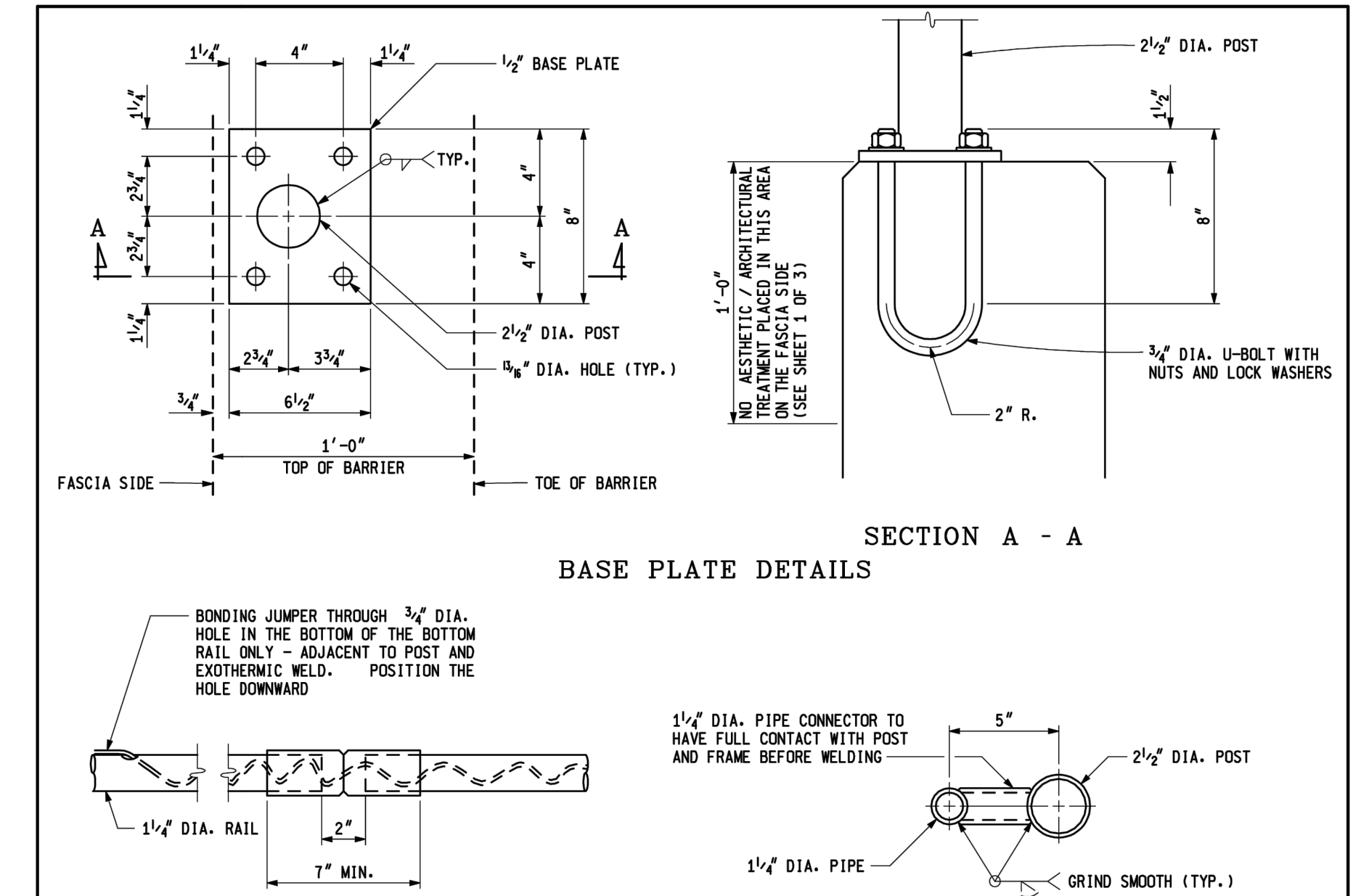
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<p>PREPARED BY DESIGN DIVISION DRAWN BY: B.L.T. CHECKED BY: V.Z.</p>	<p>DEPARTMENT DIRECTOR Kirk T. Stoude</p> <p>APPROVED BY: <i>John C. Friend</i> ENGINEER OF DELIVERY</p>	<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR</p> <p>FENCING FOR BRIDGE RAILING, AESTHETIC PARAPET TUBE</p>			
	<p>APPROVED BY: <i>J.P. Paul</i> ENGINEER OF DEVELOPMENT</p>	<p>10-21-2008 F.H.W.A. APPROVAL</p>	<p>6-20-2008 PLAN DATE</p>	<p>B-41-C</p>	<p>SHEET 1 OF 3</p>



<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR</p> <p>FENCING FOR BRIDGE RAILING, AESTHETIC PARAPET TUBE</p>				
<p>10-21-2008 F.H.W.A. APPROVAL</p>	<p>6-20-2008 PLAN DATE</p>	<p>B-41-C</p>	<p>SHEET 2 OF 3</p>	



SECTION A - A
BASE PLATE DETAILS
EXPANSION SLEEVE DETAIL
PIPE CONNECTION DETAIL
USE AT ANTI-CLIMB SHIELD ONLY

NOTES:

ALL FENCE POSTS SHALL BE 2 1/2" NOMINAL (2.875" O.D.) PIPE AND ANTI-CLIMB SHIELD PIPE FRAMES SHALL BE 1 1/4" NOMINAL (1.66" O.D.) PIPE, IN CONFORMANCE WITH ASTM F669, CLASS 1C.

HORIZONTAL RAILS SHALL BE 1 1/4" NOMINAL (1.66" O.D.) PIPE IN CONFORMANCE WITH ASTM F669, CLASS 1C OR ASTM F1083.

ALL FENCE COMPONENTS, UNLESS OTHERWISE INDICATED, SHALL BE GALVANIZED ACCORDING TO MDOT'S CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

ALL POSTS, ANTI-CLIMB SHIELDS OR OTHER COMPONENTS TO BE FABRICATED SHALL BE FURNISHED "BLACK" AND THEN GALVANIZED AFTER FABRICATION.

DAMAGED GALVANIZED SURFACES (NEW AND EXISTING) SHALL BE REPAIRED IN CONFORMANCE WITH MDOT'S CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

FENCE FABRIC SHALL BE #9 GAGE MESH AND BE GALVANIZED OR ALUMINUM COATED IN CONFORMANCE WITH MDOT'S CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION. MESH SIZE OPENING SHALL BE 2" UNLESS 1" MESH SIZE OPENING IS APPROVED BY THE TRAFFIC AND SAFETY DIVISION AND NOTED ON DESIGN PLANS. ALL DETAILS ON STANDARD PLAN SHALL APPLY REGARDLESS OF MESH SIZE OPENINGS.

GALVANIZED 3/8" DIAMETER TRUSS RODS SHALL EXTEND DIAGONALLY FROM THE TOP CONNECTION CLIP AT EACH TENSION BAR TO THE ADJACENT POST, EXCEPT ACROSS EXPANSION JOINTS AND AT LIGHT STANDARDS WITH A CURVED FENCE DETAIL. WHEN THERE ARE TWO OR MORE CONTINUOUS PANELS OF FABRIC.

ALL POSTS SHALL BE INSTALLED PLUMB AND MAY BE SHIMMED WITH NON-METALLIC SHIMS, APPROVED BY THE ENGINEER. COSTS FOR SHIMMING SHALL BE INCLUDED IN THE PAY ITEM "FENCE, STRUCTURE".

THE GROUNDING CABLE SHALL BE PLACED IN A NON-METALLIC CONDUIT, FROM THE END POST CONNECTION TO THE GROUND ROD CONNECTION. THE CONDUIT SHALL BE SECURED TO THE STRUCTURE USING EITHER EXPANSION BOLTS OR ADHESIVE ANCHORED BOLTS WITH GALVANIZED METAL STRIPS, AS APPROVED BY THE ENGINEER.

IN THE EVENT THAT THE INSTALLATION OF A GROUND ROD IS IMPRACTICAL, THE GROUNDING CABLE SHALL BE CONNECTED TO THE NEAREST LIGHT STANDARD USING A MECHANICAL CLIP, ONLY AFTER OBTAINING PERMISSION FROM THE LOCAL PUBLIC LIGHTING AUTHORITY.

EXPANSION JOINT SLEEVES, FOR HORIZONTAL RAILS, SHALL BE THE MANUFACTURER'S STANDARD OVERSIZED SLEEVES, CRIMPED IN THE MIDDLE.

NO SLIP FORMING OF BRIDGE RAILING, AESTHETIC PARAPET TUBE SHALL BE ALLOWED. RAILINGS SHALL BE CAST IN PLACE.

THE U-BOLTS FOR FENCING BASE PLATES SHALL BE ACCURATELY POSITIONED ACCORDING TO THE PLANS AND FIRMLY HELD BY MEANS OF A TEMPLATE.

THE HSS 2" x 2" x 1/8" RAIL SHALL NOT BE REQUIRED ON THE BRIDGE RAILING. AESTHETIC PARAPET TUBE USED IN COMBINATION WITH PEDESTRAIN FENCING.

ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO INSTALL PEDESTRAIN FENCING SHALL BE INCLUDED IN PAY ITEM "FENCE, STRUCTURE".

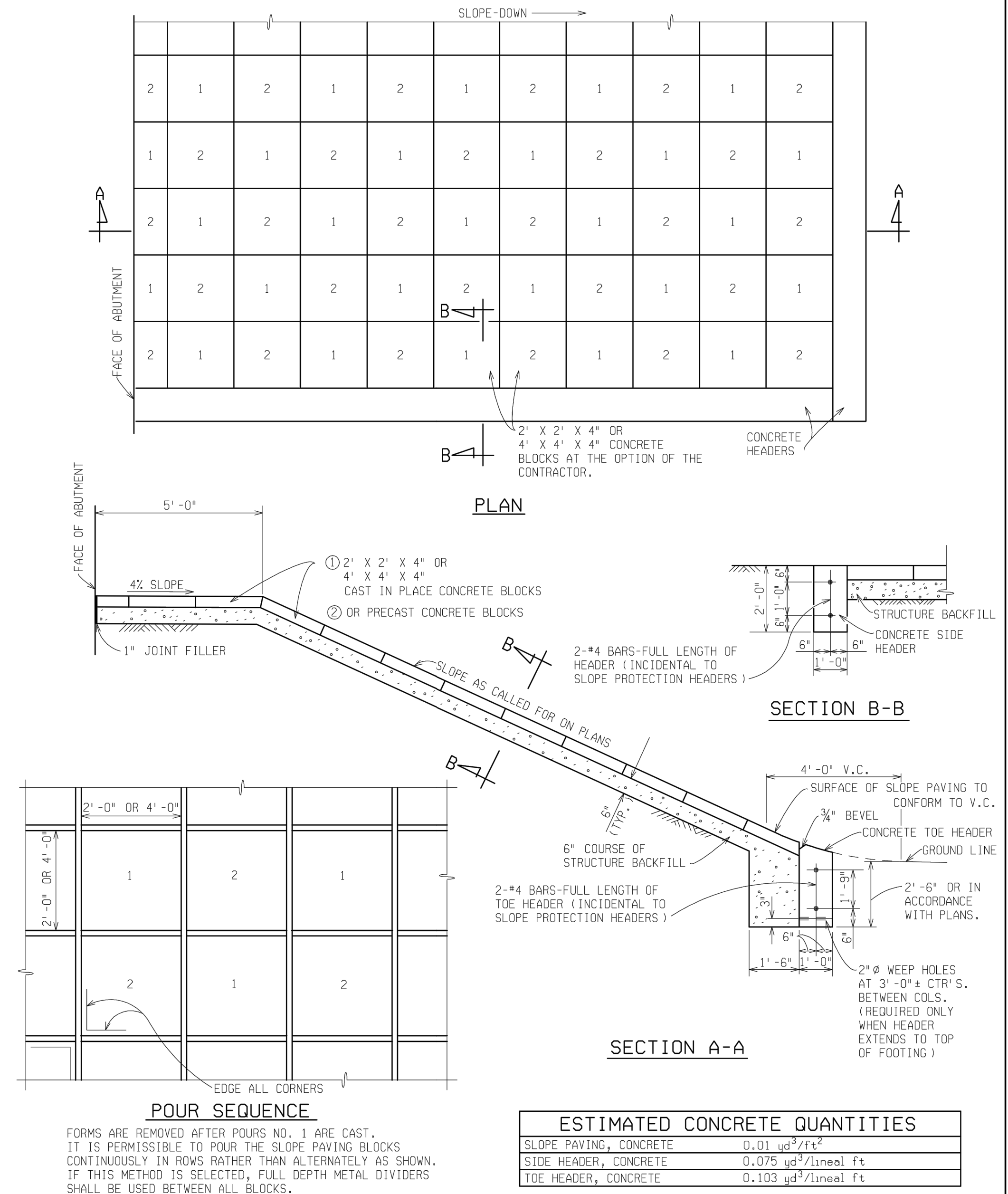
<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR</p> <p>FENCING FOR BRIDGE RAILING, AESTHETIC PARAPET TUBE</p>				
<p>10-21-2008 F.H.W.A. APPROVAL</p>	<p>6-20-2008 PLAN DATE</p>	<p>B-41-C</p>	<p>SHEET 3 OF 3</p>	

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					PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR						
					EAST MEDICAL CENTER DRIVE						
					MDOT STANDARD DETAILS					<p>SCALE HOR. 1"=40' VERT. 1"=4'</p>	<p>INCH 0 1</p>
					APPROVED BY _____					<p>DRAWING NO. 2021-008-STD13</p>	<p>SHEET NO. <u>136</u> OF <u>155</u></p>
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	ORIGINAL ISSUE	10-6-23					

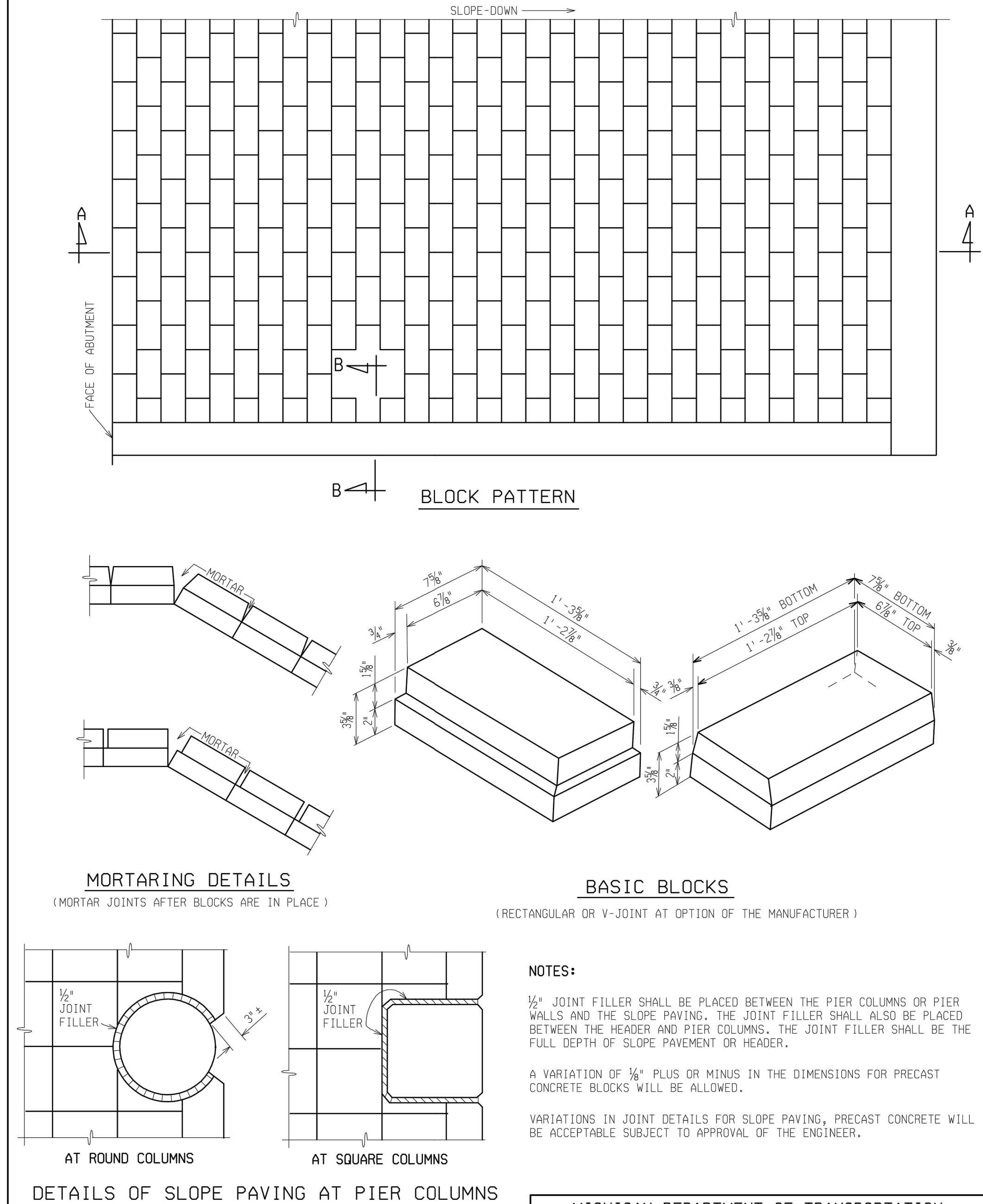
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SLOPE PAVING, CONCRETE



ESTIMATED CONCRETE QUANTITIES	
SLOPE PAVING, CONCRETE	0.01 yd ³ /ft ²
SIDE HEADER, CONCRETE	0.075 yd ³ /lineal ft
TOE HEADER, CONCRETE	0.103 yd ³ /lineal ft

SLOPE PAVING, PRECAST CONCRETE



MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY TECHNICAL SERVICES STANDARD PLAN FOR			
STANDARD SLOPE PAVING DETAILS			
11-26-2001		B-102-C	SHEET 2 OF 2
F.H.W.A. APPROVAL	PLAN DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY TECHNICAL SERVICES STANDARD PLAN FOR			
STANDARD SLOPE PAVING DETAILS			
11-26-2001		B-102-C	SHEET 1 OF 2
F.H.W.A. APPROVAL	PLAN DATE		

MDOT
MICHIGAN DEPARTMENT OF TRANSPORTATION

ENGINEER OF CONSTRUCTION & TECHNOLOGY
James D. Culp

ENGINEER OF DESIGN
Gregory J. Rosine

ENGINEER OF MAINTENANCE
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ENGINEER OF TRAFFIC AND SAFETY
John L. Roberts

DEPARTMENT DIRECTOR
GREGORY J. ROSINE

CHIEF ENGINEER/DEPUTY DIRECTOR
HIGHWAY TECHNICAL SERVICES
Gregory J. Rosine

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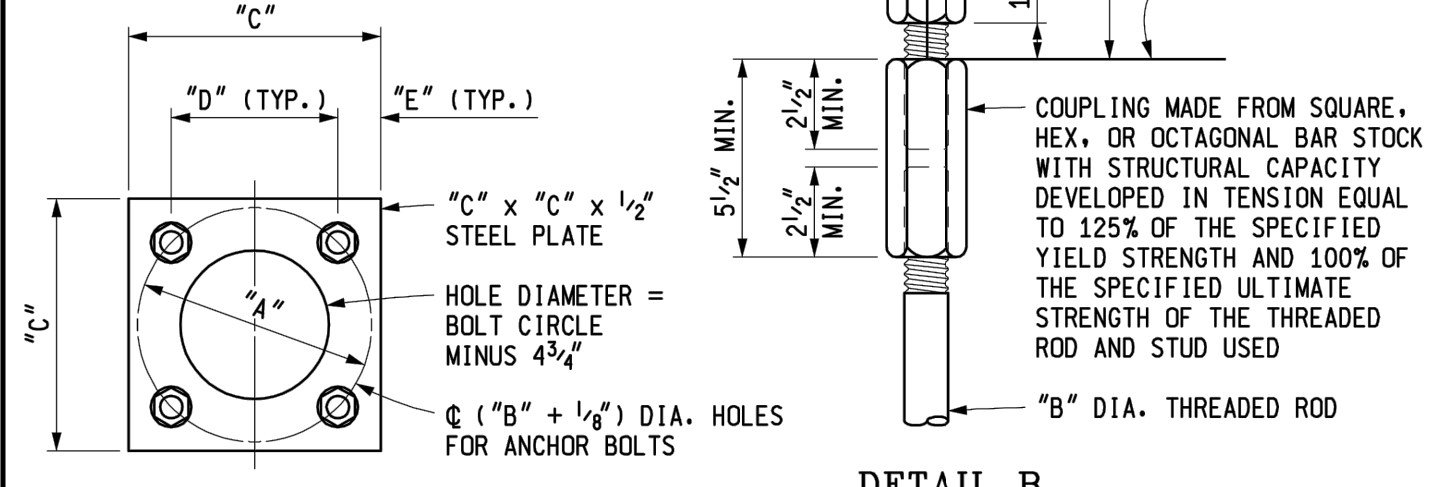
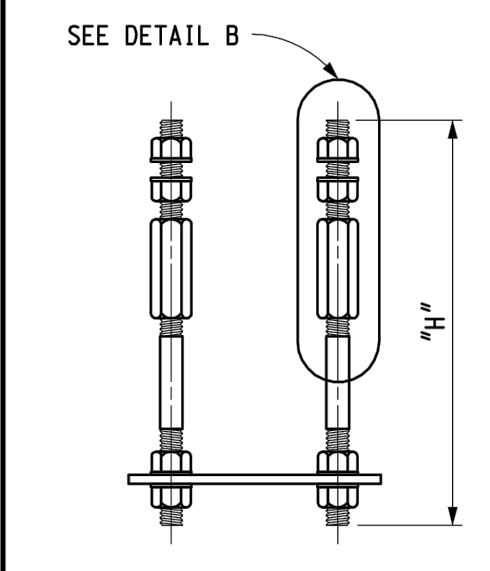
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10-6-23		

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE	
MDOT STANDARD DETAILS	
SCALE HOR. 1"=40' VERT. 1"=4'	INCH 0 1
DRAWING NO. 2021-008-STD14	
SHEET NO. 137 OF 155	

ANCHOR BOLT ASSEMBLY DIMENSIONS								
LIGHT STANDARD MOUNTING HEIGHT	BOLT CIRCLE "A"	ANCHOR BOLT DIA. "B"	"C"	"D"	"E"	STUD PROJECTION "F"	STUD LENGTH "G"	"H"
30'*	11"	1"	11 1/2"	7 3/4"	1 1/8"	4 3/4"	7 1/4"	1' - 9 3/4"
30'**	11"	1 1/4"	11 1/2"	7 3/4"	1 1/8"	5 1/2"	8"	1' - 10 1/2"
40'**	1' - 1"	1 1/4"	1' - 2"	9 1/4"	2 3/8"	5 1/2"	8"	1' - 10 1/2"
45'**	1' - 1"	1 1/4"	1' - 2"	9 1/4"	2 3/8"	5 1/2"	8"	1' - 10 1/2"

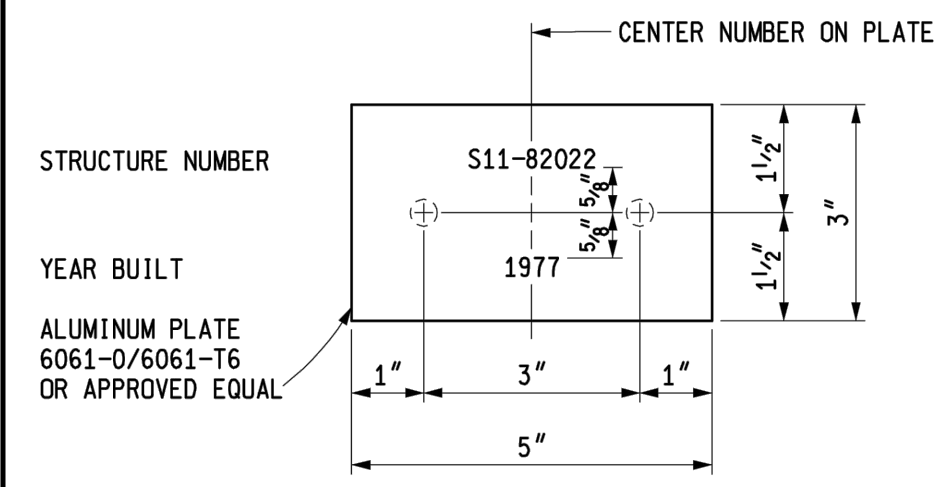
* UP TO 15' SINGLE OR DOUBLE BRACKET ARM
 ** UP TO 17' SINGLE OR DOUBLE BRACKET ARM

ANCHOR BOLTS (4 REQUIRED):
 "B" DIA. x 1'-2" THREADED ROD AND "B" DIA. x "G" STUD
 WITH 4 NUTS, 4 WASHERS, AND ONE COUPLING.



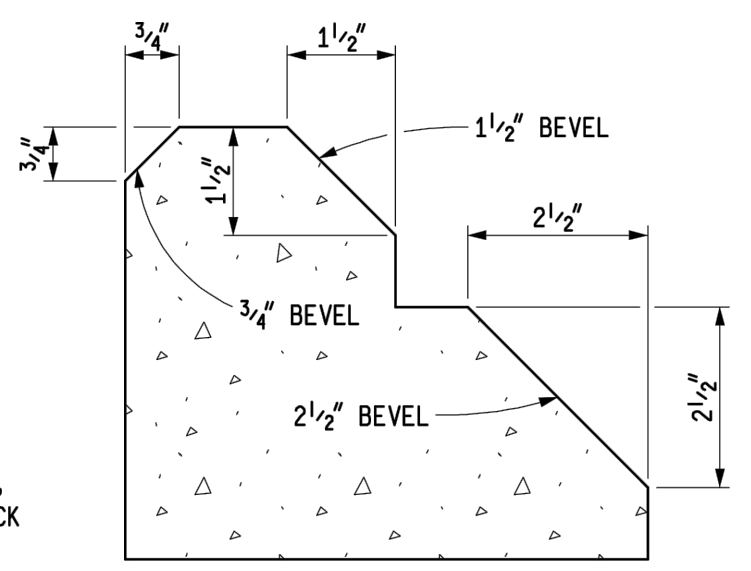
DETAIL B

LIGHT STANDARD ANCHOR BOLT ASSEMBLY

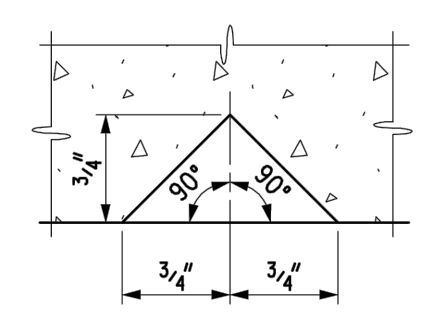


NAME PLATE

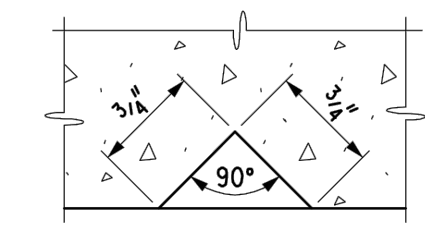
NOTES:
 DIE STAMP - 1/4" MINIMUM
 LETTERS AND NUMBERS SHALL BE 1/4" MINIMUM OR 3/8" MAXIMUM HEIGHT.
 DATE SHALL BE YEAR THAT SUPERSTRUCTURE WAS COMPLETED.



BEVEL DETAILS



DOUBLE 3/4" Δ MOLDING



3/4" Δ MOLDING
 MOLDING DETAILS

NOTES:
 DETAILS SHOWN ARE ACCORDING TO THE CURRENT AASHTO SPECIFICATIONS.
 LIGHT STANDARD ANCHOR BOLT ASSEMBLY STEEL PLATE SHALL BE ASTM A36.
 ALL STEEL SHALL BE HOT-DIP GALVANIZED ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS.
 ANCHOR BOLTS, WASHERS, COUPLINGS AND NUTS FOR LIGHT STANDARDS SHALL BE ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS.
 THE COUPLING SHALL BE RETAPPED AFTER GALVANIZING IN THE SAME MANNER AS SPECIFIED FOR NUTS.
 ALUMINUM PLATE SHALL MEET THE REQUIREMENTS OF ASTM B209.
 ALUMINUM BOLT SHALL MEET THE REQUIREMENTS OF ASTM F468.

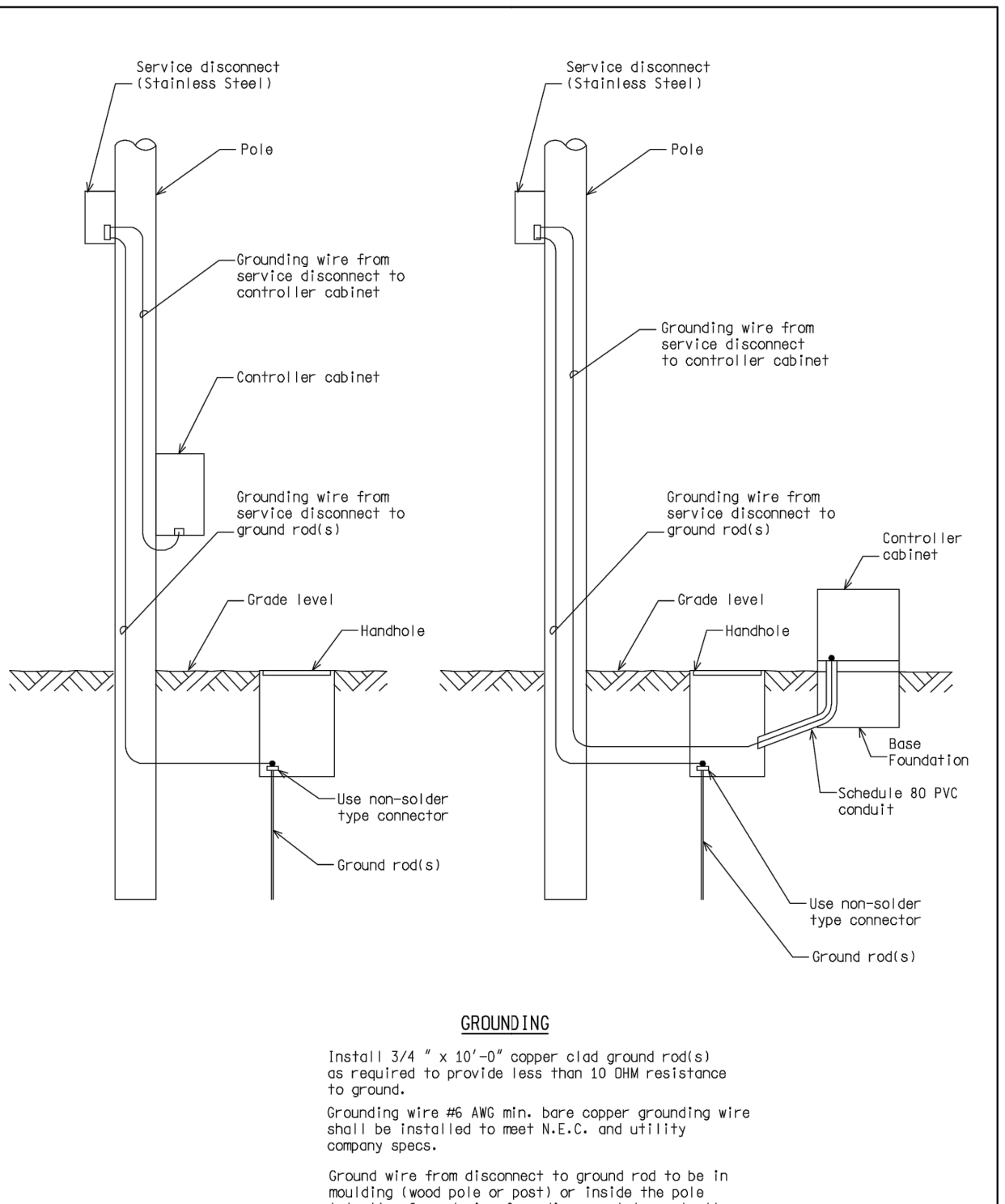
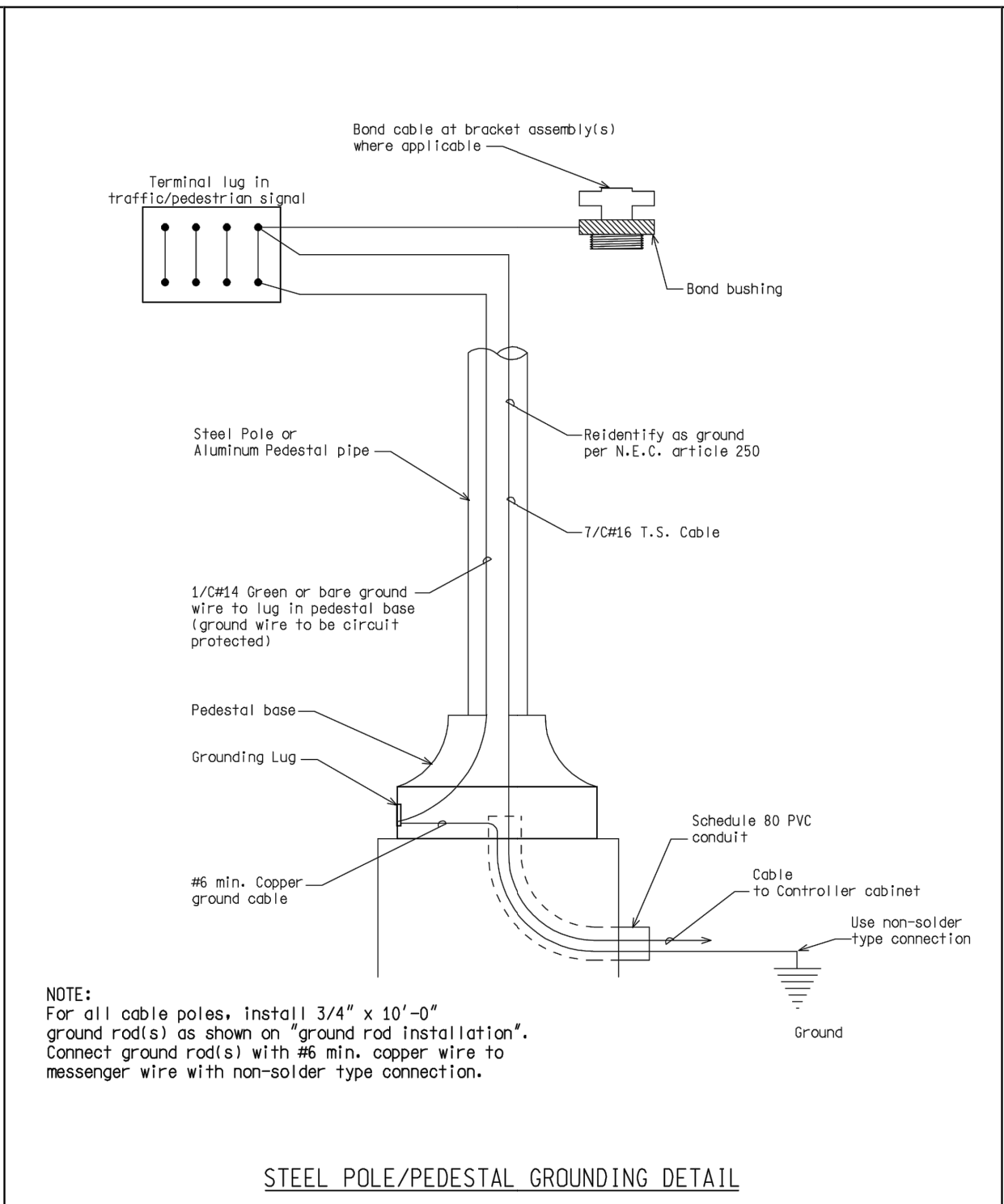
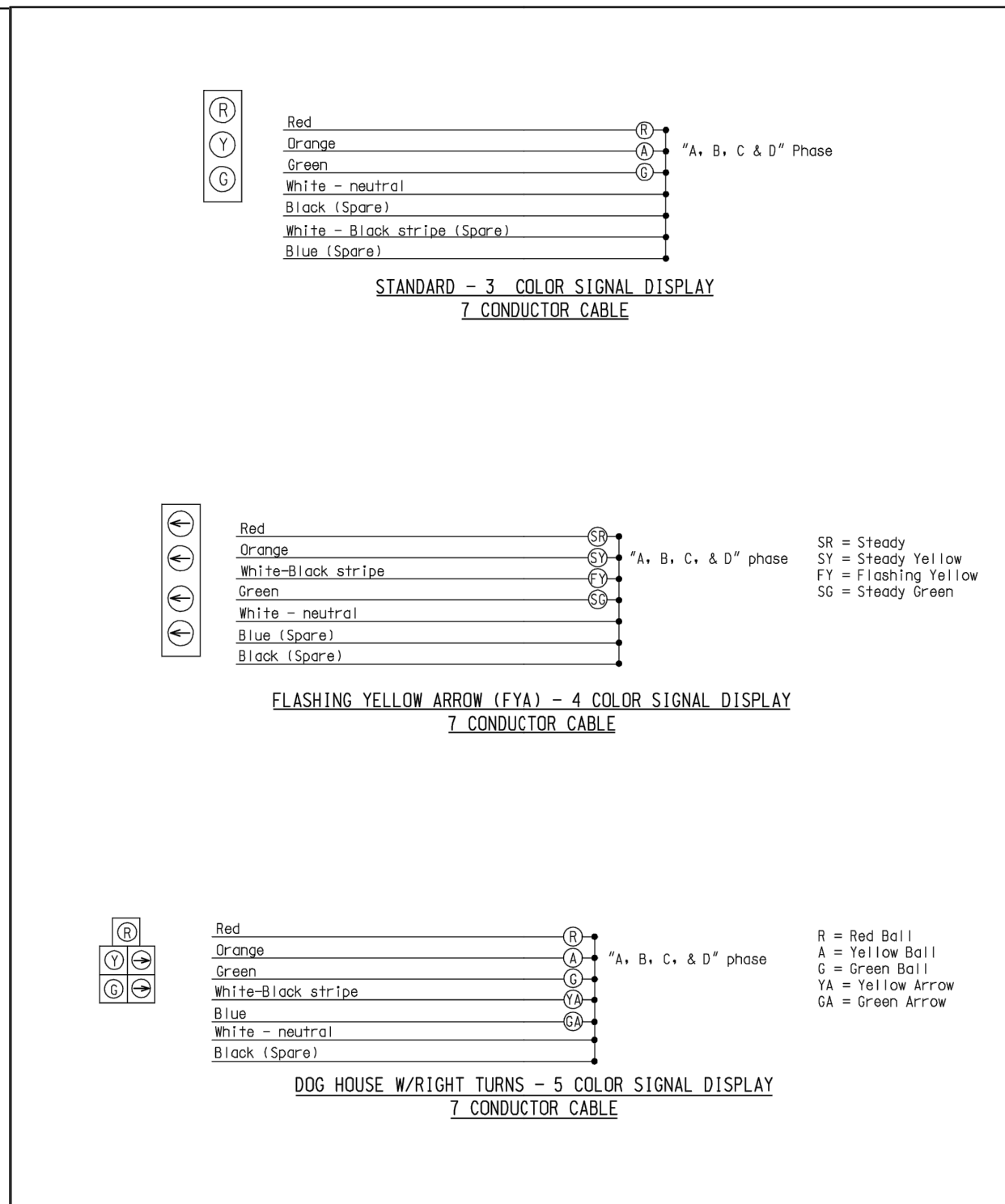
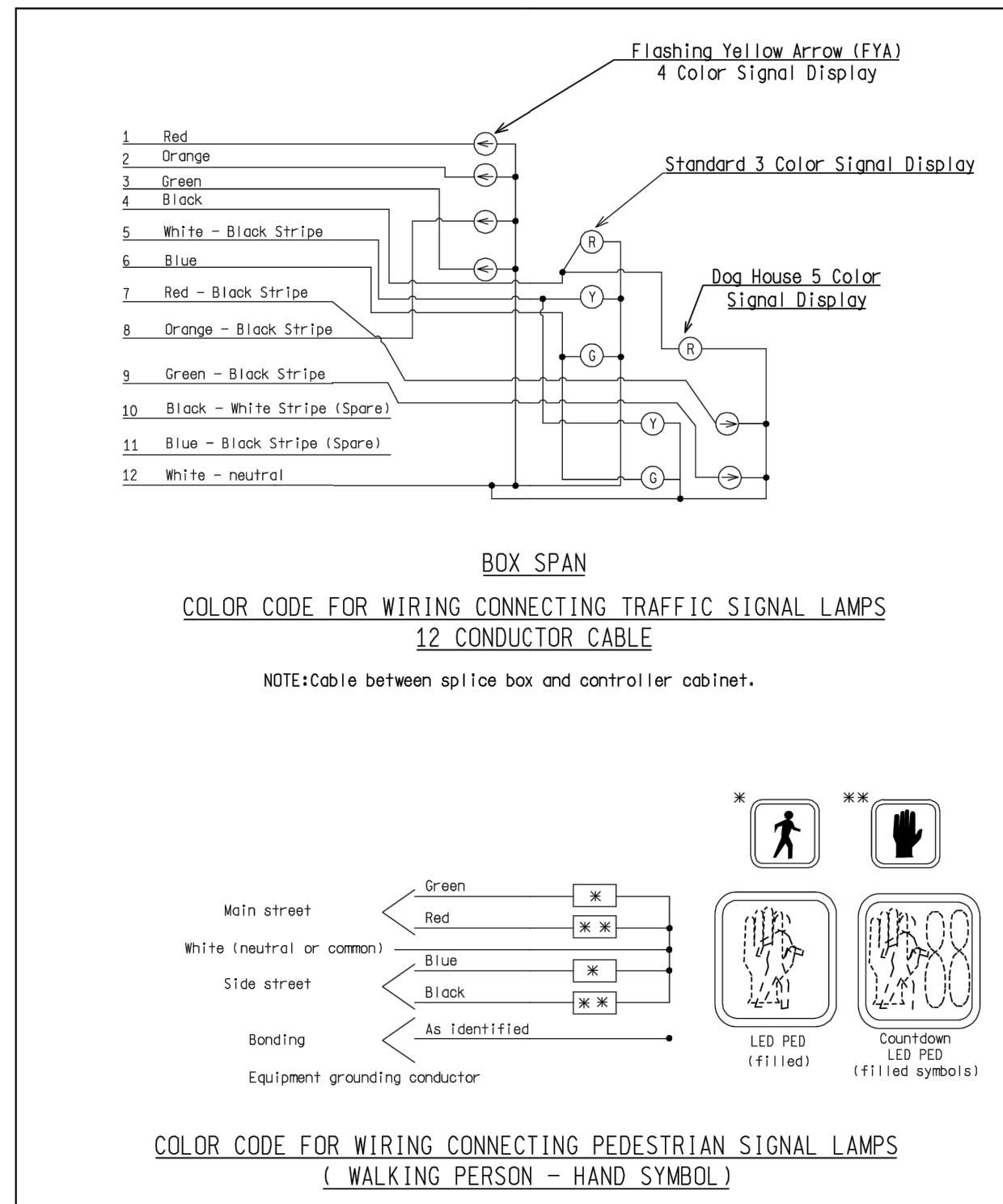
	DEPARTMENT DIRECTOR Kirk T. Stouffe 	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR MOLDING, BEVEL, LIGHT STD. ANCHOR BOLT ASSY., AND NAME PLATE DETAILS		
	PREPARED BY DESIGN DIVISION DRAWN BY: <u>B.L.T.</u> CHECKED BY: <u>V.Z.</u>	APPROVED BY: 	10-21-2008 F.H.W.A. APPROVAL	3-30-2007 PLAN DATE

SHEET 1 OF 1

3 WORKING DAYS
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	
EAST MEDICAL CENTER DRIVE MDOT STANDARD DETAILS	
SCALE HOR. 1"=40' VERT. 1"=4' 	DRAWING NO. 2021-008-STD15 SHEET NO. <u>138</u> OF <u>155</u>
APPROVED BY _____	

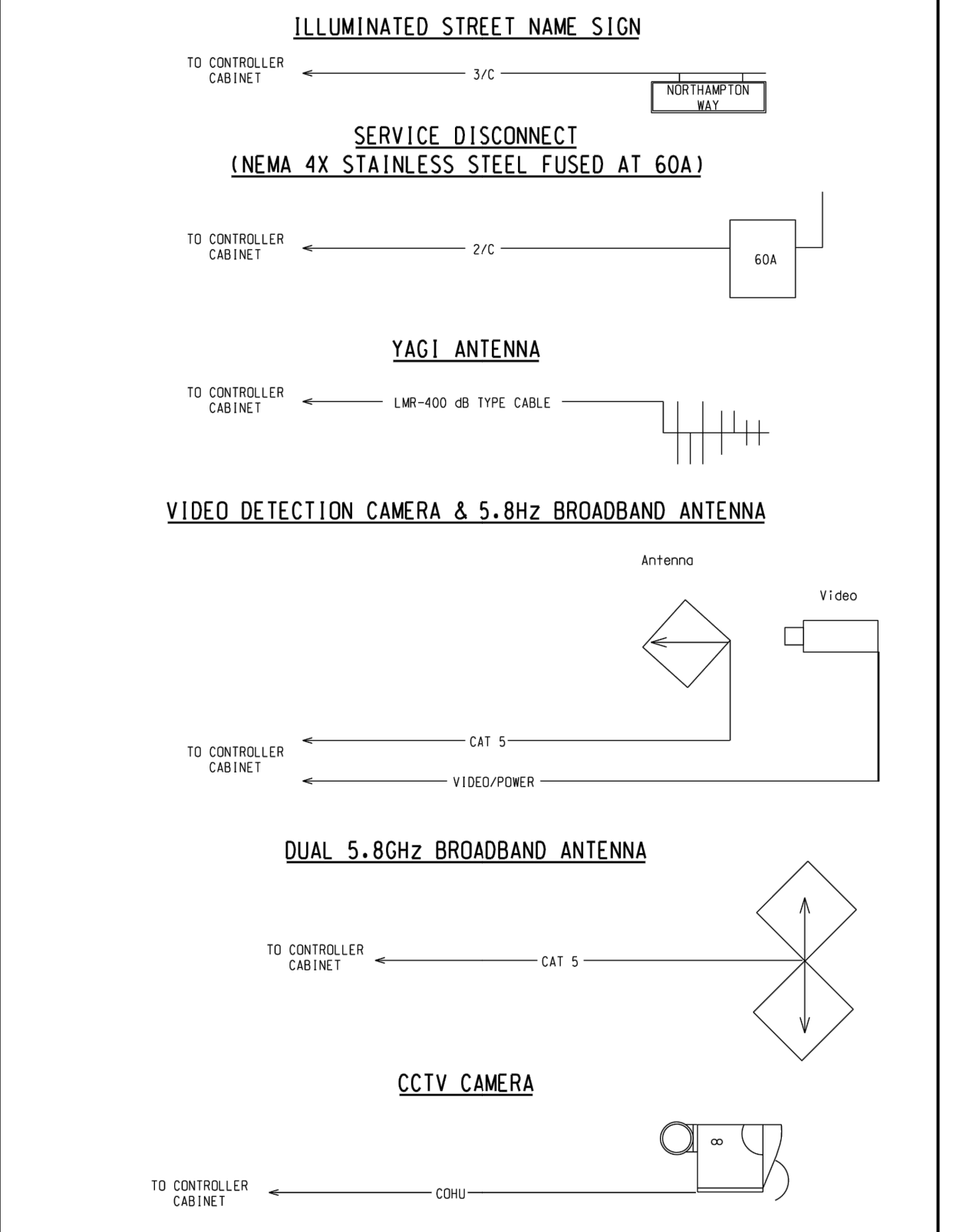
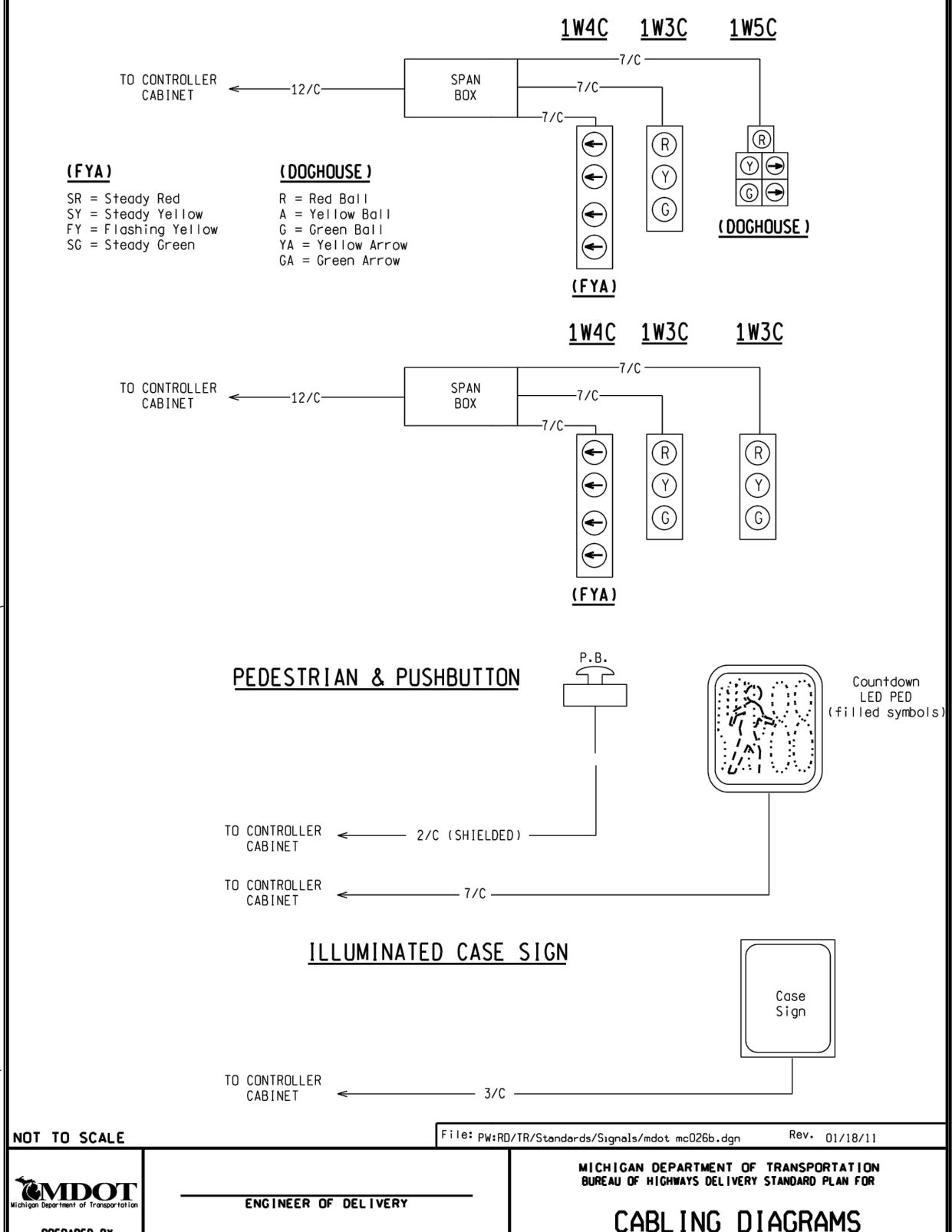
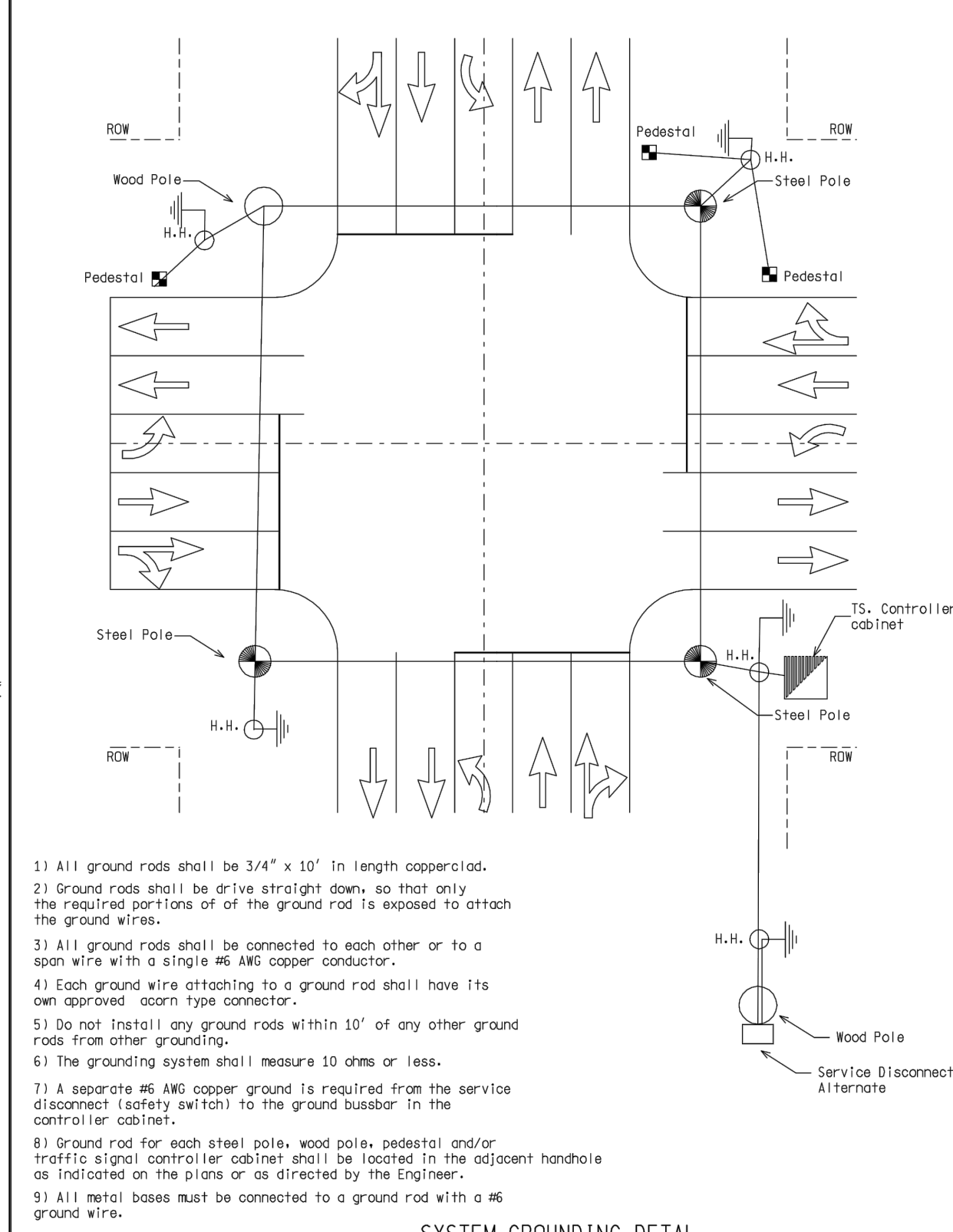
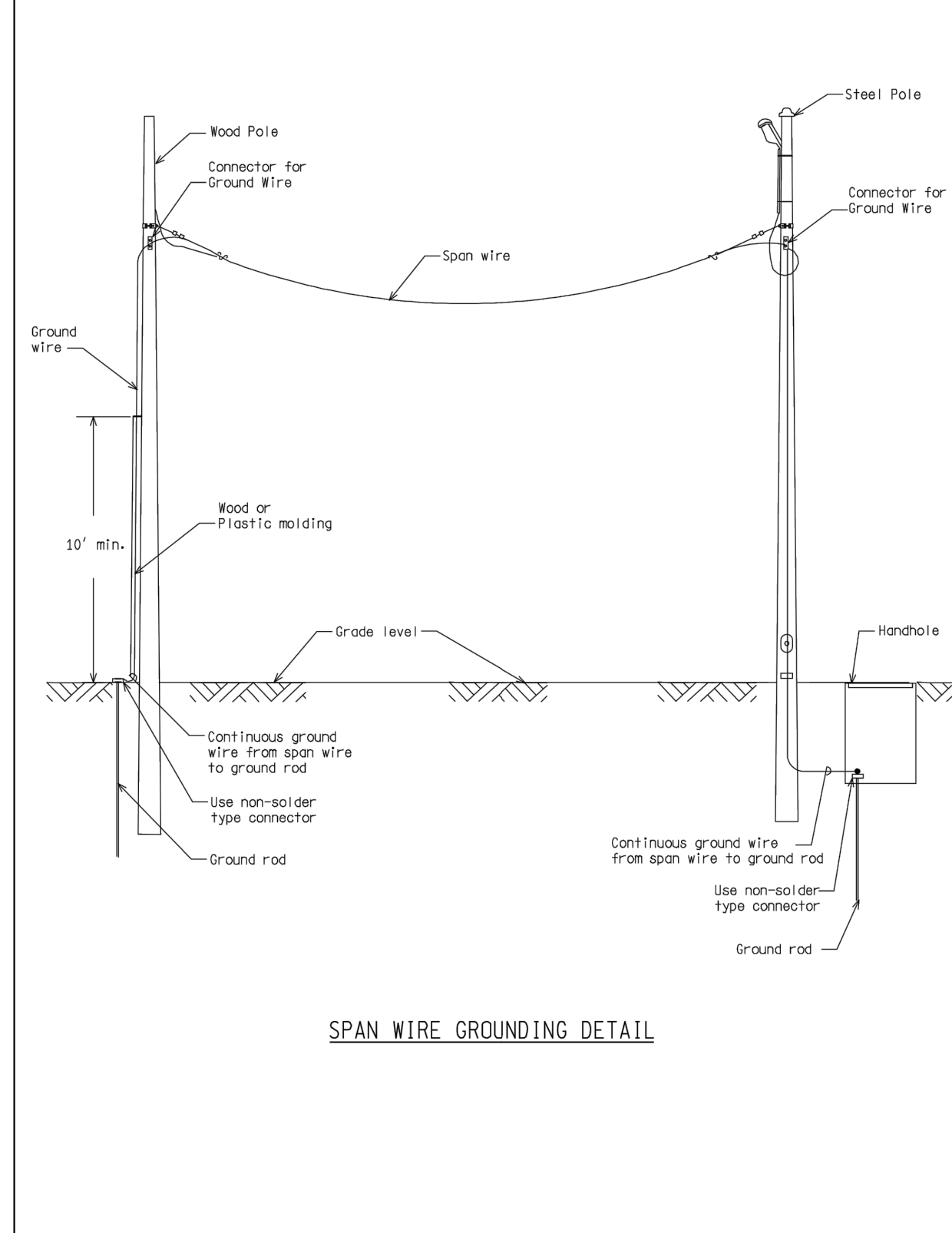


NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 11/16/10
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	COLOR CODE WIRING/ EQUIPMENT GROUNDING
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-A
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 1 OF 6

NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 11/16/10
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	COLOR CODE WIRING/ EQUIPMENT GROUNDING
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-A
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 2 OF 6

NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 11/16/10
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	COLOR CODE WIRING/ EQUIPMENT GROUNDING
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-A
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 3 OF 6

NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 11/16/10
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	COLOR CODE WIRING/ EQUIPMENT GROUNDING
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-A
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 4 OF 6



NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 11/16/10
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	COLOR CODE WIRING/ EQUIPMENT GROUNDING
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-A
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 5 OF 6

NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 11/16/10
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	COLOR CODE WIRING/ EQUIPMENT GROUNDING
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-A
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 6 OF 6

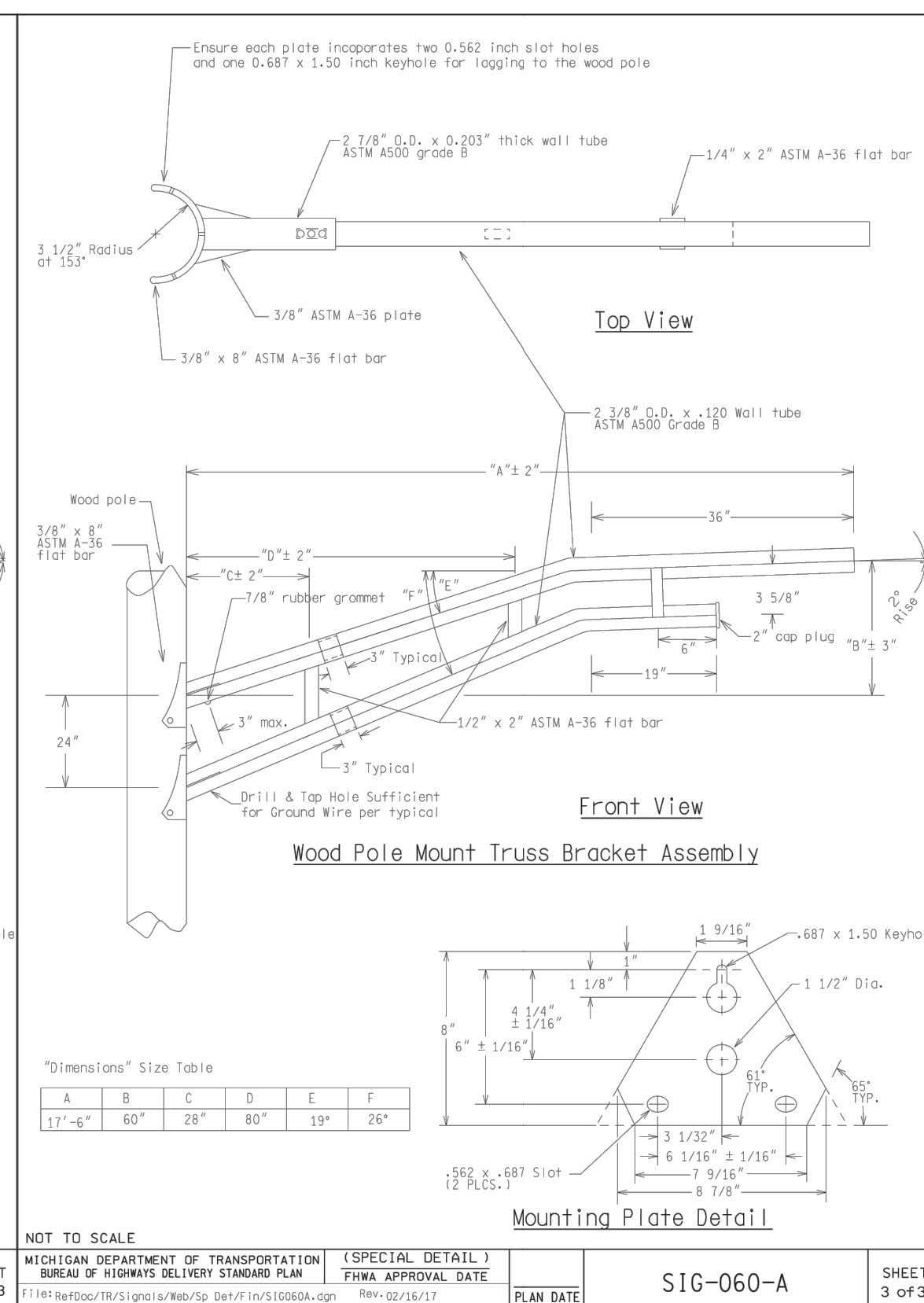
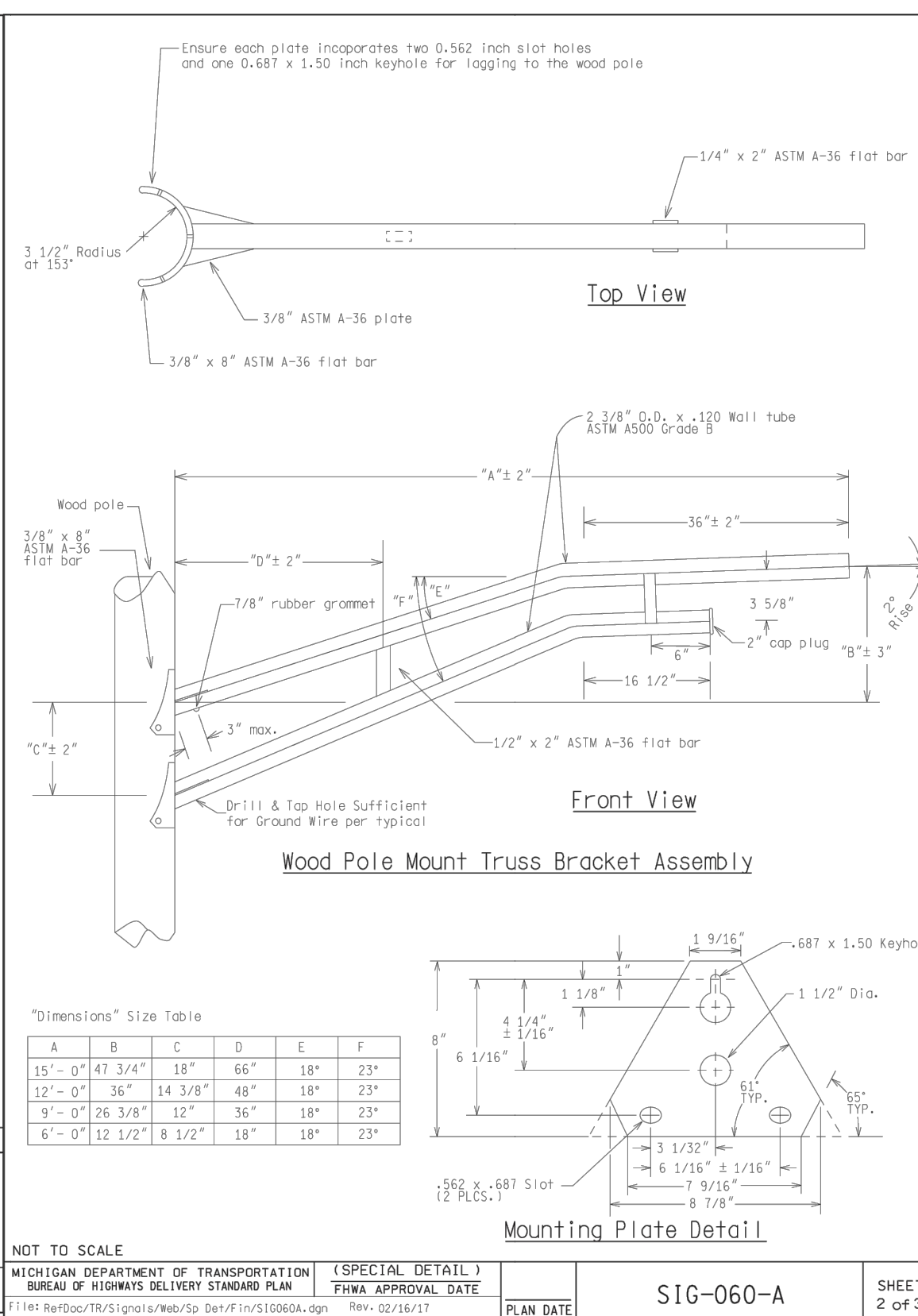
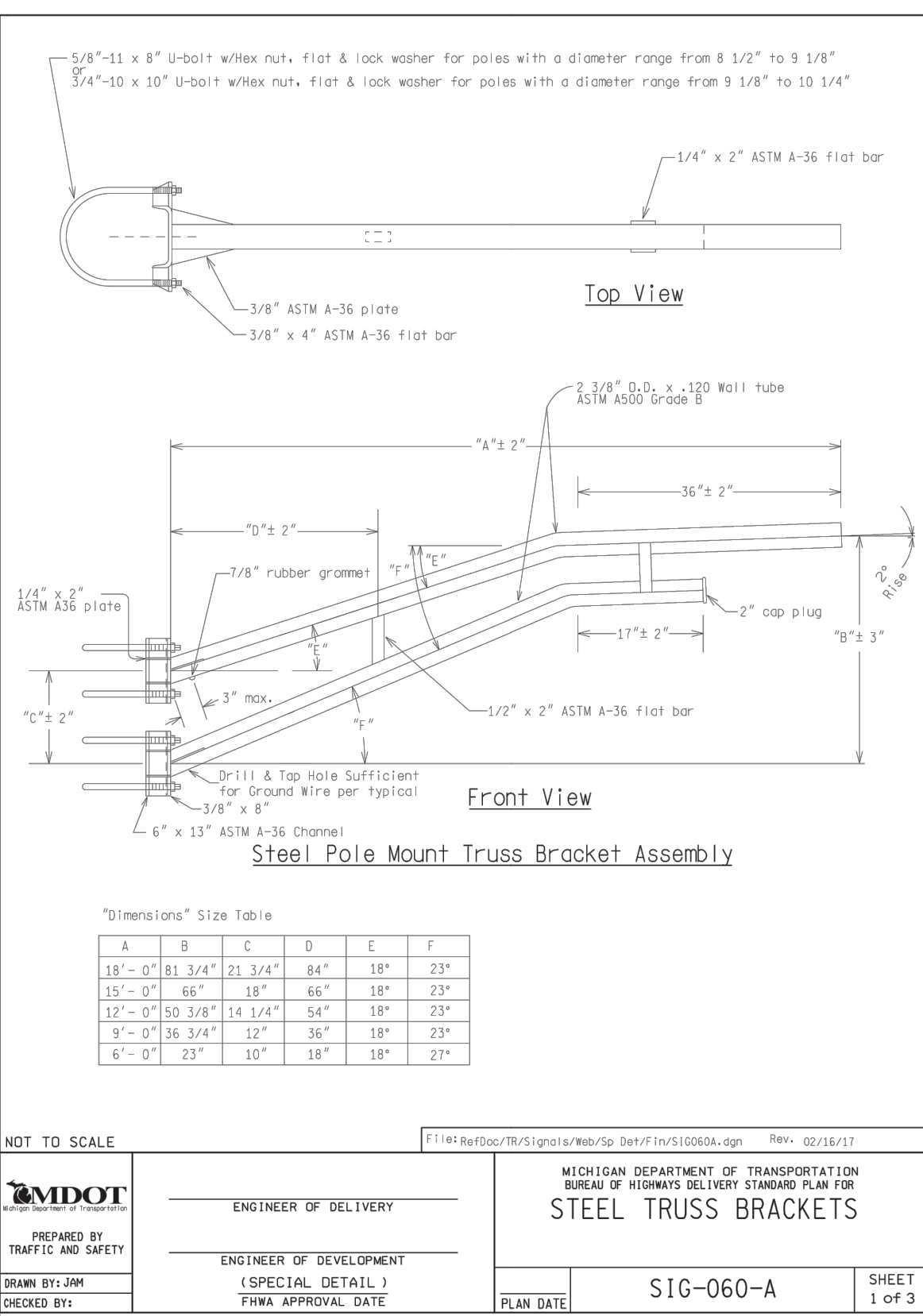
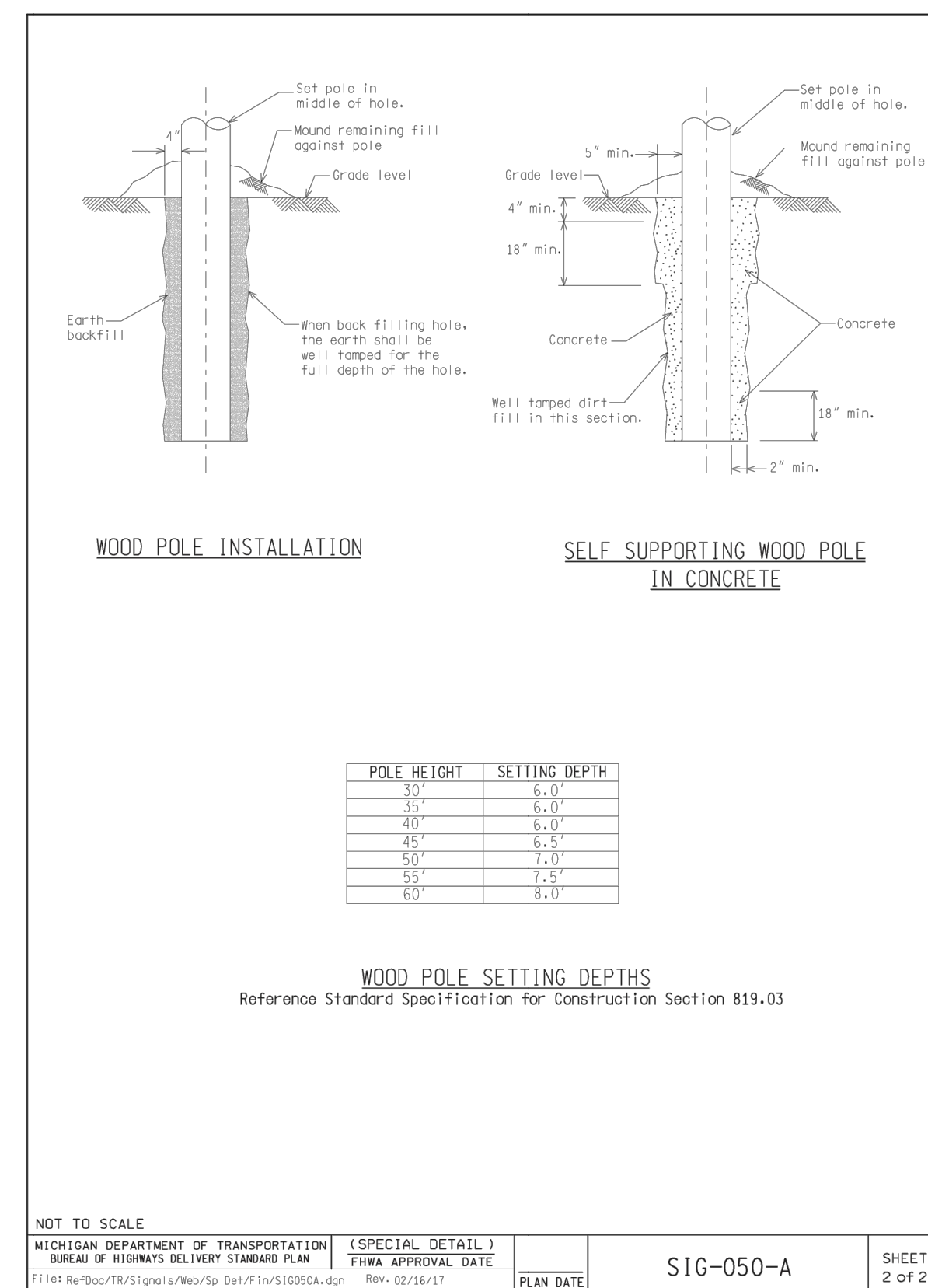
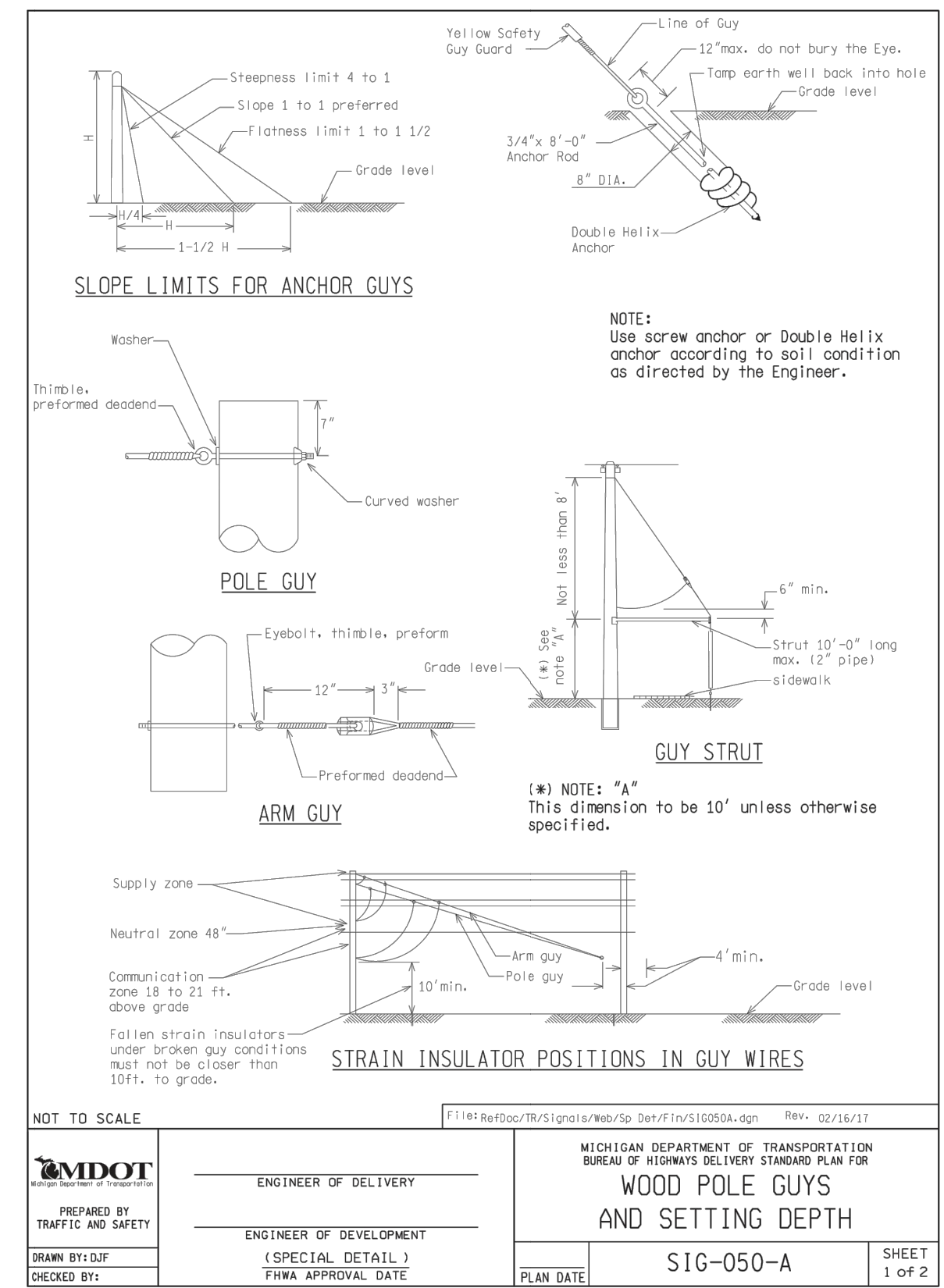
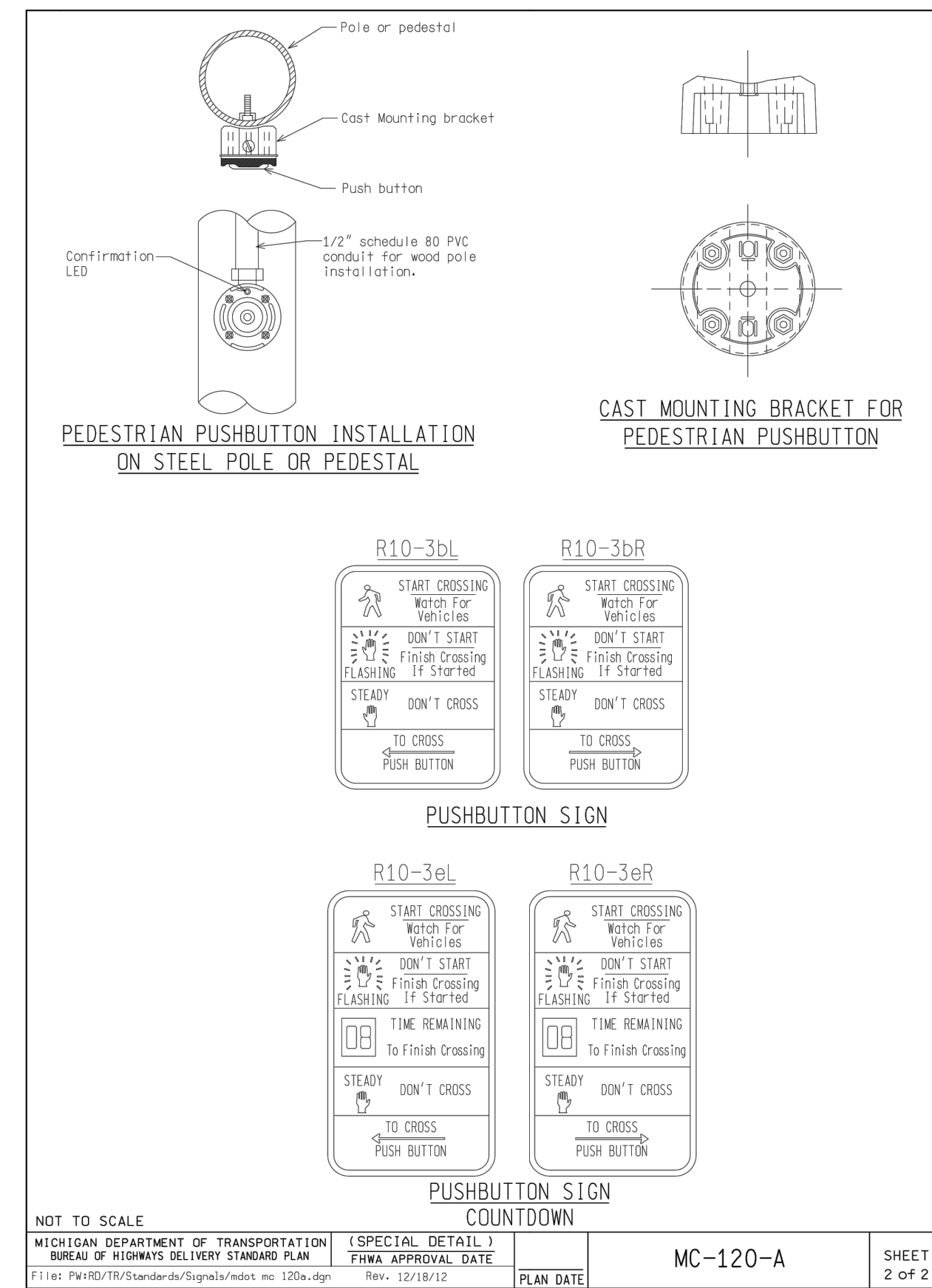
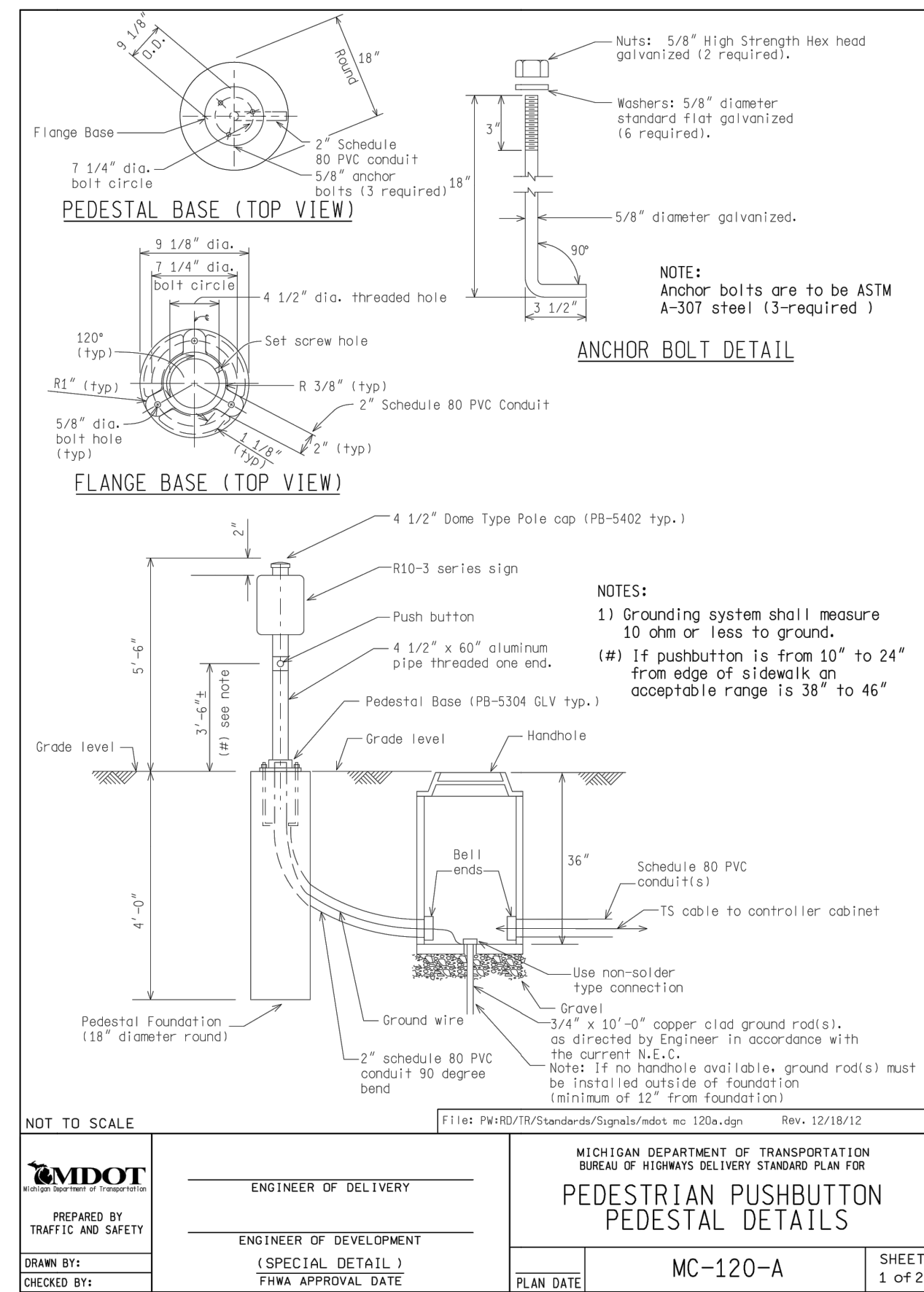
NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 01/18/11
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	CABLING DIAGRAMS
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-B
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 1 OF 2

NOT TO SCALE	F114: Pw/HD/TR/Standards/Signals/ndot_ssg228a.dgn	Rev: 01/18/11
MDOT	ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DEVELOPMENT	CABLING DIAGRAMS
DRAWN BY: DJF	(SPECIAL DETAIL)	MC-026-B
CHECKED BY:	FWHA APPROVAL DATE	PLAN DATE
		SHEET 2 OF 2

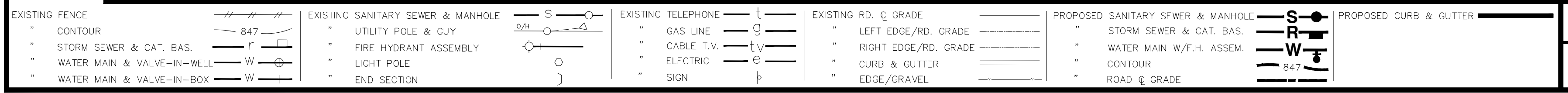
LEGEND

EXISTING FENCE - CONTOUR - STORM SEWER & CAT. BAS. - WATER MAIN & VALVE-IN-WELL - WATER MAIN & VALVE-IN-BOX	EXISTING SANITARY SEWER & MANHOLE - UTILITY POLE & GUY - FIRE HYDRANT ASSEMBLY - LIGHT POLE - END SECTION	EXISTING TELEPHONE - GAS LINE - CABLE T.V. - ELECTRIC - SIGN	EXISTING RD. & GRADE - LEFT EDGE/RD. GRADE - RIGHT EDGE/RD. GRADE - CURB & GUTTER - EDGE/GRAVEL - ROAD & GRADE	PROPOSED SANITARY SEWER & MANHOLE - STORM SEWER & CAT. BAS. - WATER MAIN W/F.H. ASSEM. - CONTOUR - ROAD & GRADE	PROPOSED CURB & GUTTER
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DLZ		PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR			
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS		SCALE	NTS		
DRAWING NO. 2021-008-SSD1		REV. NO.	DESCRIPTION	DATE	DR. BY
SHEET NO. 139 OF 155		BENCH	MARK	10/6/23	INB
APPROVED BY		SURVEY	BOOK	LCM	CH. BY



LEGEND



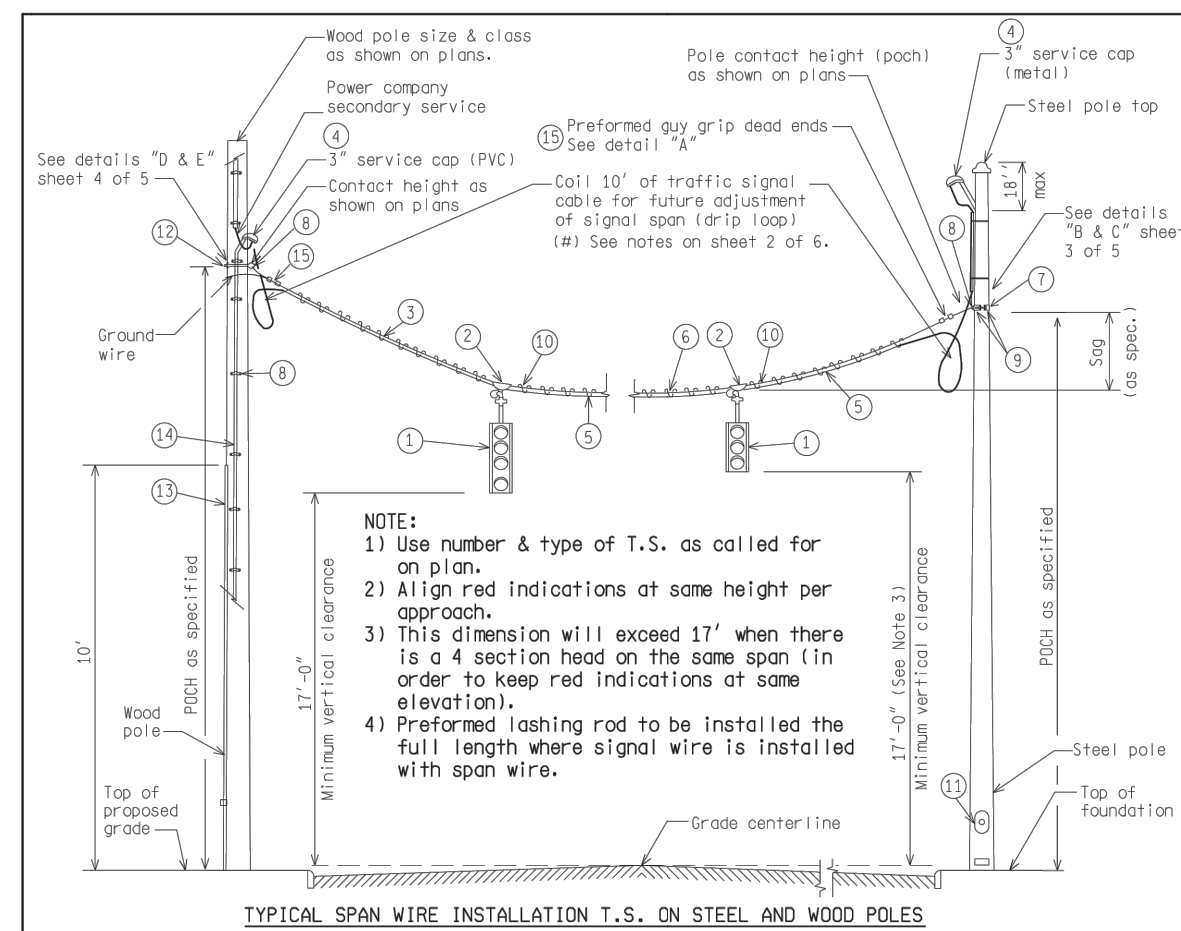
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

**E. MEDICAL CENTER DRIVE
 TRAFFIC SIGNAL SPECIAL DETAILS**

SCALE	0	1
NTS	INCH	
DRAWING NO.	2021-008-SSD2	
SHEET NO.	140	OF 155

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

APPROVED BY: _____



NO.	ITEM
1	Traffic signal (no. heads as indicated)
2	Span wire hanger
3	5/16" extra high strength span wire
4	3" service cap (weatherhead), (metal for steel and PVC for wood poles)
5	P.V.C. traffic signal cable (as specified)
6	Preformed lashing rods
7	Pole band clamp (steel pole)
8	4" eye thimble (2" dia.)
9	(2) 5/8" x 4" long bolt, nut, washers per pole band clamp (steel pole)
10	Install span wire preformed (armor rod) under each span hanger
11	Access hand hole all new & existing steel poles
12	5/8" eyebolt, oval eye and nut
13	Wood mauling or plastic duct (10" from ground level)
14	3" schedule 80 PVC or rigid metal (see note on sheet 2 of 5)
15	Preformed guy grip dead ends

NOT TO SCALE

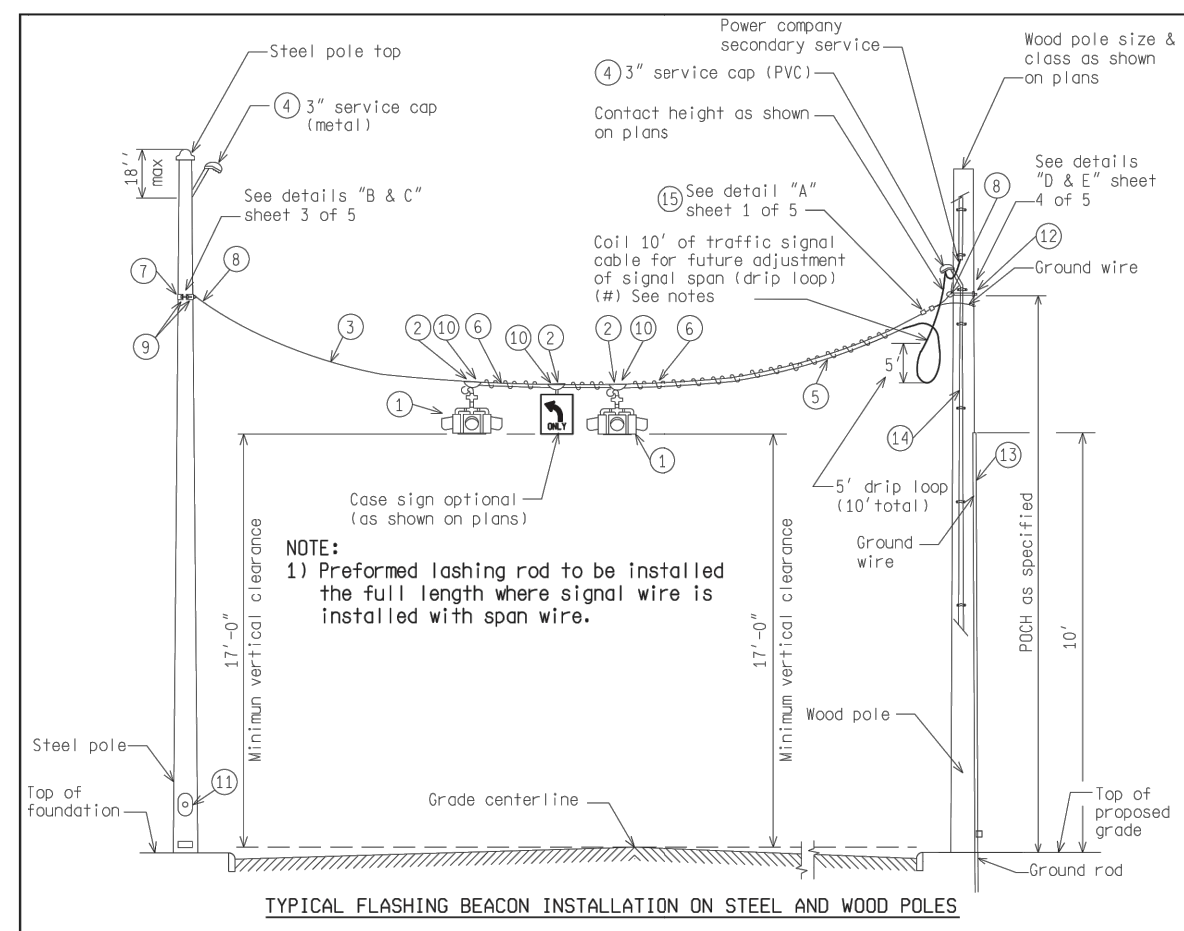
FILE: RefDoc/Tr/Sig/Std/Sp Det/FIN/SIG010A.dgn Rev. 02/16/17

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL AND WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 1 OF 7



NO.	ITEM
1	Traffic signal (no. heads as indicated)
2	Span wire hanger
3	5/16" extra high strength span wire
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10	Install span wire preformed (armor rod) under each span hanger
11	Access hand hole all new & existing steel poles
12	5/8" eyebolt, oval eye and nut
13	Wood mauling or plastic duct (10" from ground level)
14	1 1/2" to 2" schedule 80 PVC or rigid metal (see note on sheet 2 of 5)
15	Preformed guy grip dead ends

NOT TO SCALE

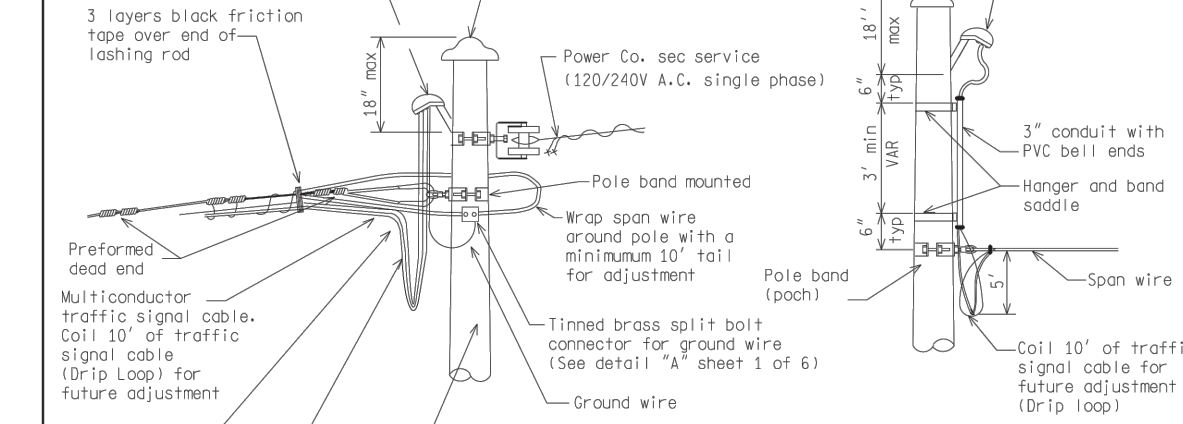
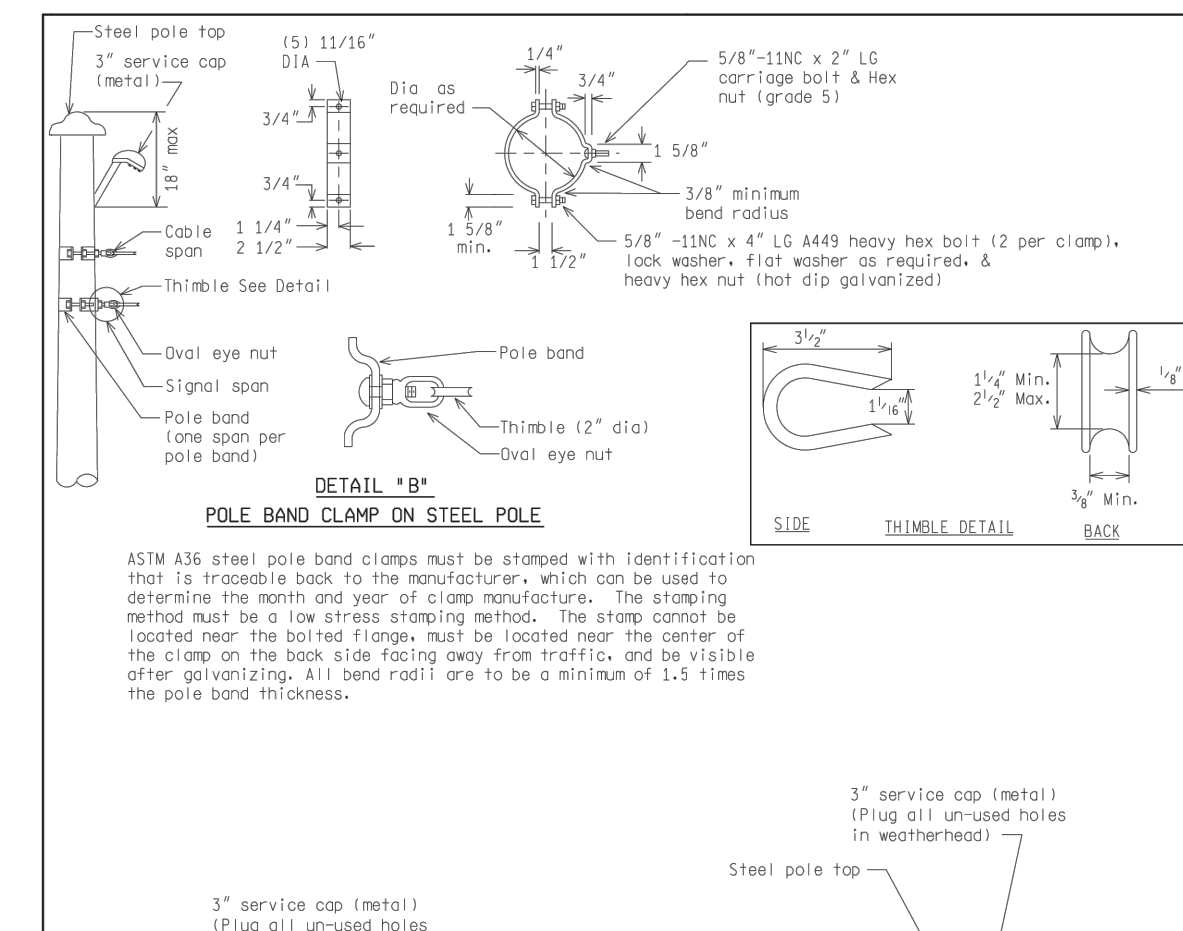
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL AND WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 2 OF 7



NOT TO SCALE

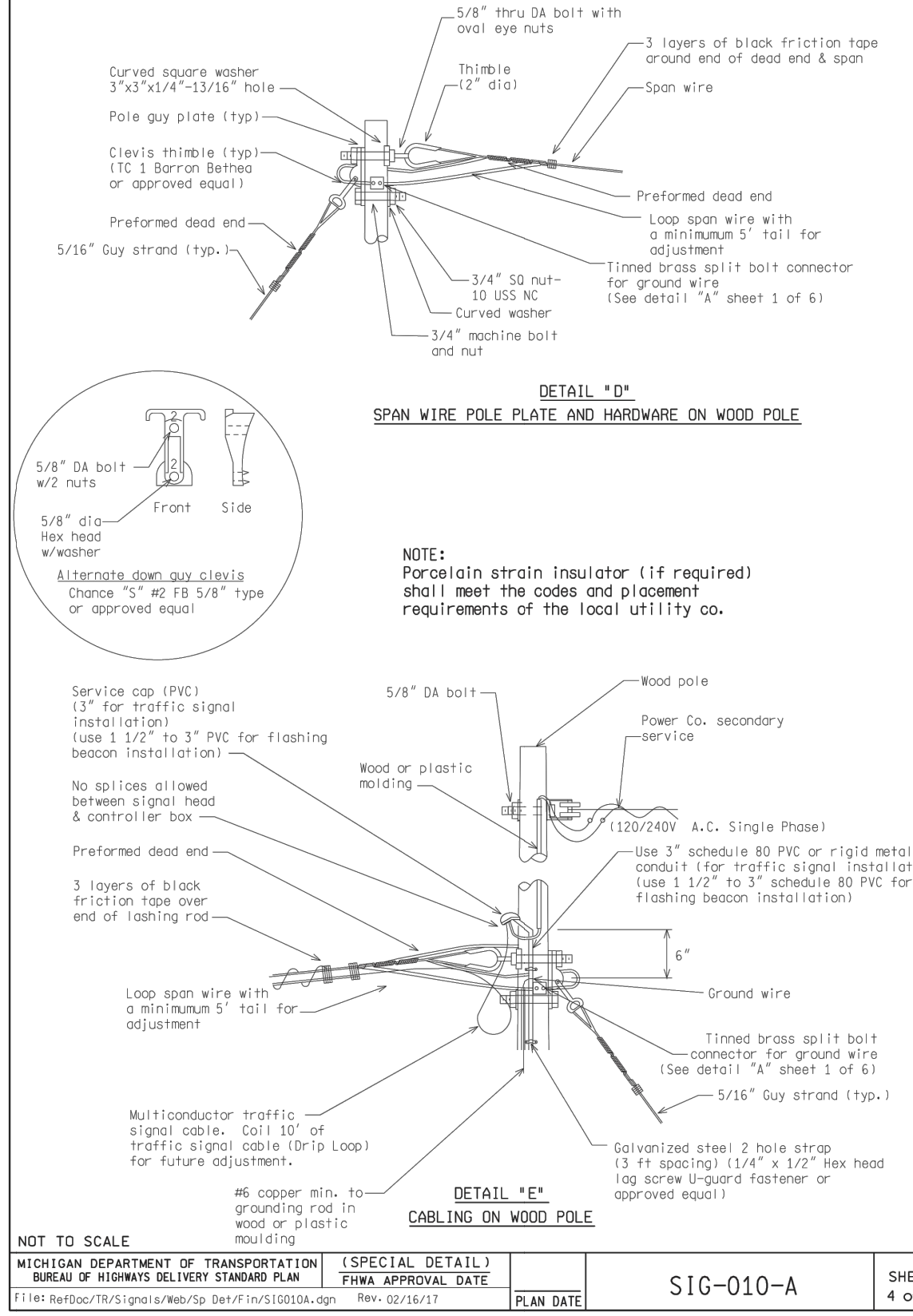
FILE: RefDoc/Tr/Sig/Std/Sp Det/FIN/SIG010A.dgn Rev. 02/16/17

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL AND WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 3 OF 7



NOT TO SCALE

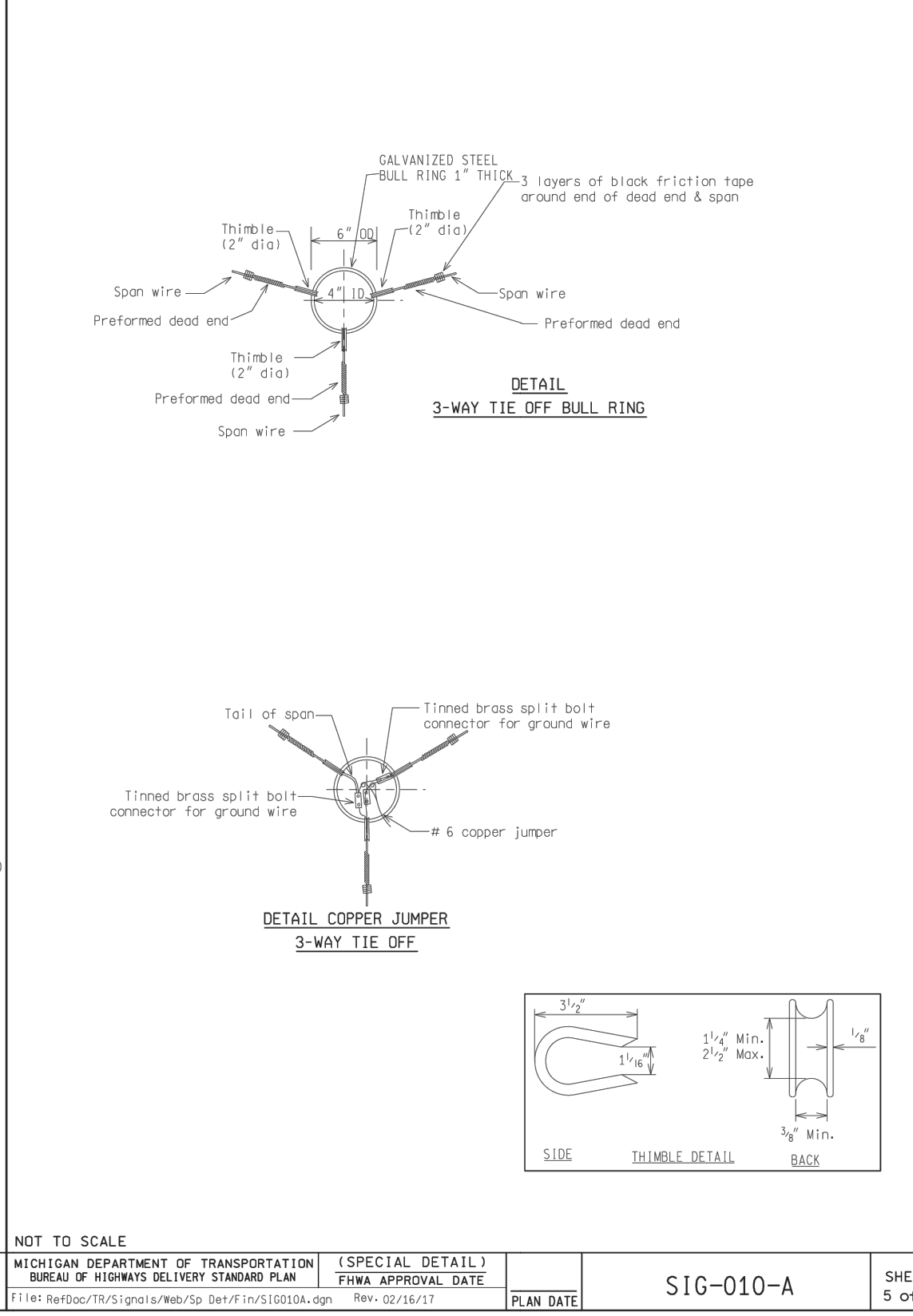
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL AND WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 4 OF 7



NOT TO SCALE

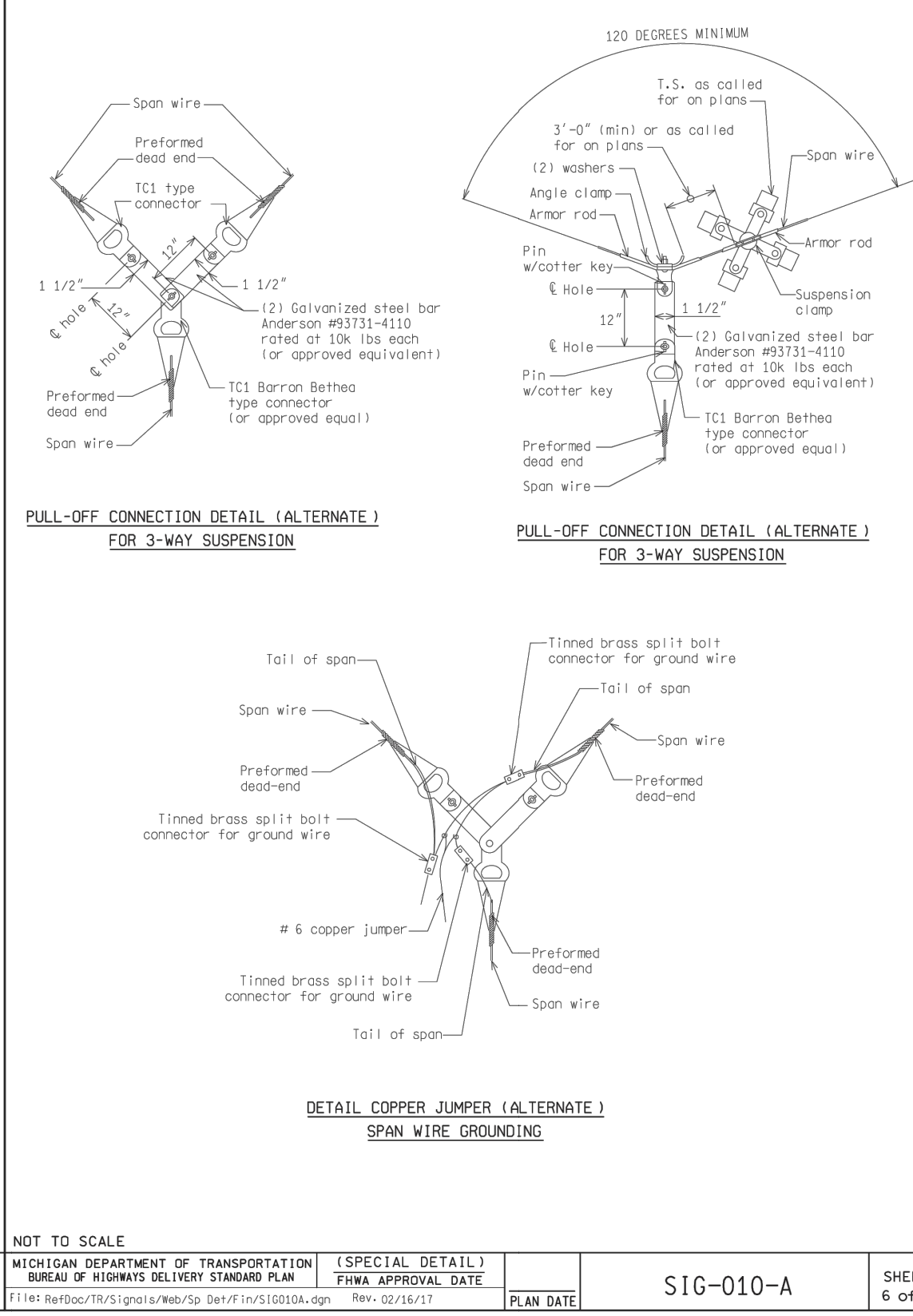
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL AND WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 5 OF 7



NOT TO SCALE

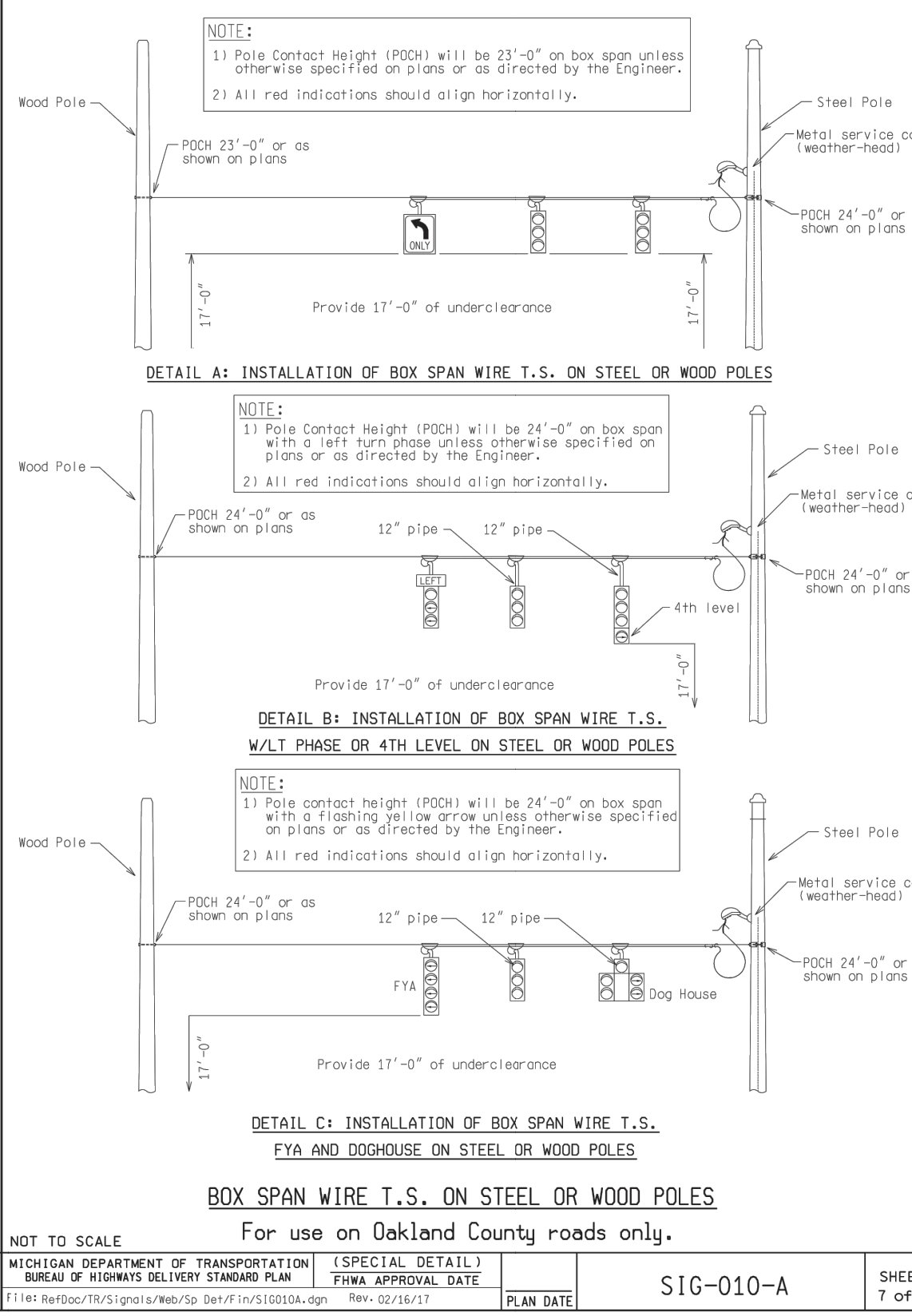
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL AND WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 6 OF 7



NOT TO SCALE

FILE: RefDoc/Tr/Sig/Std/Sp Det/FIN/SIG010A.dgn Rev. 02/16/17

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
ALL SPAN WIRE T.S. ON STEEL OR WOOD POLES

ENGINEER OF DELIVERY: _____
 ENGINEER OF DEVELOPMENT: _____
 SPECIAL APPROVAL DATE: _____

PREPARED BY: TRAFFIC AND SAFETY
 DRAWN BY: DJF
 CHECKED BY: _____

PLAN DATE: _____ SHEET: 7 OF 7

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

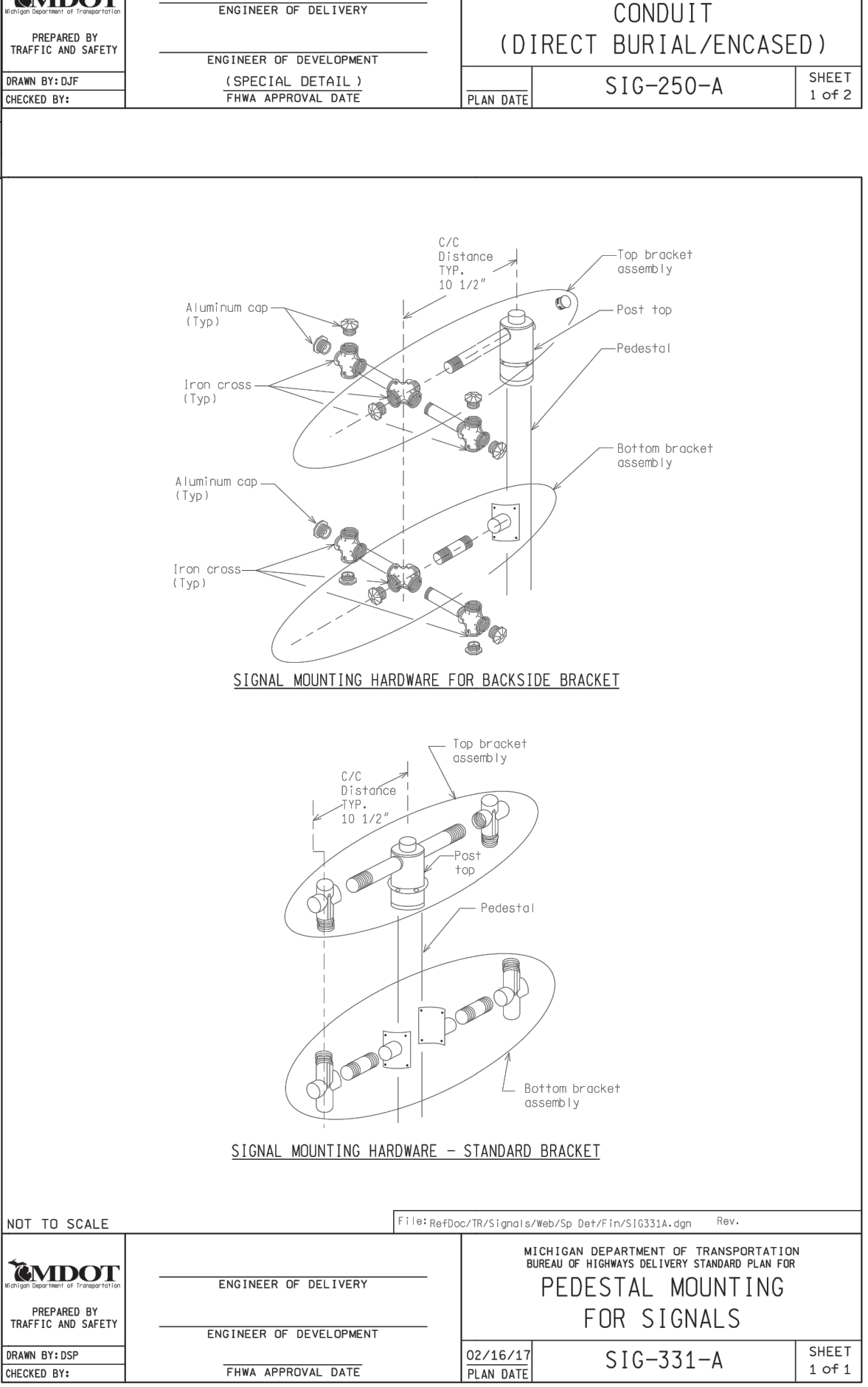
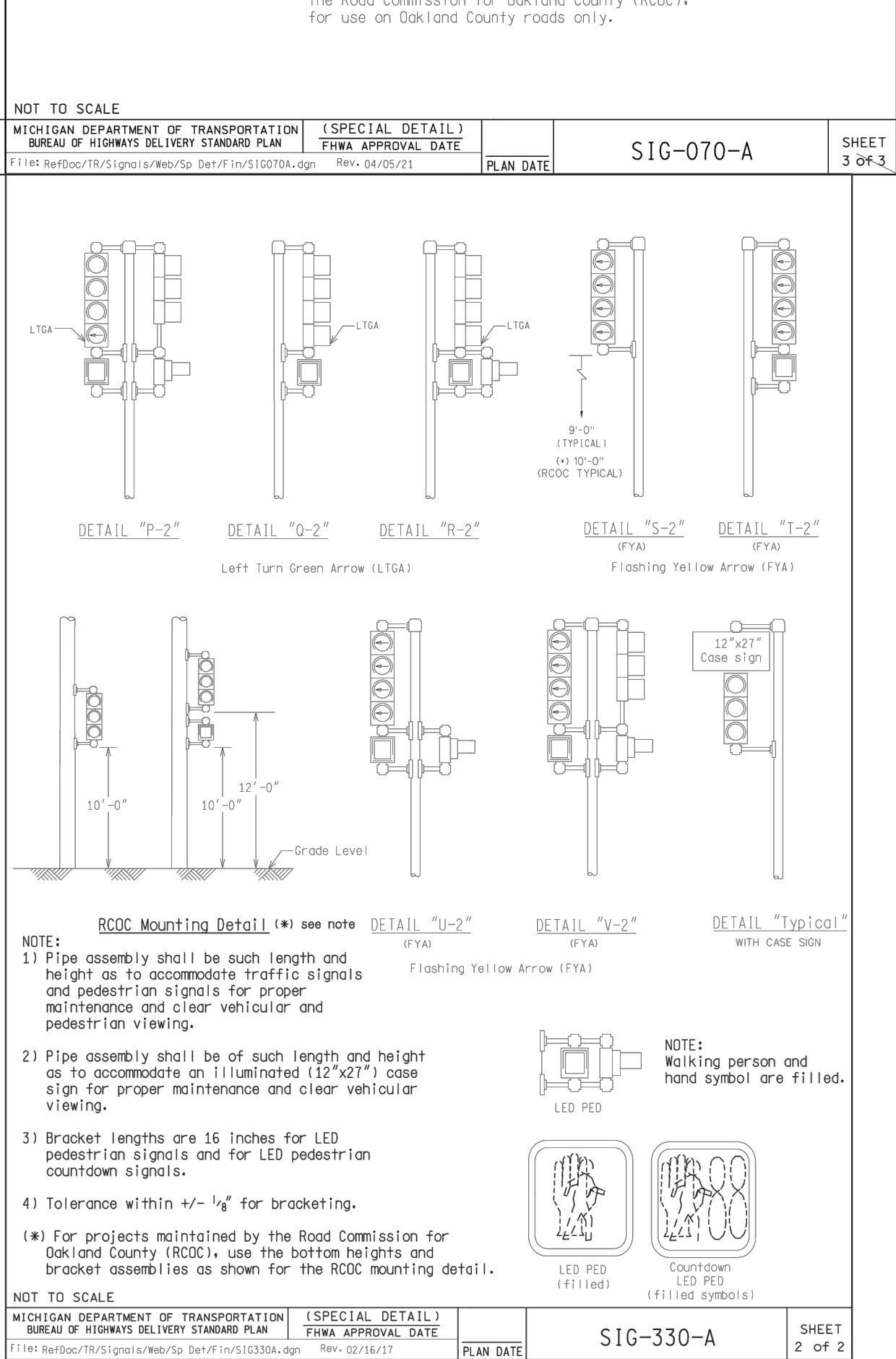
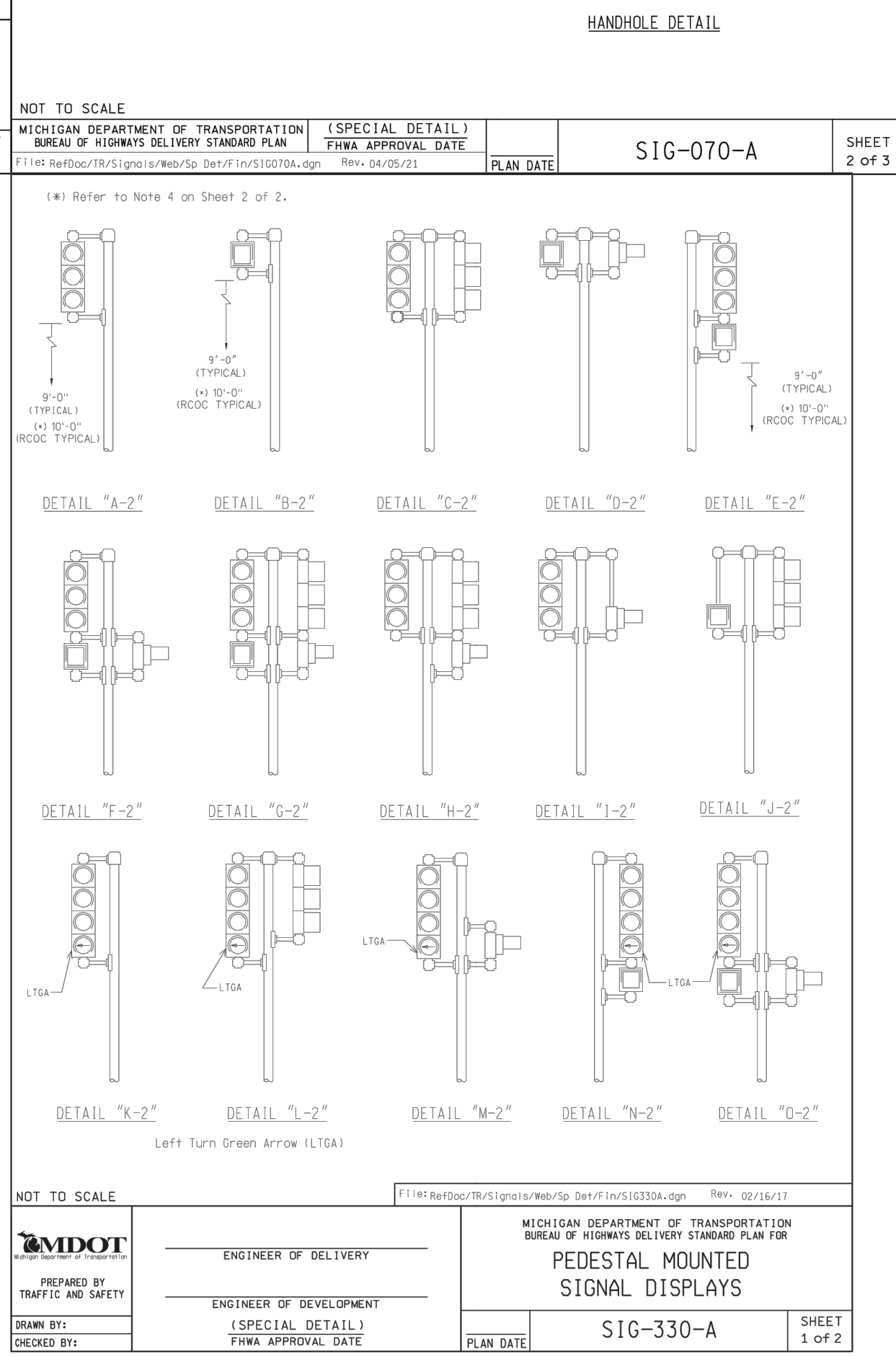
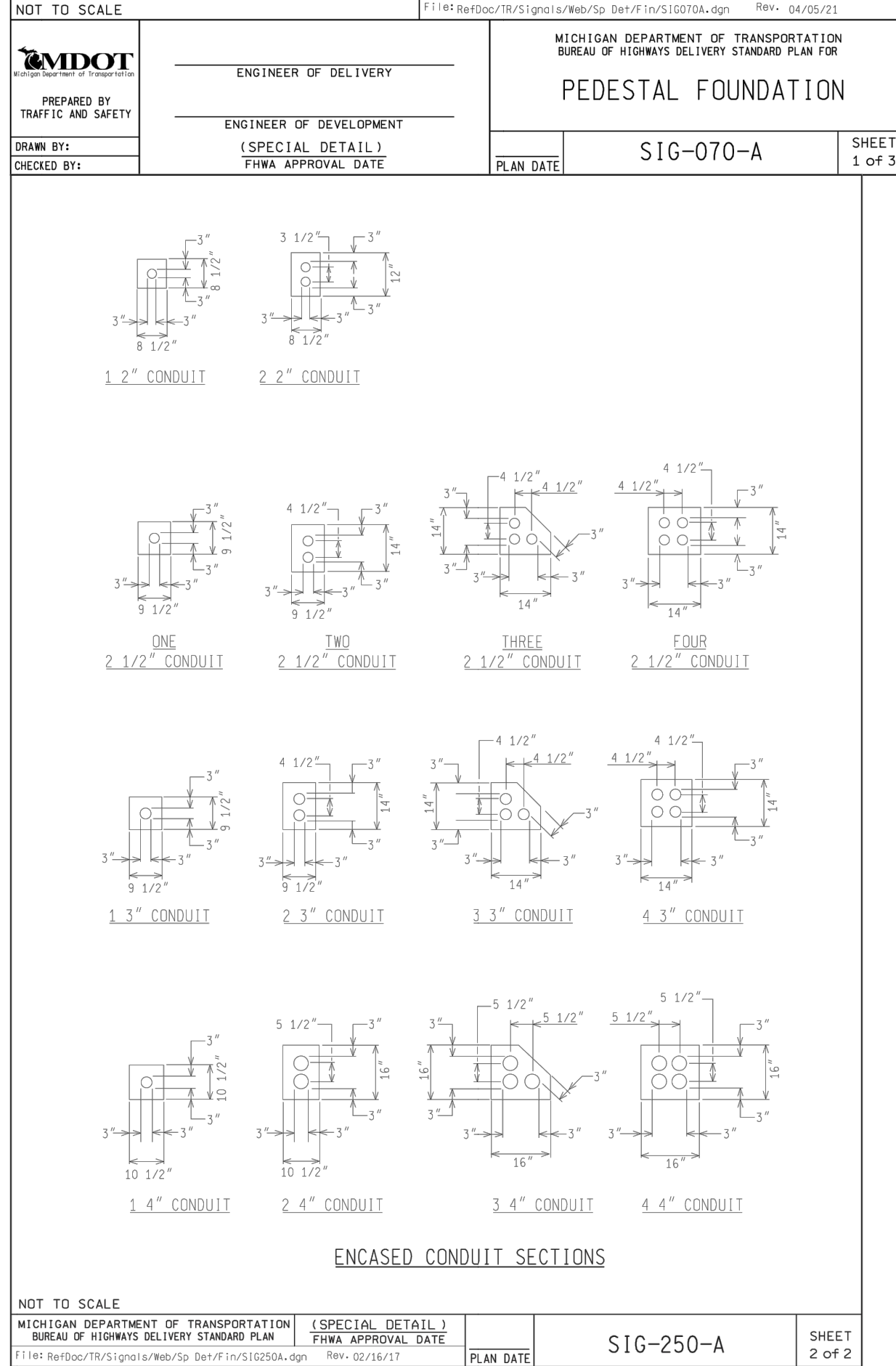
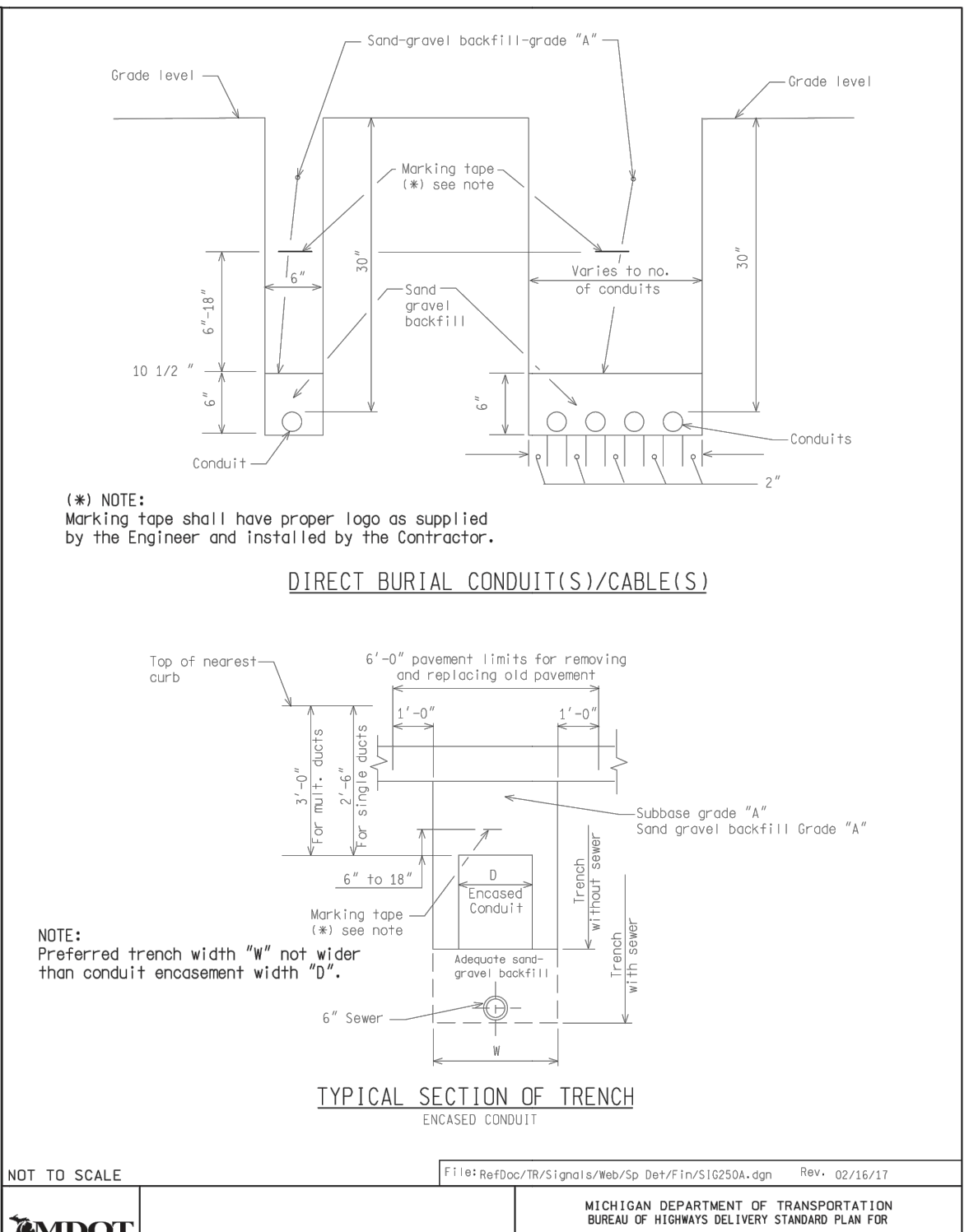
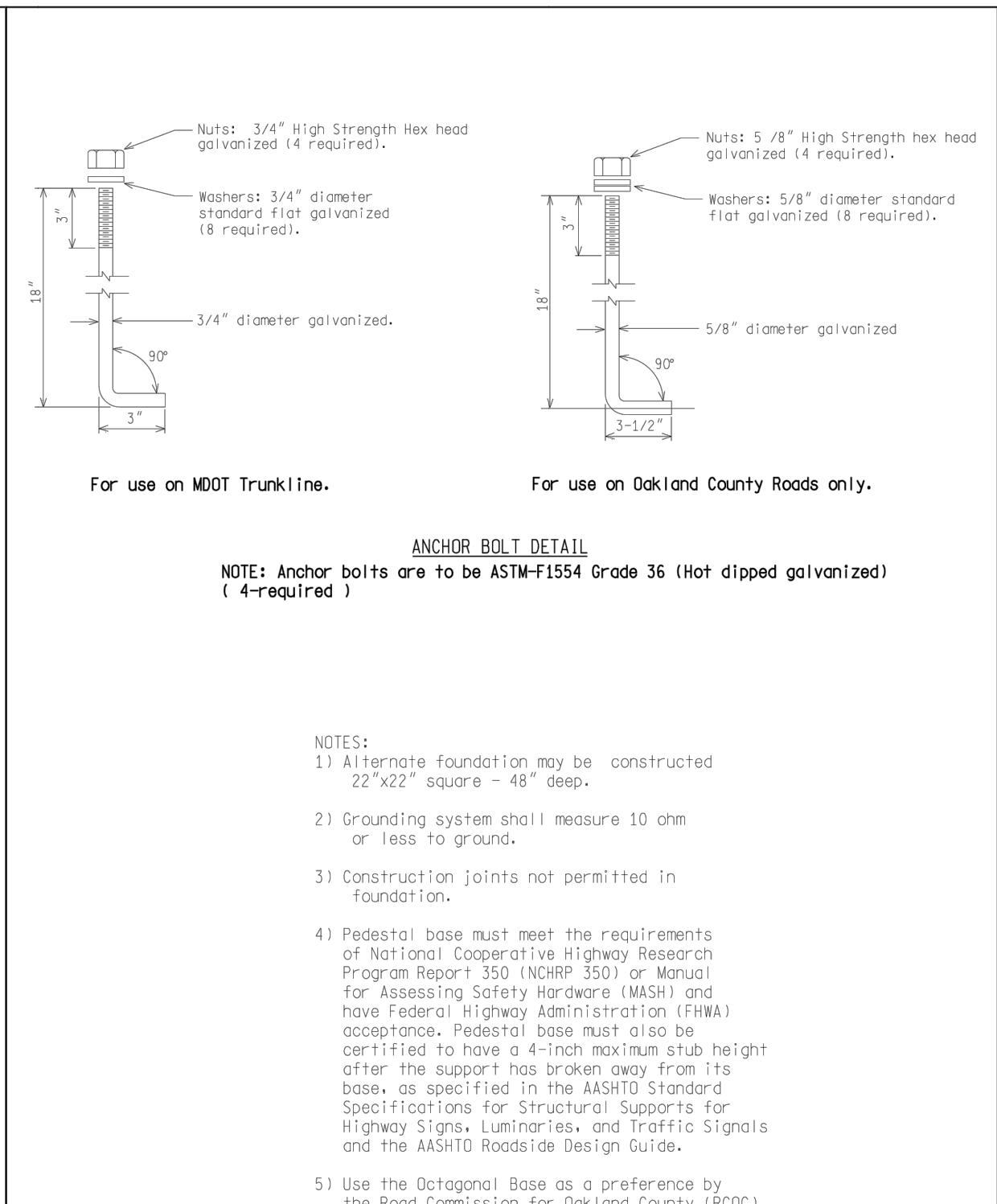
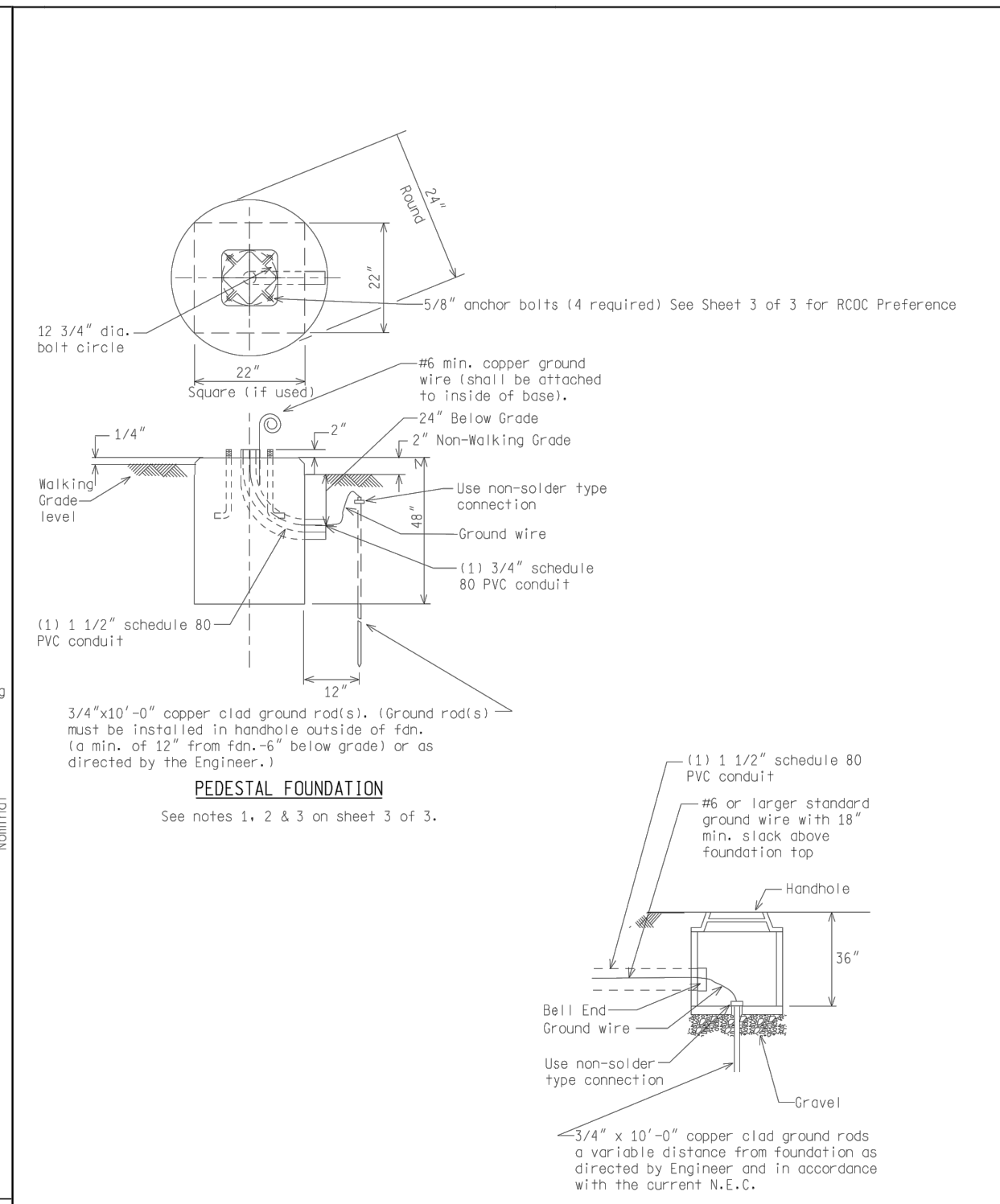
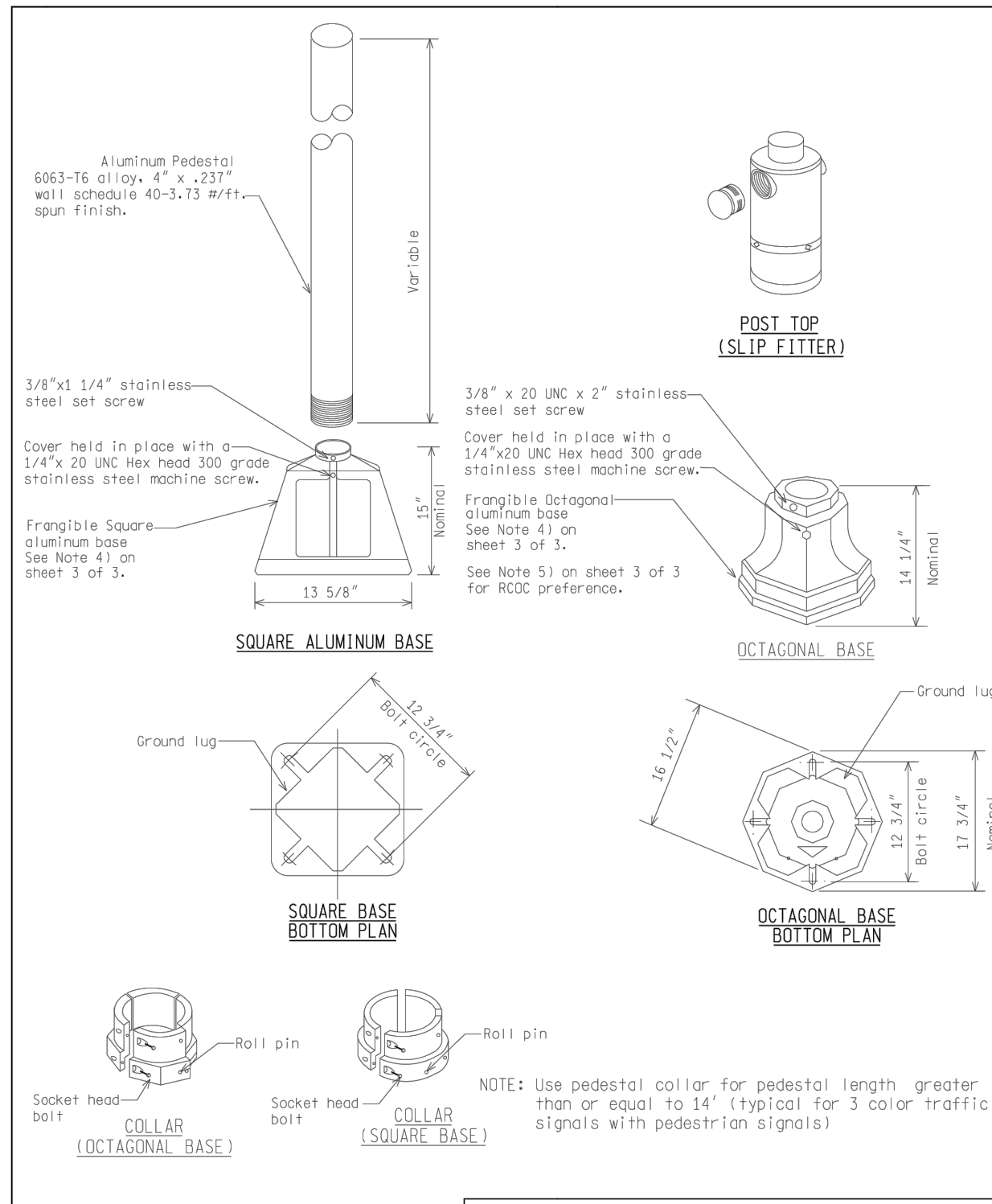
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DRAWING NO. 2021-008-SSD3

SHEET NO. 141 OF 155

APPROVED BY: _____

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM



LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.

DATE	10/6/23	INB	LCM
DR. BY	INB	CH. BY	LCM

DLZ

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

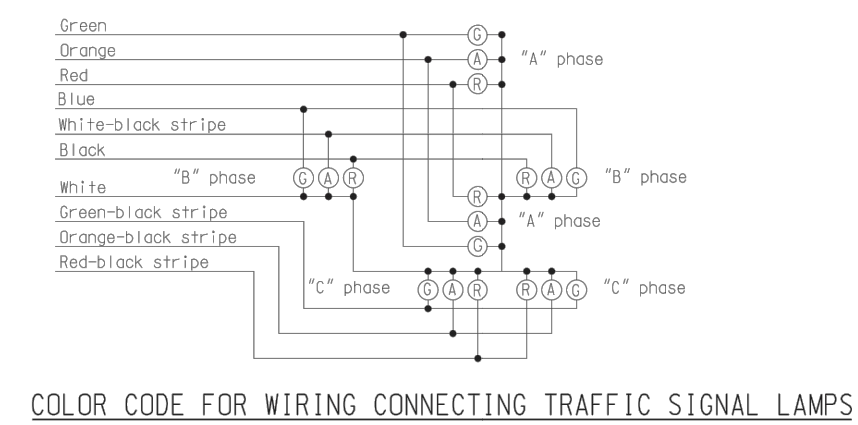
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

SCALE: 0 INCH 1

DRAWING NO. 2021-008-SSD4

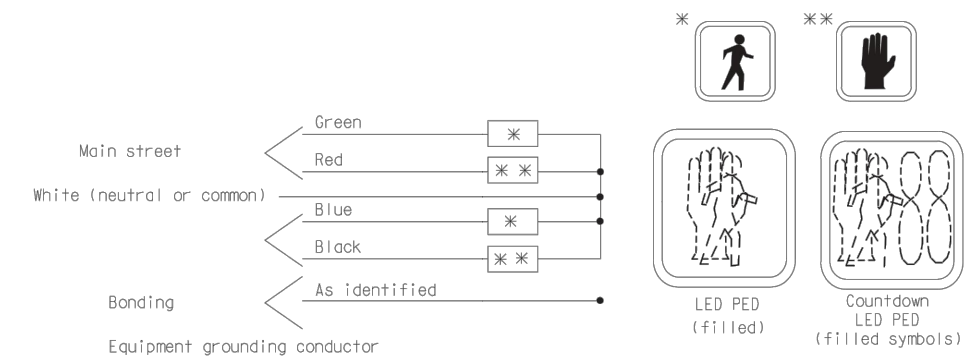
SHEET NO. 142 OF 155

APPROVED BY: _____

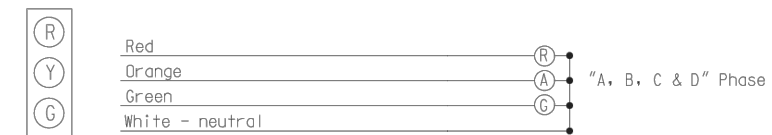


COLOR CODE FOR WIRING CONNECTING TRAFFIC SIGNAL LAMPS

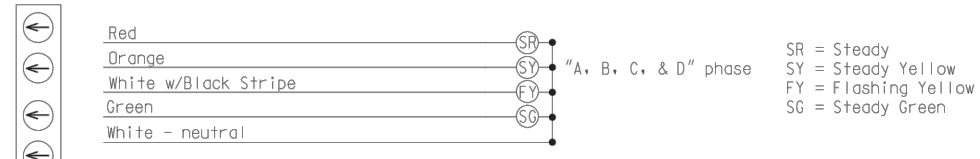
NOTE: No splices allowed between traffic signal head and controller.



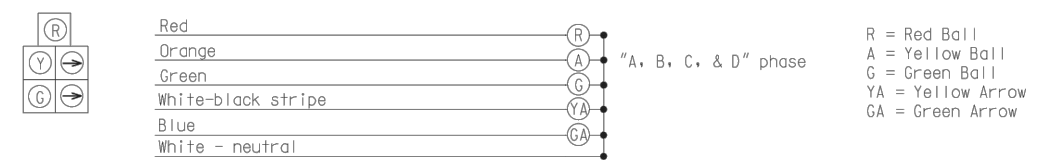
COLOR CODE FOR WIRING CONNECTING PEDESTRIAN SIGNAL LAMPS (WALKING PERSON - HAND SYMBOL)



STANDARD - 3 COLOR SIGNAL DISPLAY

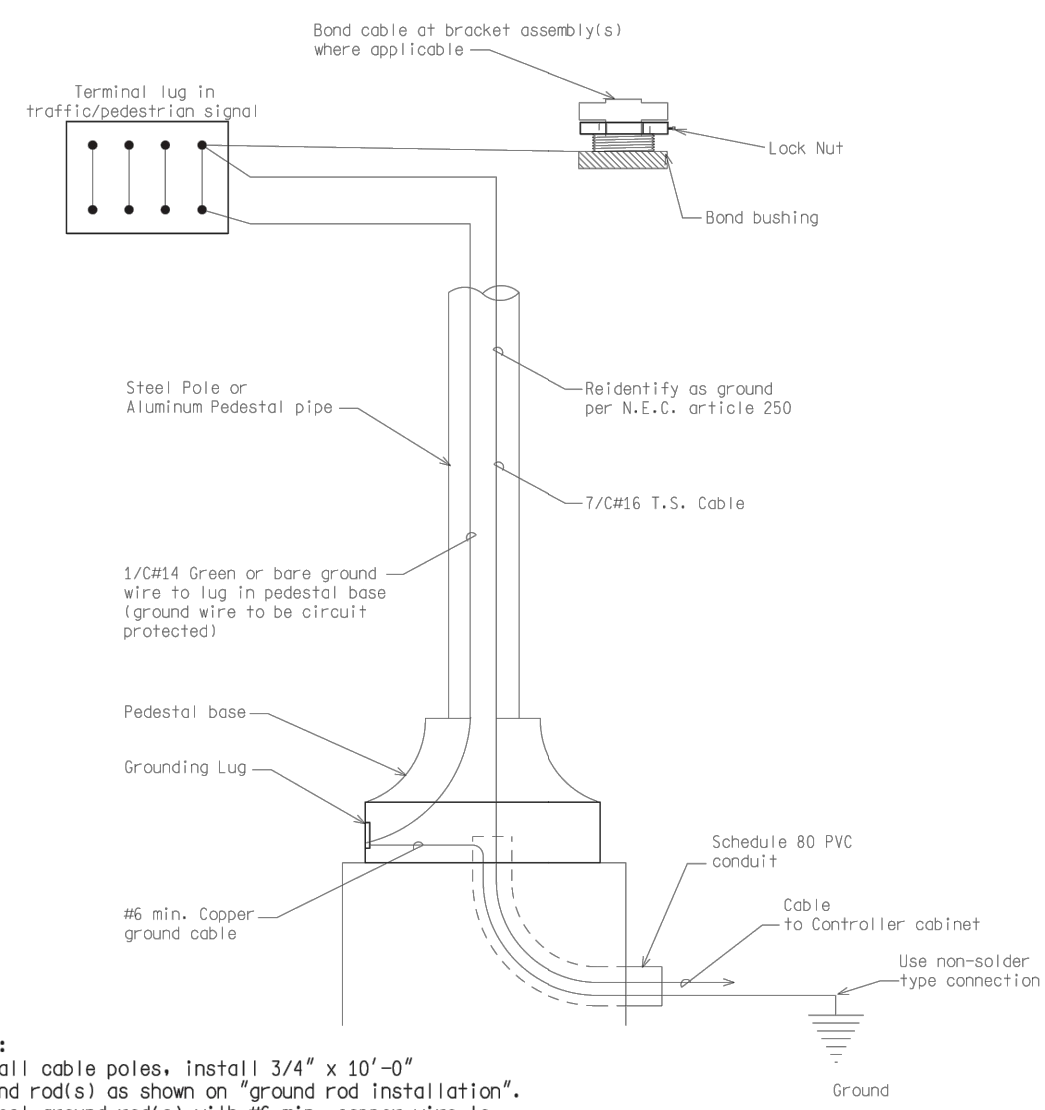


FLASHING YELLOW ARROW (FYA) - 4 COLOR SIGNAL DISPLAY



DOG HOUSE W/RIGHT TURNS - 5 COLOR SIGNAL DISPLAY

COLOR CODE FOR WIRING CONNECTING TRAFFIC SIGNAL LAMPS



NOTE:
For all cable poles, install 3/4" x 10'-0" ground rods) as shown on "ground rod installation". Connect ground rods) with #6 min. copper wire to messenger wire with non-solder type connection.

STEEL POLE/PEDESTAL GROUNDING DETAIL

NOT TO SCALE

ENGINEER OF DELIVERY	PLAN DATE	SIG-230-A	SHEET 1 of 6
ENGINEER OF DEVELOPMENT	FWHA APPROVAL DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR
COLOR CODE WIRING/
EQUIPMENT GROUNDING

FILE# : Bdl002/TR/S/Signal/Rev/Sp_Bdl/Tr/S/10230A.dgn Rev: 02/16/17

NOT TO SCALE

ENGINEER OF DELIVERY	PLAN DATE	SIG-230-A	SHEET 2 of 6
ENGINEER OF DEVELOPMENT	FWHA APPROVAL DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
COLOR CODE WIRING/
EQUIPMENT GROUNDING

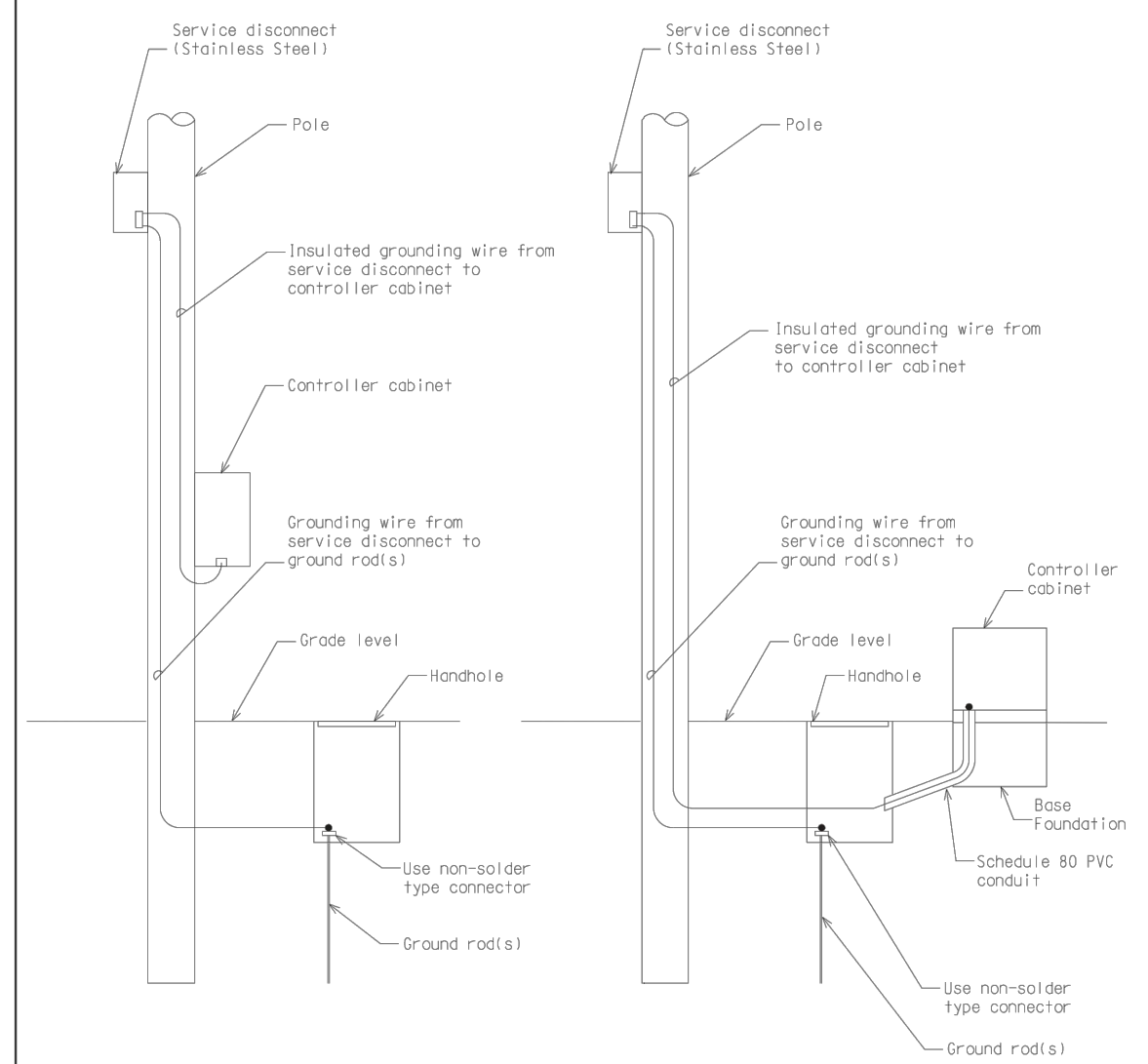
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NOT TO SCALE

ENGINEER OF DELIVERY	PLAN DATE	SIG-230-A	SHEET 3 of 6
ENGINEER OF DEVELOPMENT	FWHA APPROVAL DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
COLOR CODE WIRING/
EQUIPMENT GROUNDING

FILE# : Bdl002/TR/S/Signal/Rev/Sp_Bdl/Tr/S/10230A.dgn Rev: 02/16/17



GROUNDING

Install 3/4" x 10'-0" copper clad ground rods) as required to provide less than 10 OHM resistance to ground.
Grounding wire #6 AWG min. bare copper grounding wire shall be installed to meet N.E.C. and utility company specs.
Ground wire from disconnect to ground rod to be in conduit (wood pole or post) or inside the pole (steel). Ground wire from disconnect to controller cabinet to be in conduit (wood pole, wood post, and steel pole).

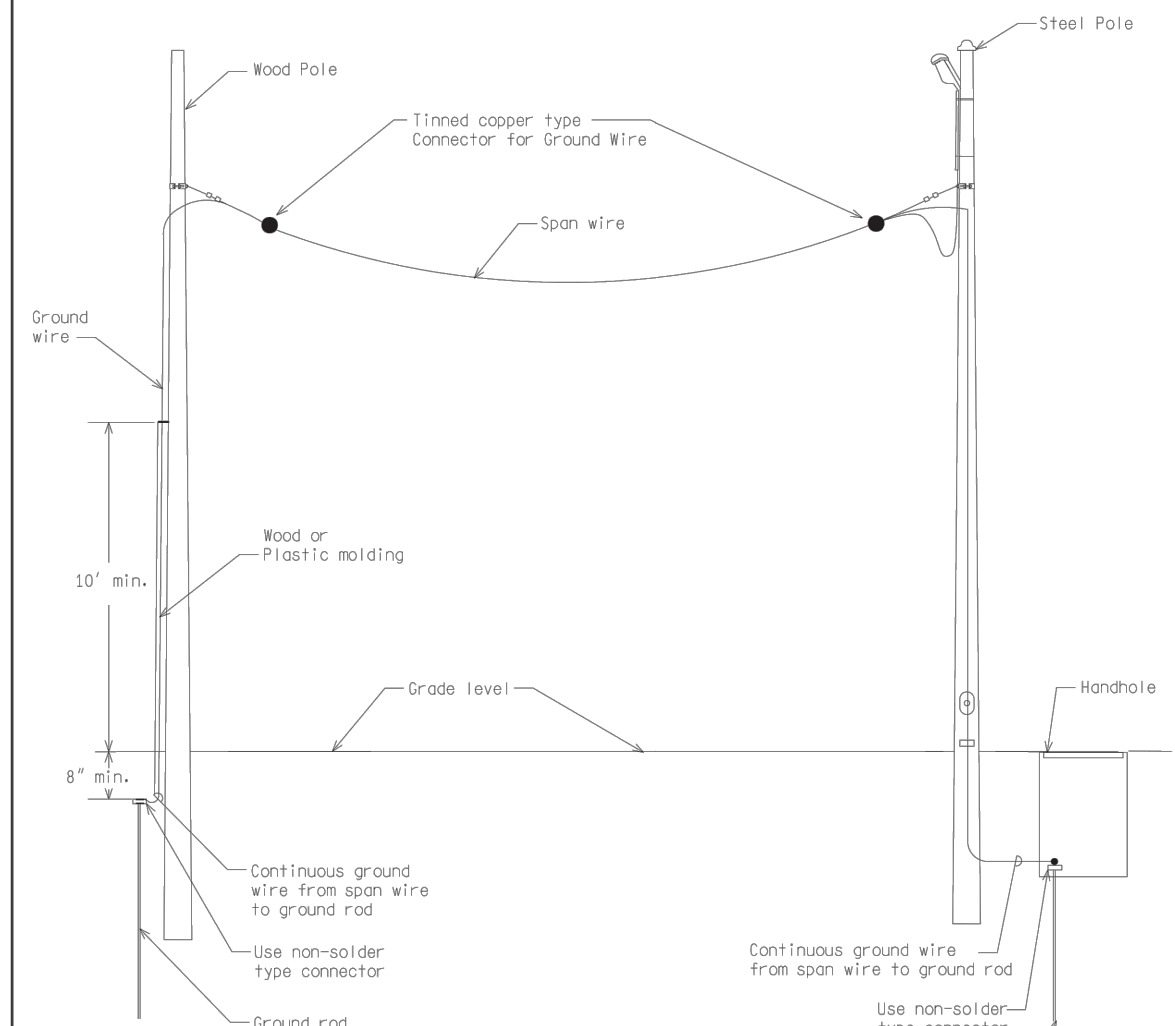
CONTROLLER CABINET GROUNDING DETAIL

NOT TO SCALE

ENGINEER OF DELIVERY	PLAN DATE	SIG-230-A	SHEET 4 of 6
ENGINEER OF DEVELOPMENT	FWHA APPROVAL DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
COLOR CODE WIRING/
EQUIPMENT GROUNDING

FILE# : Bdl002/TR/S/Signal/Rev/Sp_Bdl/Tr/S/10230A.dgn Rev: 02/16/17



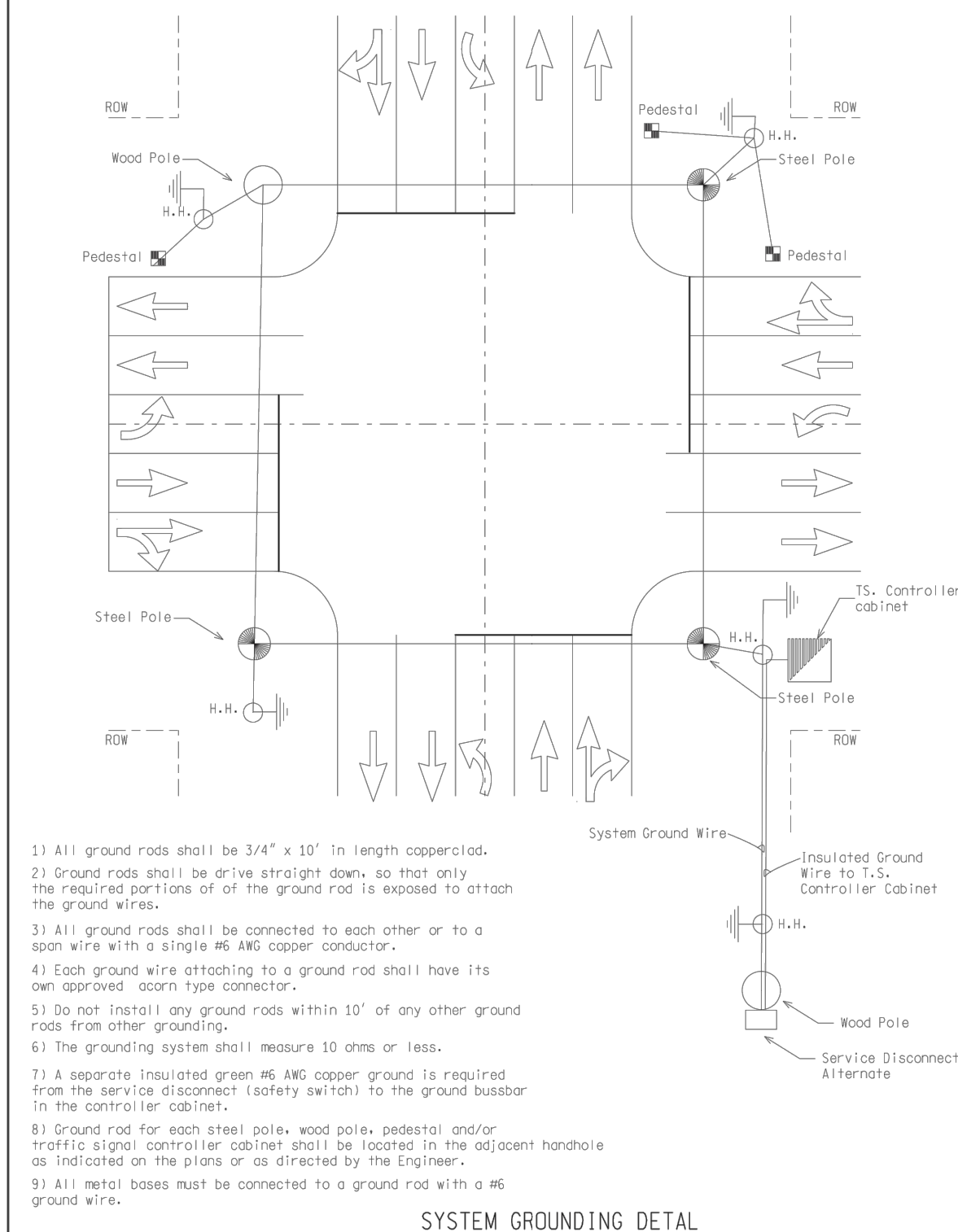
SPAN WIRE GROUNDING DETAIL

NOT TO SCALE

ENGINEER OF DELIVERY	PLAN DATE	SIG-230-A	SHEET 5 of 6
ENGINEER OF DEVELOPMENT	FWHA APPROVAL DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
COLOR CODE WIRING/
EQUIPMENT GROUNDING

FILE# : Bdl002/TR/S/Signal/Rev/Sp_Bdl/Tr/S/10230A.dgn Rev: 02/16/17



- All ground rods shall be 3/4" x 10' in length copper clad.
- Ground rods shall be driven straight down, so that only the required portions of of the ground rod is exposed to attach the ground wires.
- All ground rods shall be connected to each other or to a span wire with a single #6 AWG copper conductor.
- Each ground wire attaching to a ground rod shall have its own approved acorn type connector.
- Do not install any ground rods within 10' of any other ground rods from other grounding.
- The grounding system shall measure 10 ohms or less.
- A separate insulated green #6 AWG copper ground is required from the service disconnect (safety switch) to the ground busbar in the controller cabinet.
- Ground rod for each steel pole, wood pole, pedestal and/or traffic signal controller cabinet shall be located in the adjacent handhole as indicated on the plans or as directed by the Engineer.
- All metal bases must be connected to a ground rod with a #6 ground wire.

SYSTEM GROUNDING DETAIL

NOT TO SCALE

ENGINEER OF DELIVERY	PLAN DATE	SIG-230-A	SHEET 6 of 6
ENGINEER OF DEVELOPMENT	FWHA APPROVAL DATE		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN (SPECIAL DETAIL)
COLOR CODE WIRING/
EQUIPMENT GROUNDING

FILE# : Bdl002/TR/S/Signal/Rev/Sp_Bdl/Tr/S/10230A.dgn Rev: 02/16/17

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
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EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.

SEE ABOVE	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
		ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

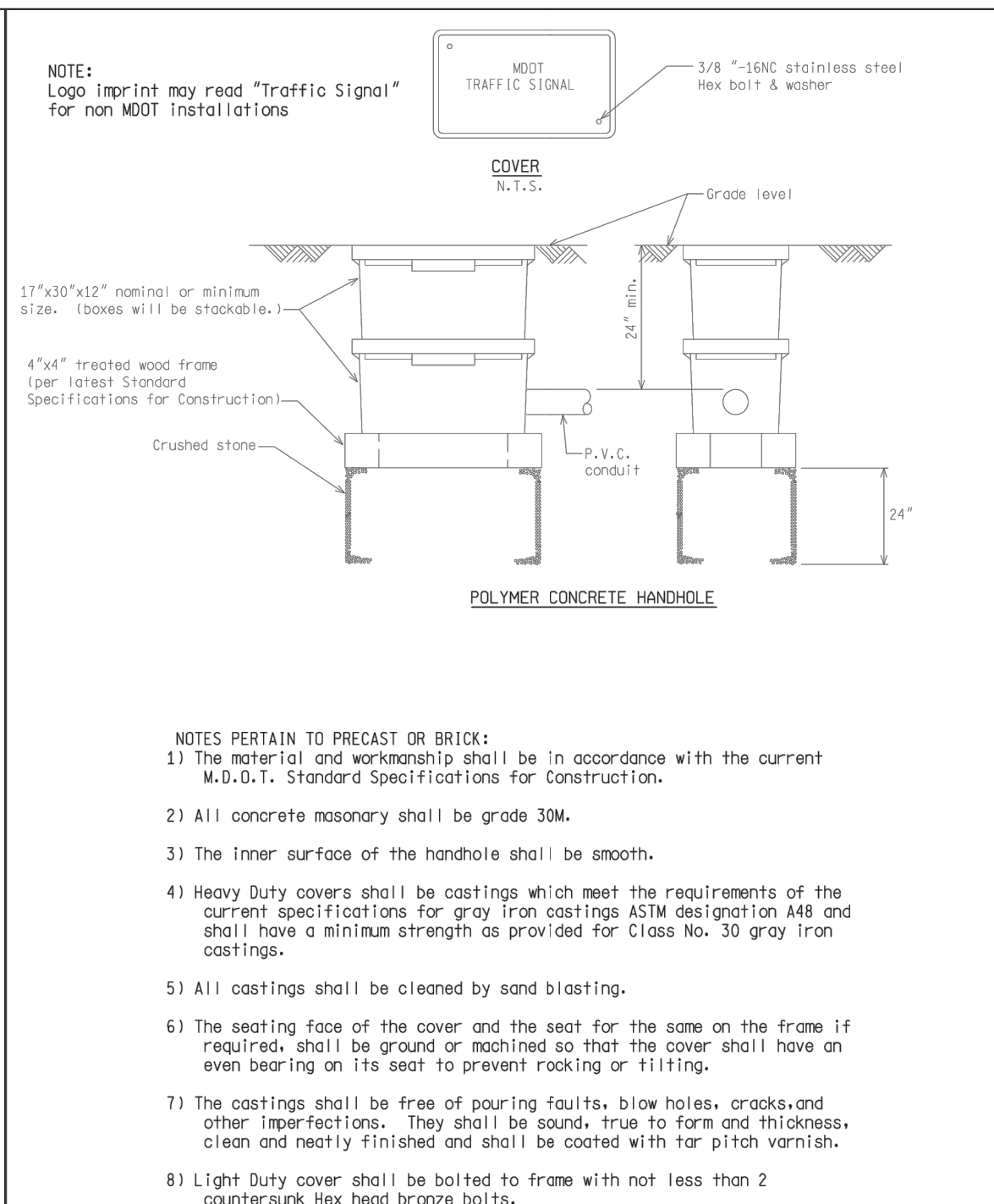
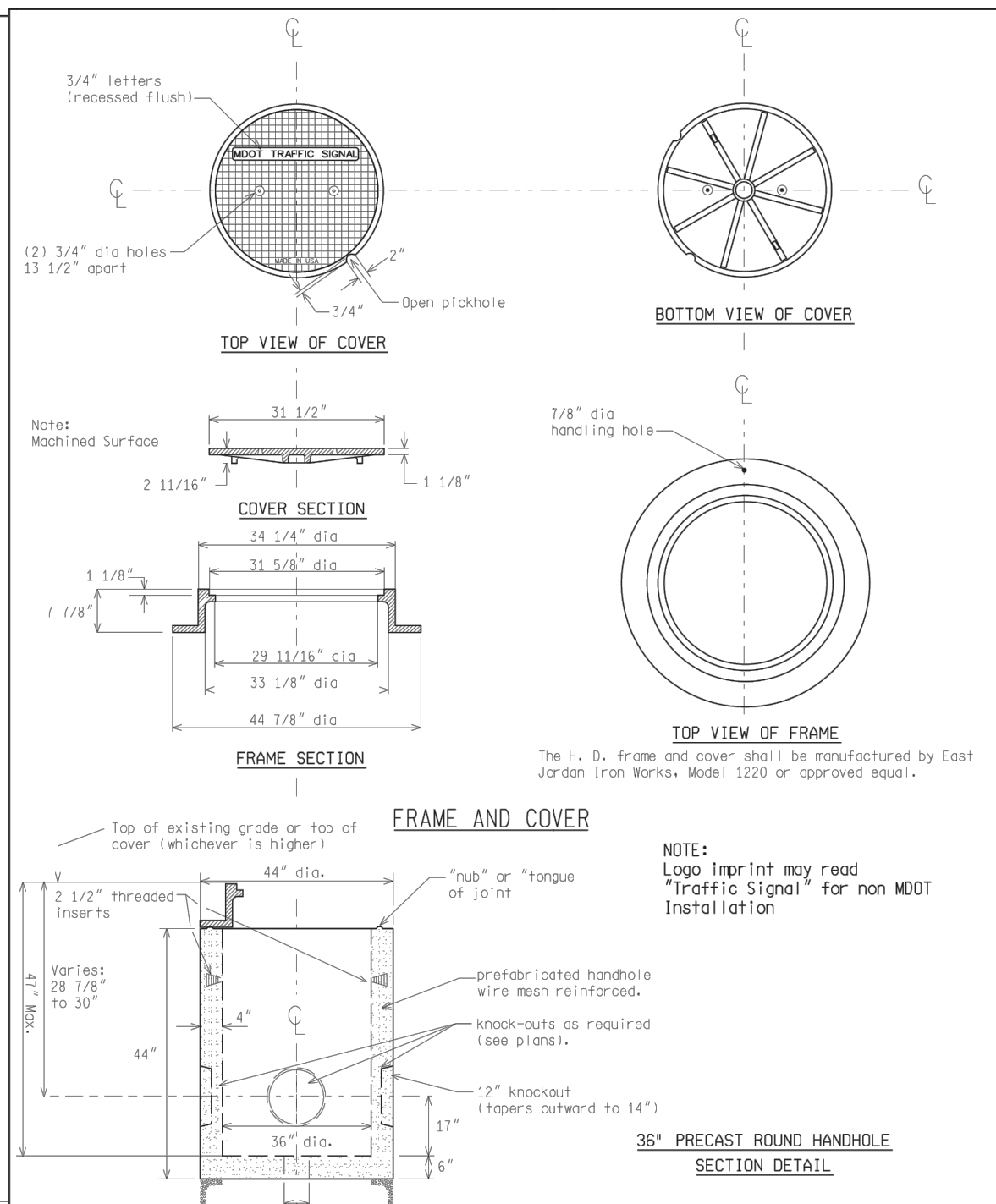
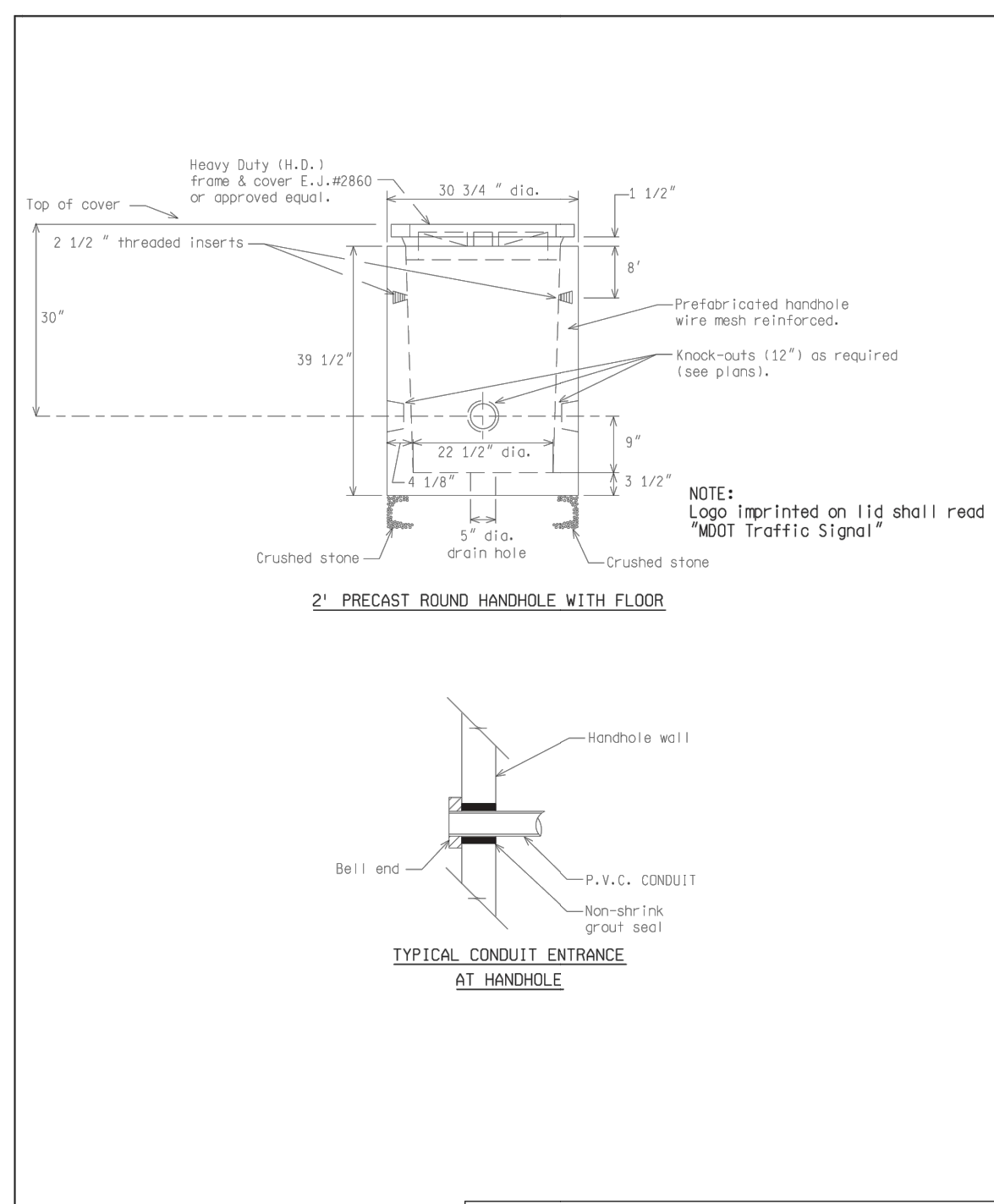
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DRAWING NO. 2021-008-SSD5

SHEET NO. 143 OF 155

APPROVED BY _____





NOT TO SCALE

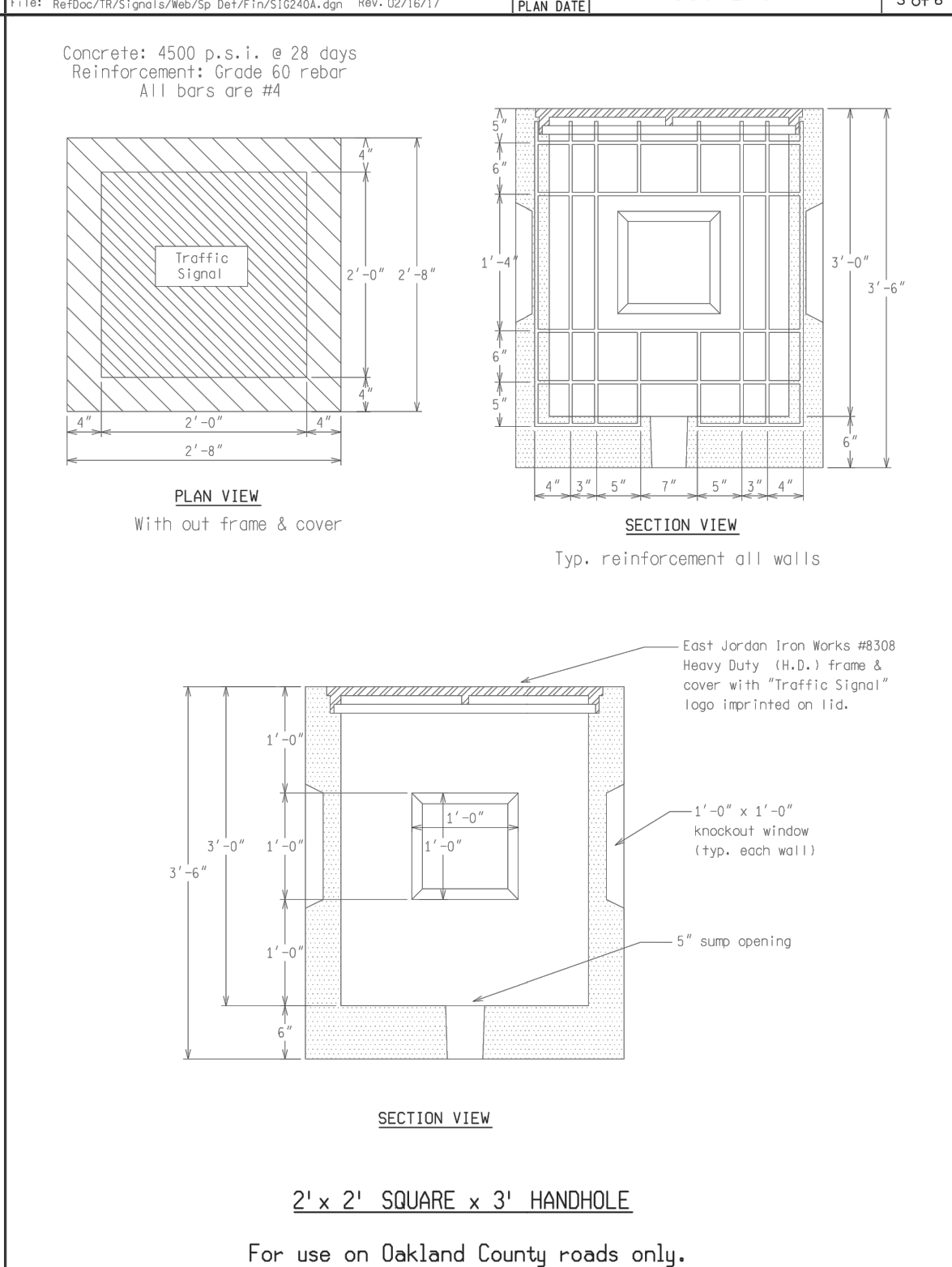
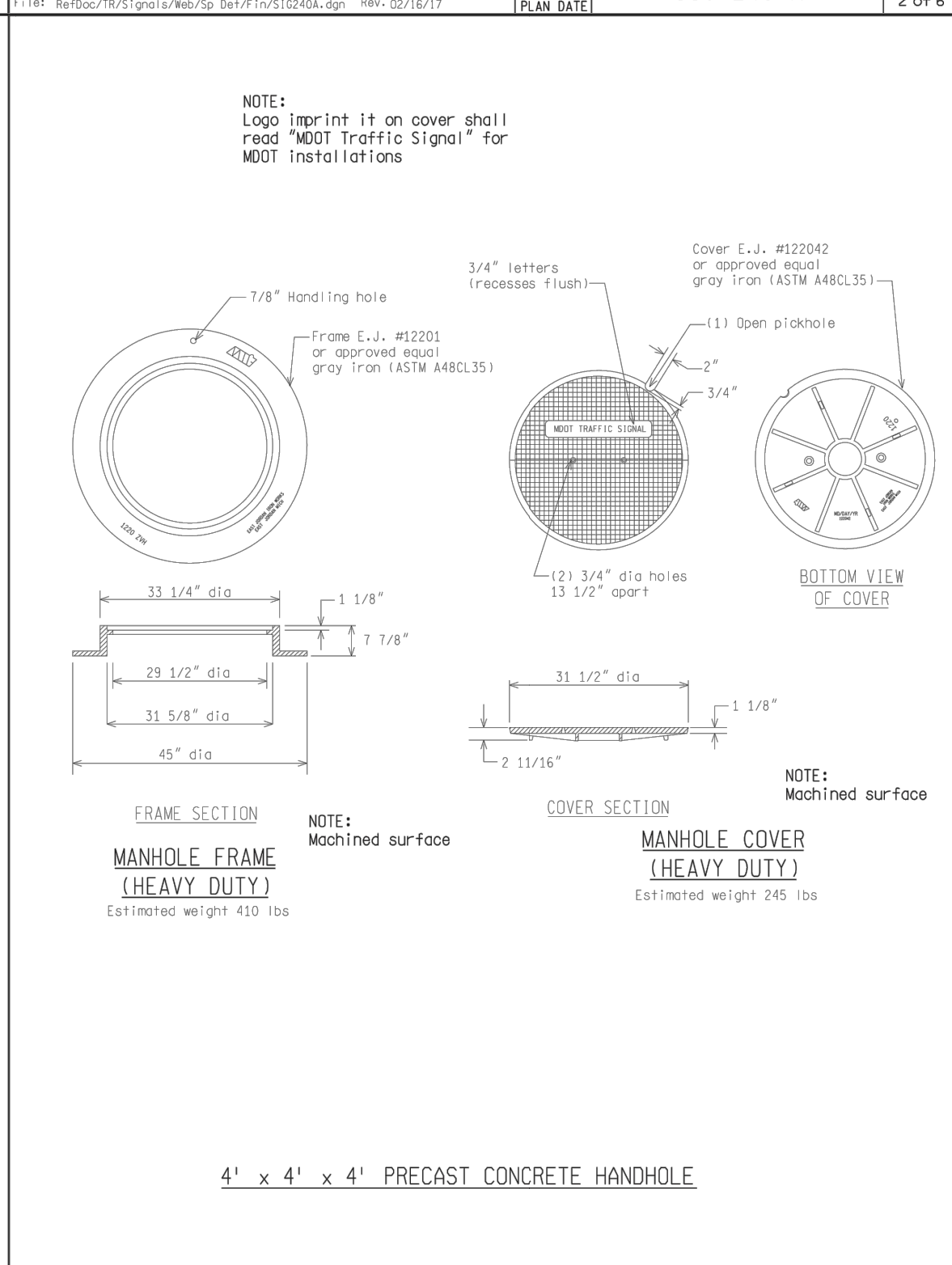
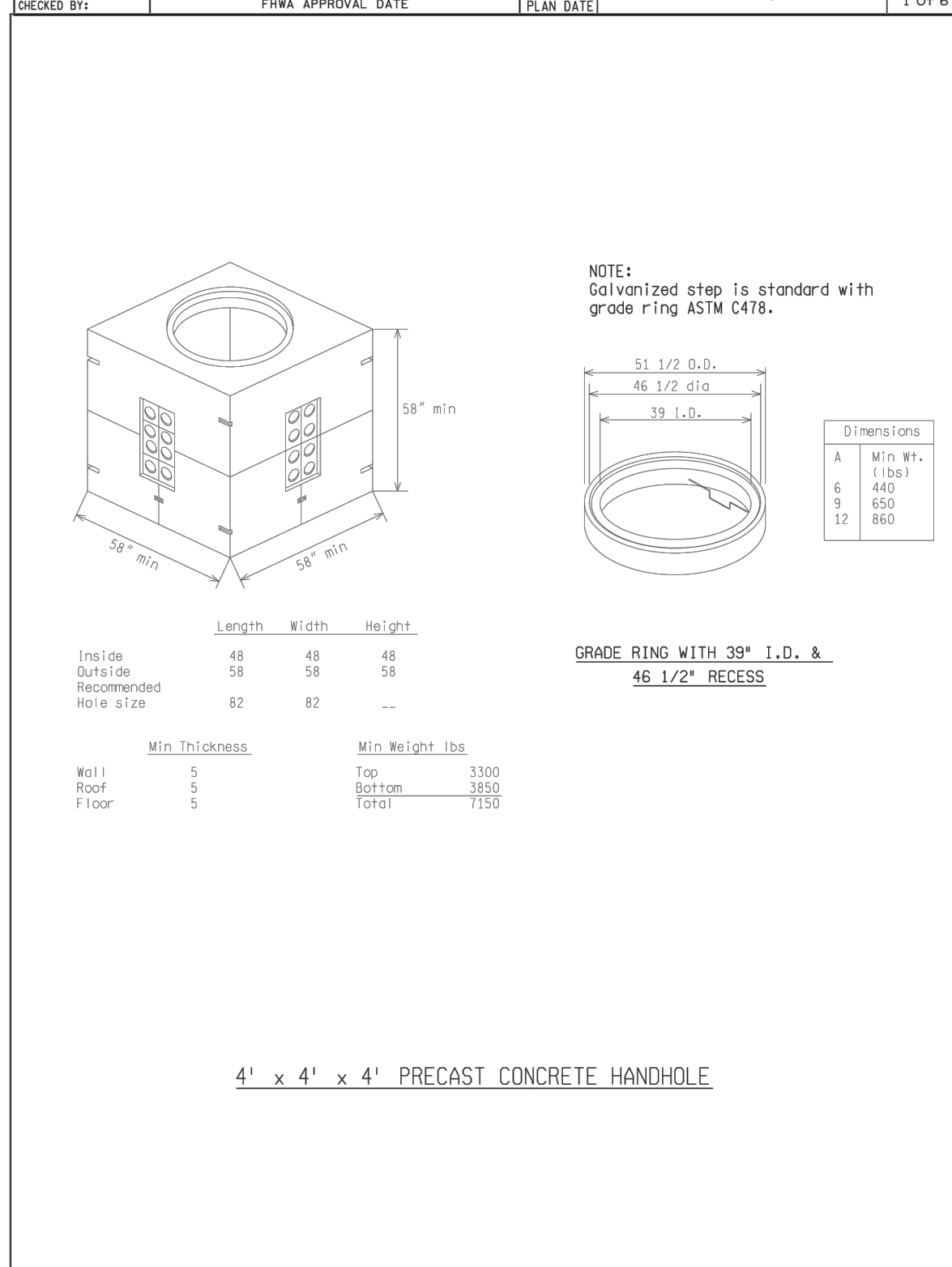
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ENGINEER OF DEVELOPMENT			
(SPECIAL DETAIL.)			
FWHA APPROVAL DATE			

NOT TO SCALE

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-240-A	SHEET 2 OF 6
ENGINEER OF DEVELOPMENT			
(SPECIAL DETAIL.)			
FWHA APPROVAL DATE			

NOT TO SCALE

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-240-A	SHEET 3 OF 6
ENGINEER OF DEVELOPMENT			
(SPECIAL DETAIL.)			
FWHA APPROVAL DATE			



NOT TO SCALE

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-240-A	SHEET 4 OF 6
ENGINEER OF DEVELOPMENT			
(SPECIAL DETAIL.)			
FWHA APPROVAL DATE			

NOT TO SCALE

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-240-A	SHEET 5 OF 6
ENGINEER OF DEVELOPMENT			
(SPECIAL DETAIL.)			
FWHA APPROVAL DATE			

NOT TO SCALE

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-240-A	SHEET 6 OF 6
ENGINEER OF DEVELOPMENT			
(SPECIAL DETAIL.)			
FWHA APPROVAL DATE			

LEGEND

EXISTING FENCE	---//---//---	EXISTING SANITARY SEWER & MANHOLE	—S—○—	EXISTING TELEPHONE	—t—	EXISTING RD. & GRADE	—C—	PROPOSED SANITARY SEWER & MANHOLE	—S—●—	PROPOSED CURB & GUTTER	—
CONTOUR	—	UTILITY POLE & GUY	—○/H—	GAS LINE	—G—	LEFT EDGE/RD. GRADE	—	STORM SEWER & CAT. BAS.	—	SEE ABOVE	
STORM SEWER & CAT. BAS.	—	FIRE HYDRANT ASSEMBLY	—	CABLE T.V.	—t—	RIGHT EDGE/RD. GRADE	—	WATER MAIN W/F.H. ASSEM.	—	BENCH MARK	
WATER MAIN & VALVE-IN-WELL	—W—	LIGHT POLE	—○—	ELECTRIC	—e—	CURB & GUTTER	—	CONTOUR	—	SURVEY BOOK	
WATER MAIN & VALVE-IN-BOX	—W—	END SECTION	—)	SIGN	—b—	EDGE/GRAVEL	—	ROAD & GRADE	—	REV. NO.	

SEE ABOVE		ORIGINAL ISSUE	10/6/23	INB	LCM
BENCH MARK		DATE		DR.BY	CH.BY
		DESCRIPTION			

DLZ

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

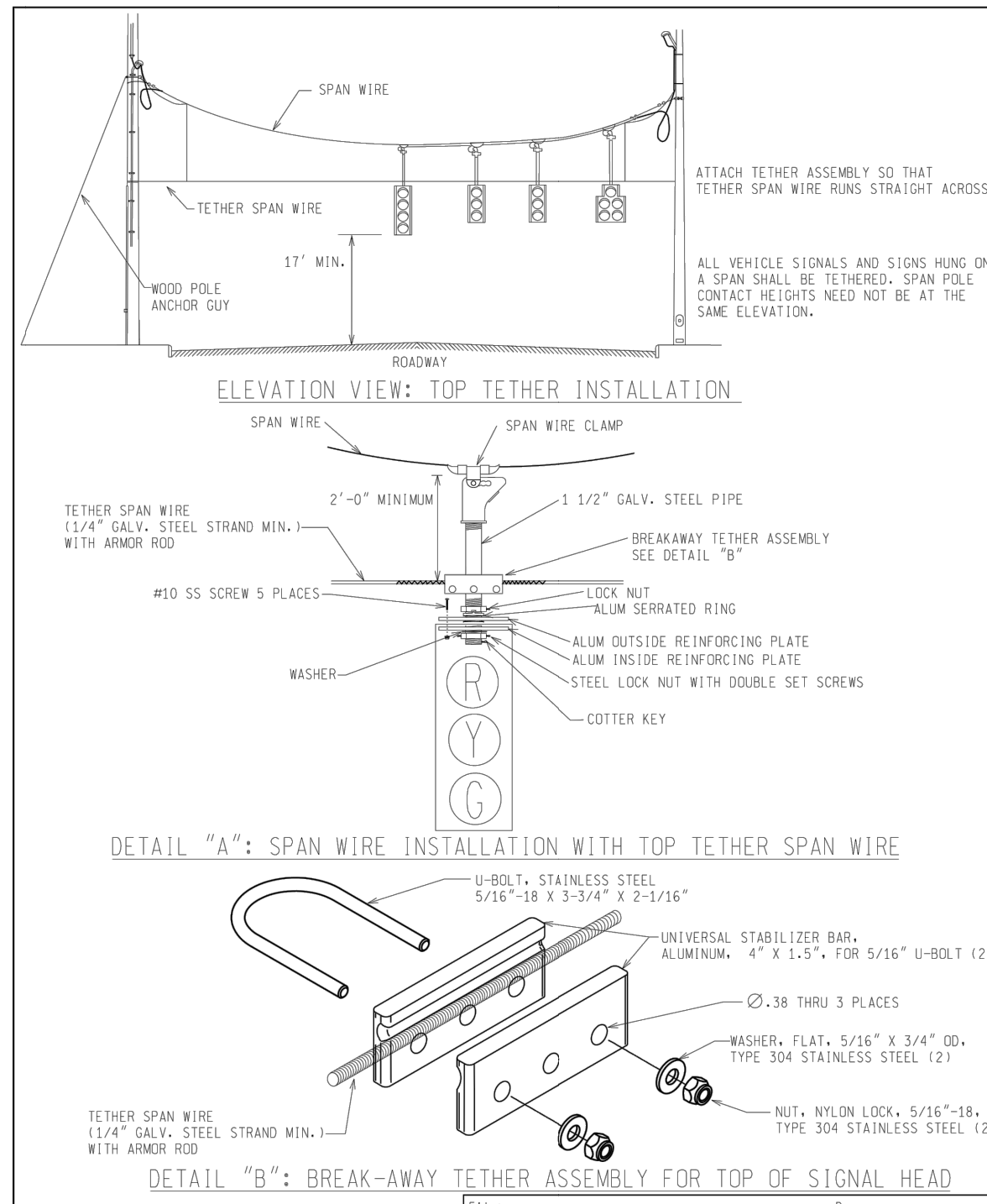
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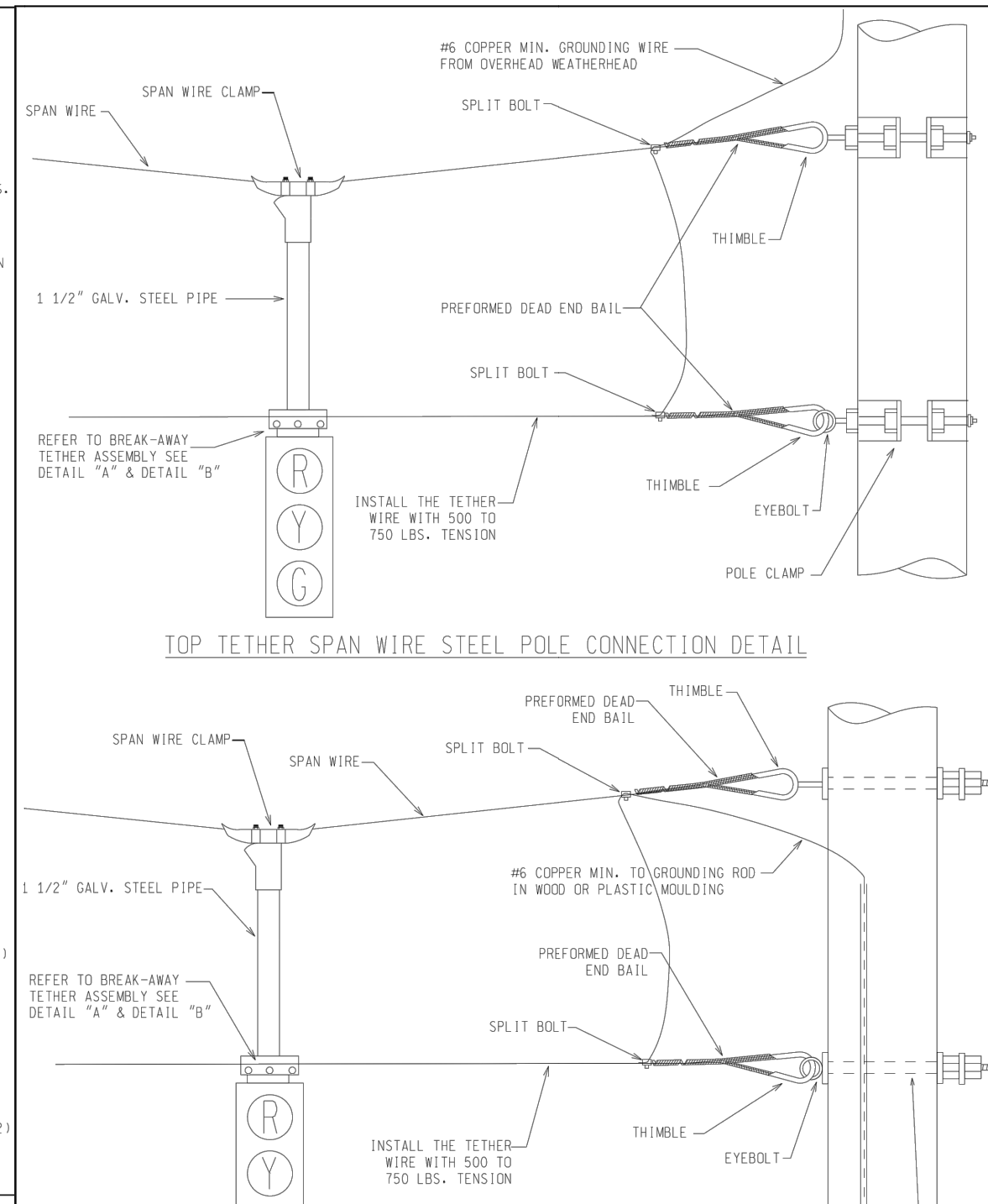
SHEET NO. 144 OF 155

APPROVED BY: _____

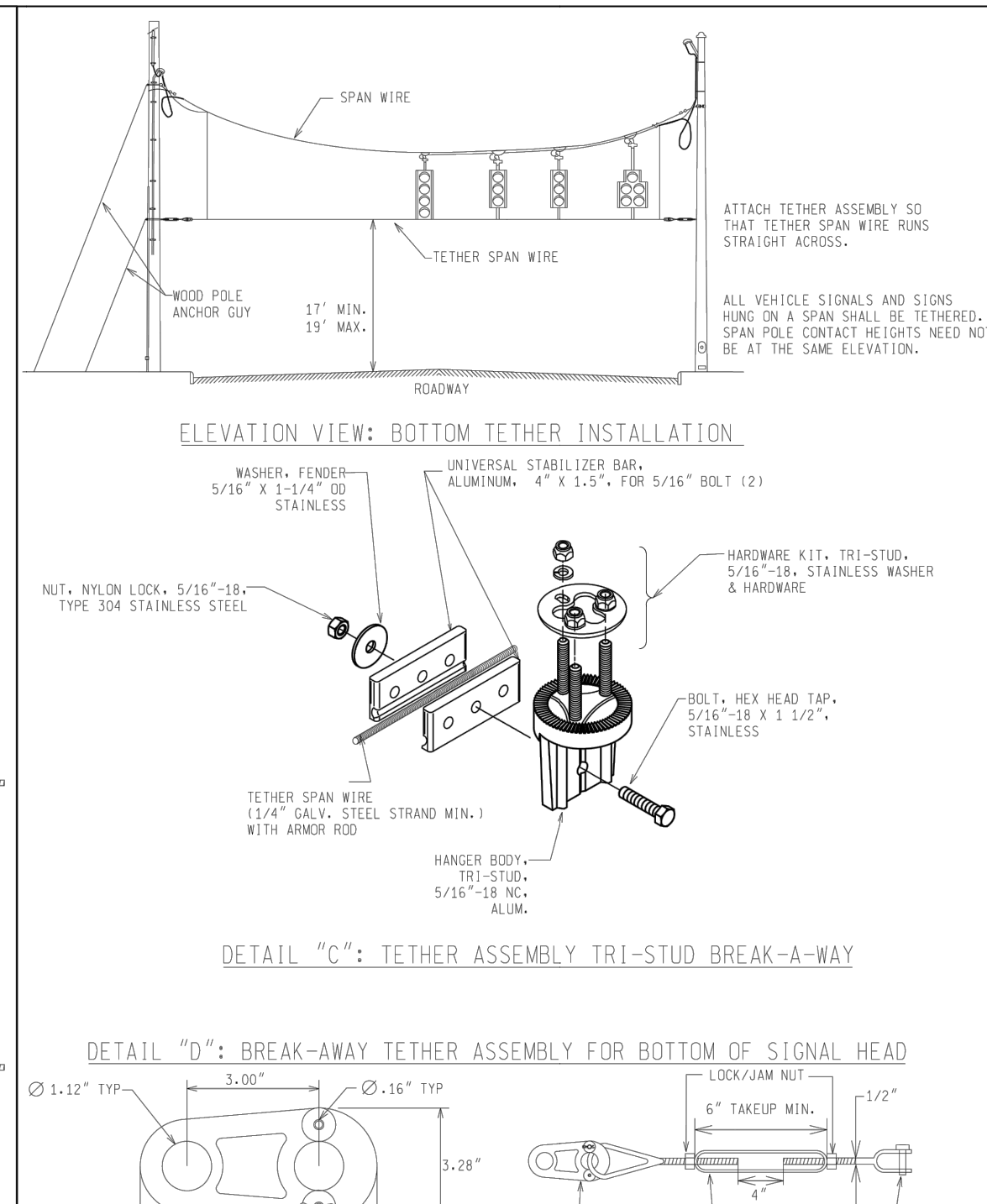
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DRAWING NO.	2021-008-SSD6
SHEET NO.	144 OF 155



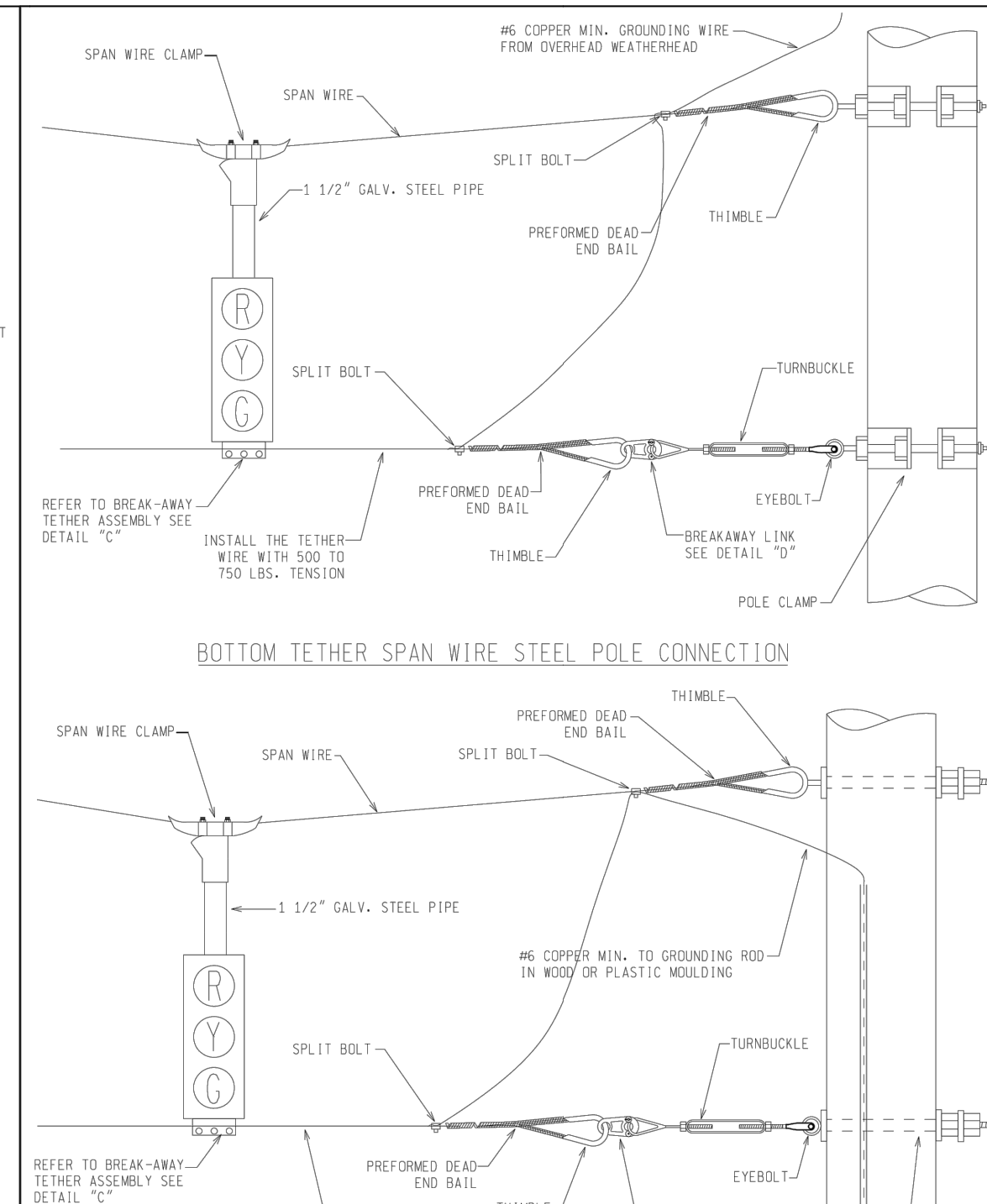
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ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	APPROVAL DATE	Rev. 04/08/19
<p>SPAN WIRE TETHER DETAILS</p>					



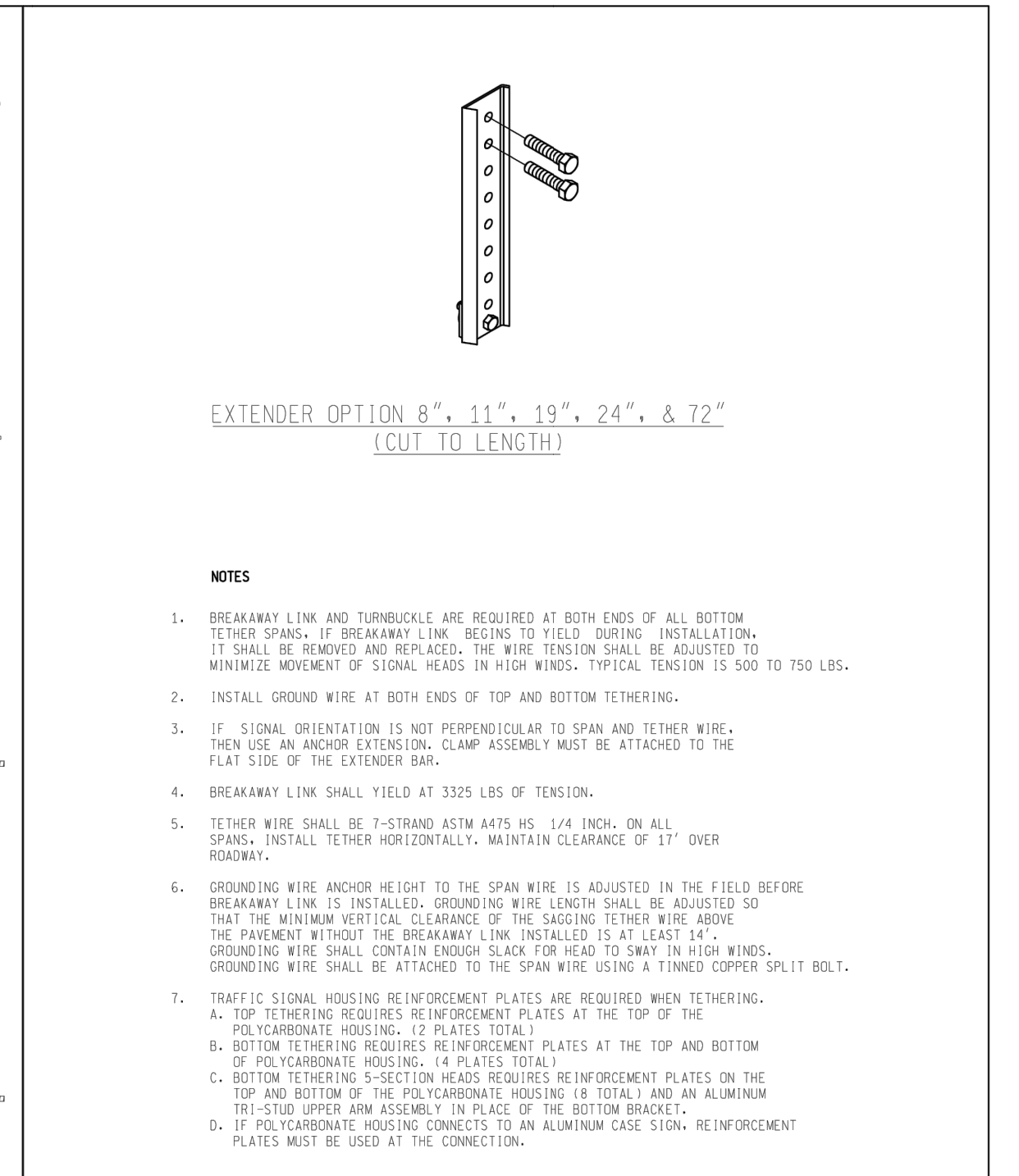
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ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	APPROVAL DATE	Rev. 04/08/19
<p>SPAN WIRE TETHER DETAILS</p>					



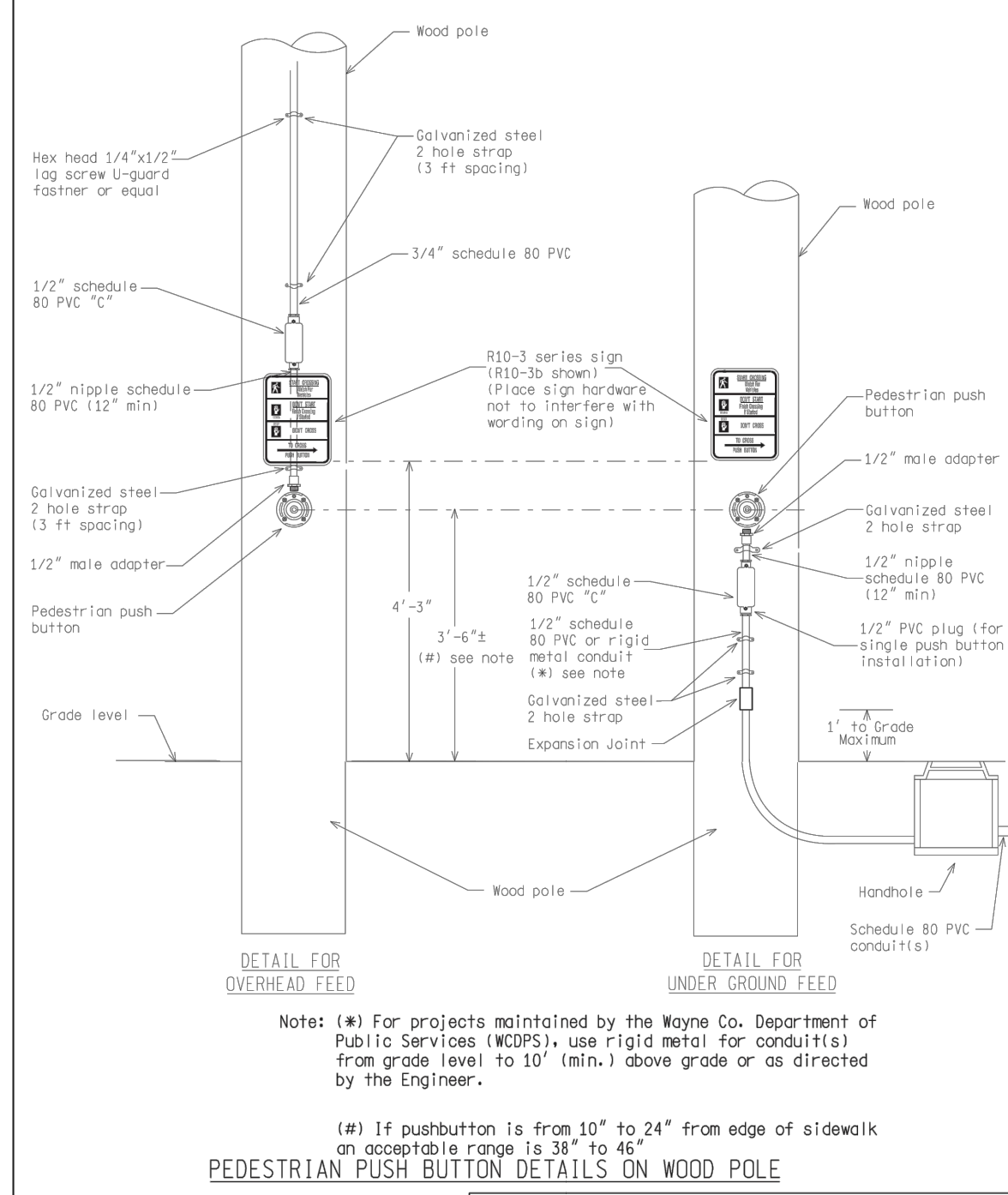
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ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	APPROVAL DATE	Rev. 04/08/19
<p>SPAN WIRE TETHER DETAILS</p>					



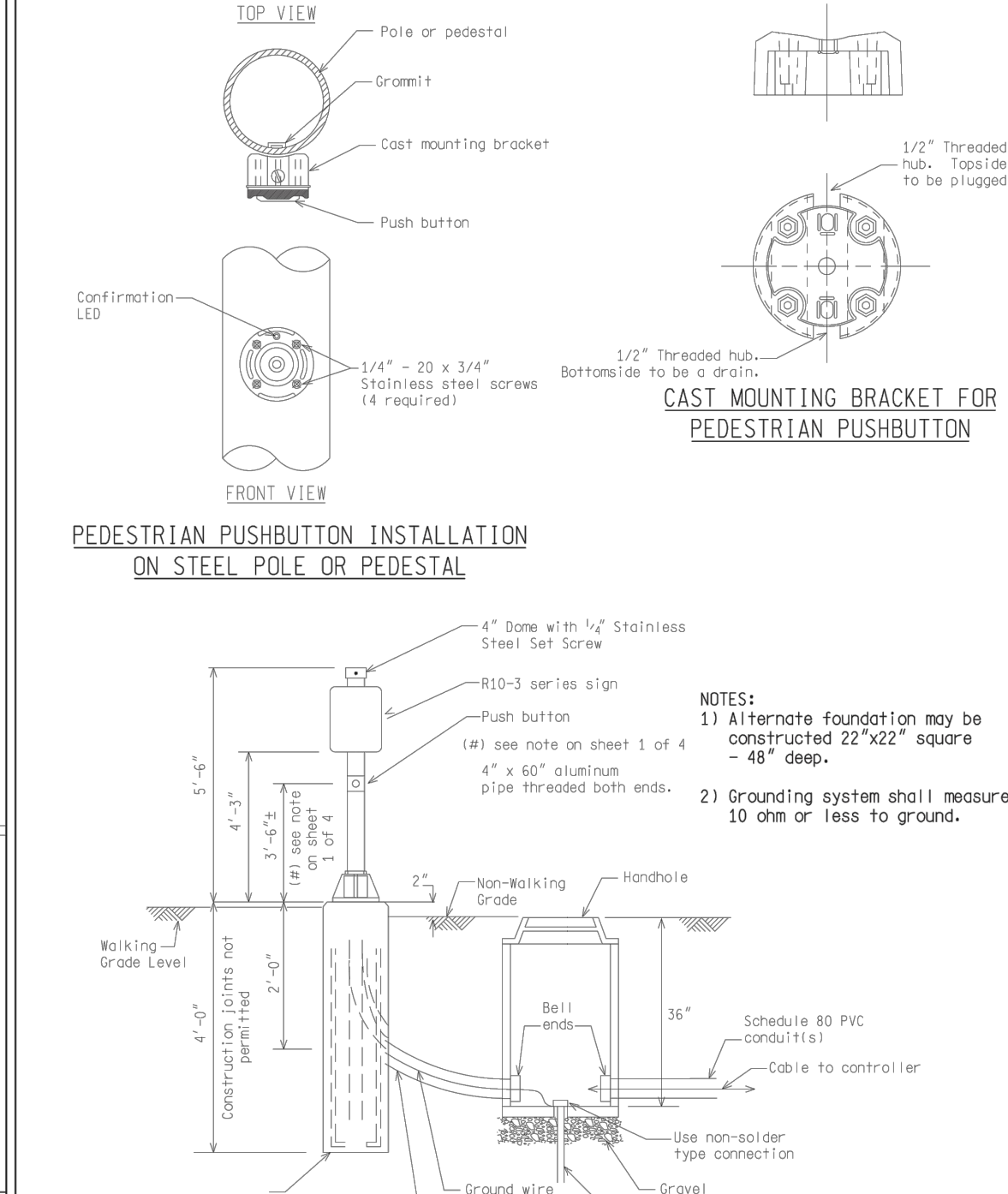
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ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	APPROVAL DATE	Rev. 04/08/19
<p>SPAN WIRE TETHER DETAILS</p>					



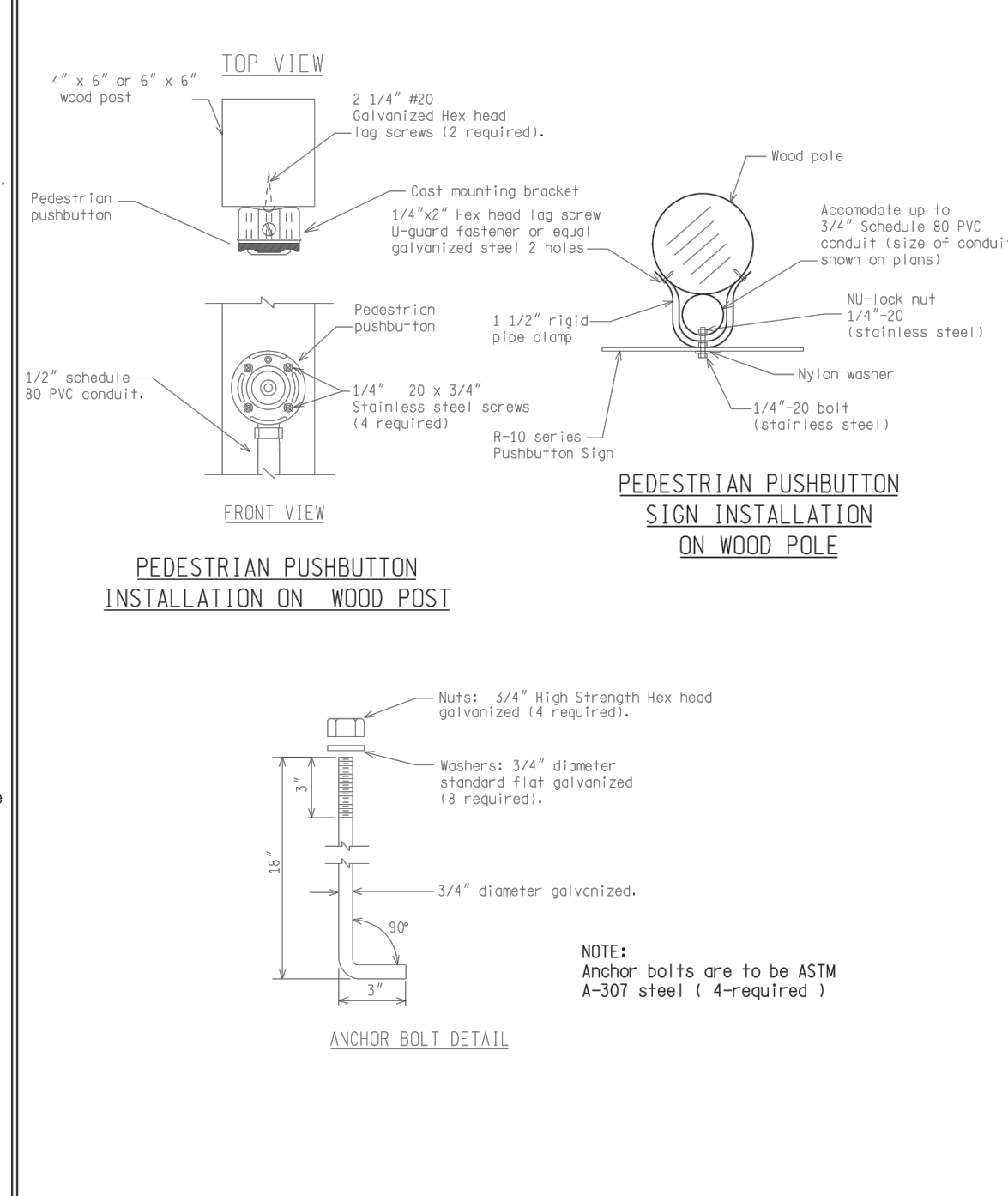
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ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	APPROVAL DATE	Rev. 04/08/19
<p>SPAN WIRE TETHER DETAILS</p>					



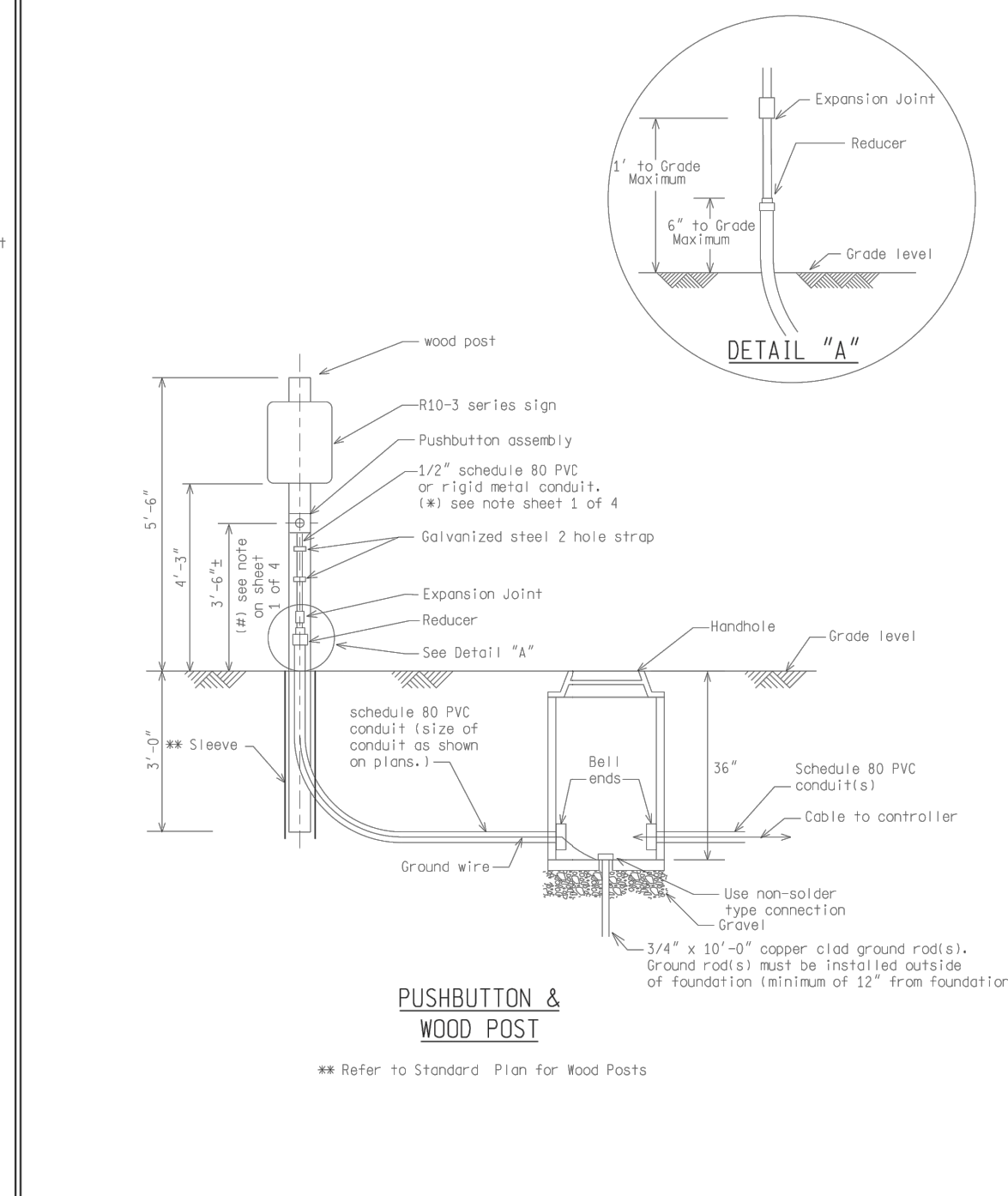
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ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-400-A	APPROVAL DATE	Rev. 02/16/17
<p>PEDESTRIAN PUSH BUTTON DETAILS</p>					



NOT TO SCALE		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR		SHEET 2 OF 4	
ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-400-A	APPROVAL DATE	Rev. 02/16/17
<p>PEDESTRIAN PUSH BUTTON DETAILS</p>					



NOT TO SCALE		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR		SHEET 3 OF 4	
ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-400-A	APPROVAL DATE	Rev. 02/16/17
<p>PEDESTRIAN PUSH BUTTON DETAILS</p>					



NOT TO SCALE		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR		SHEET 4 OF 4	
ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-400-A	APPROVAL DATE	Rev. 02/16/17
<p>PEDESTRIAN PUSH BUTTON DETAILS</p>					

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.

DATE	10/6/23	INB	LCM
DESCRIPTION	ORIGINAL ISSUE	DATE	10/6/23
DR.BY	INB	CH.BY	LCM
APPROVED BY			

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

SCALE: 0 INCH 1

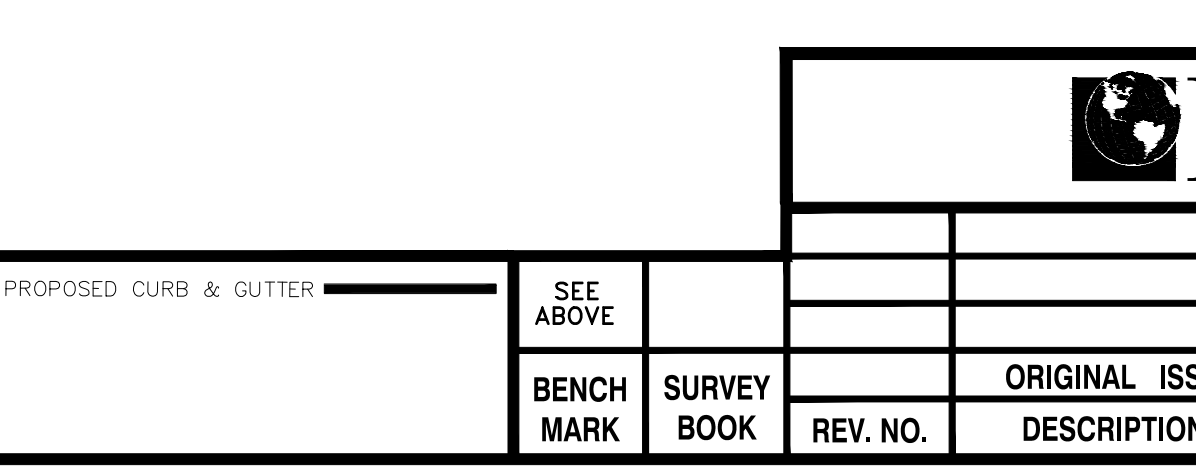
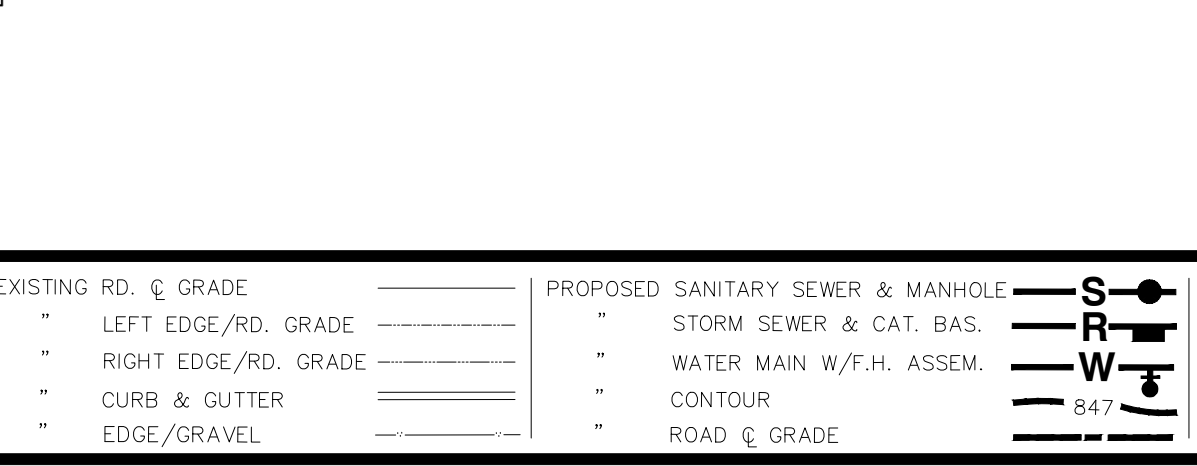
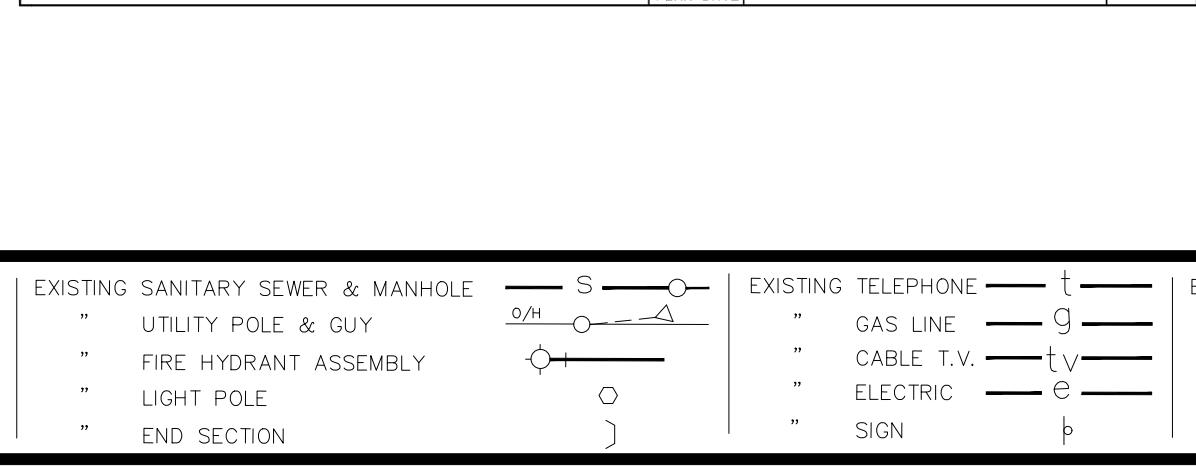
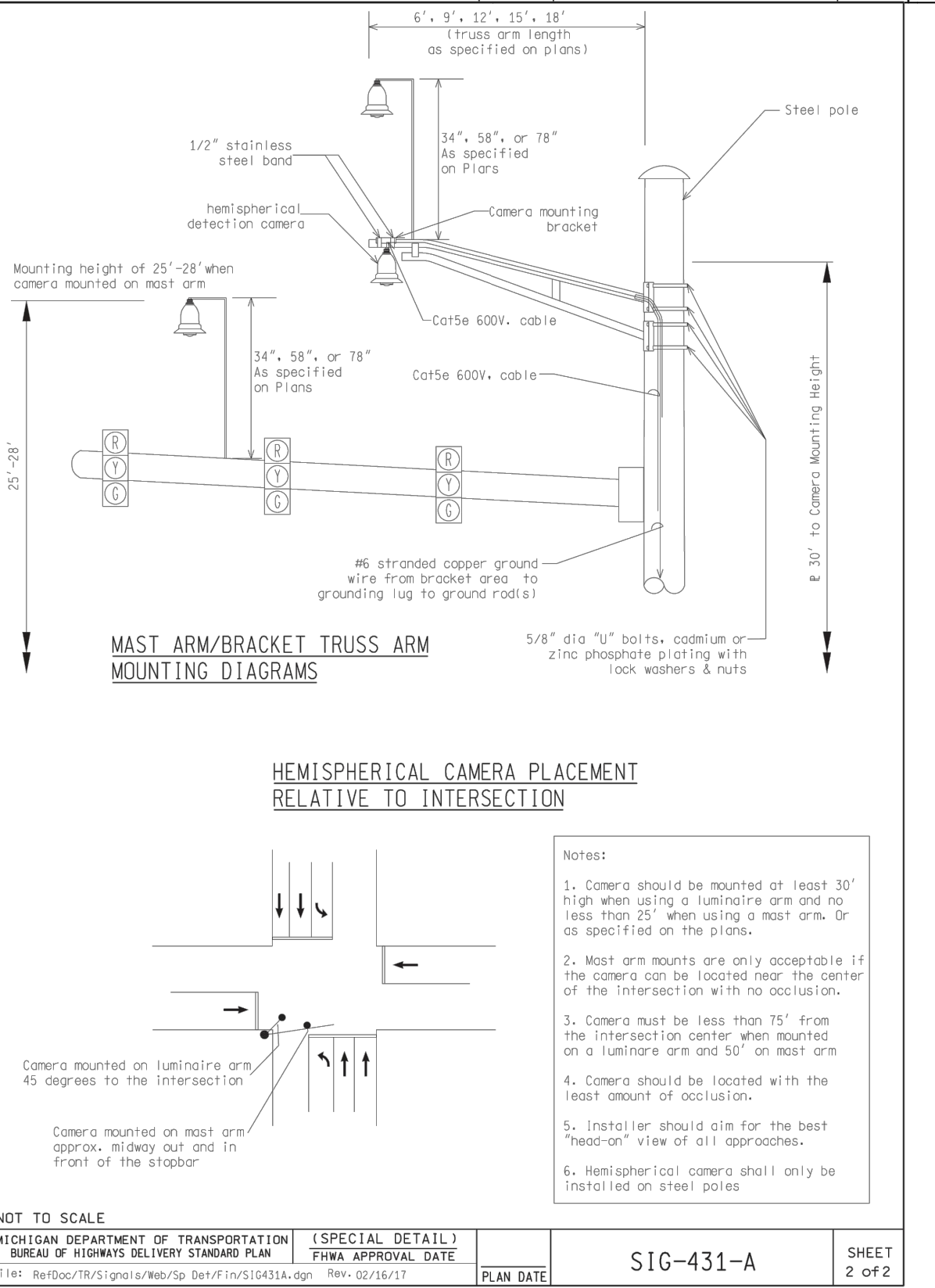
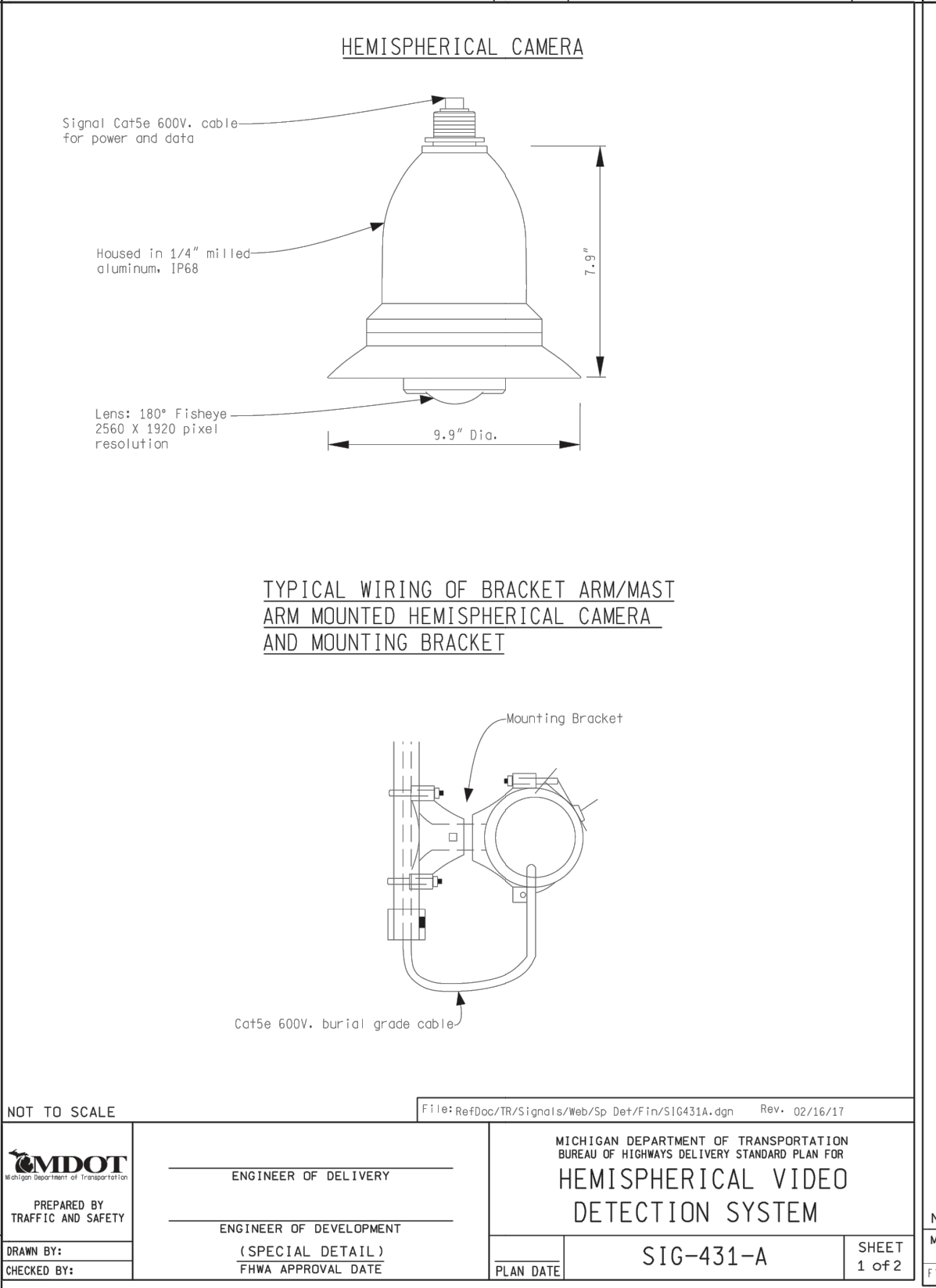
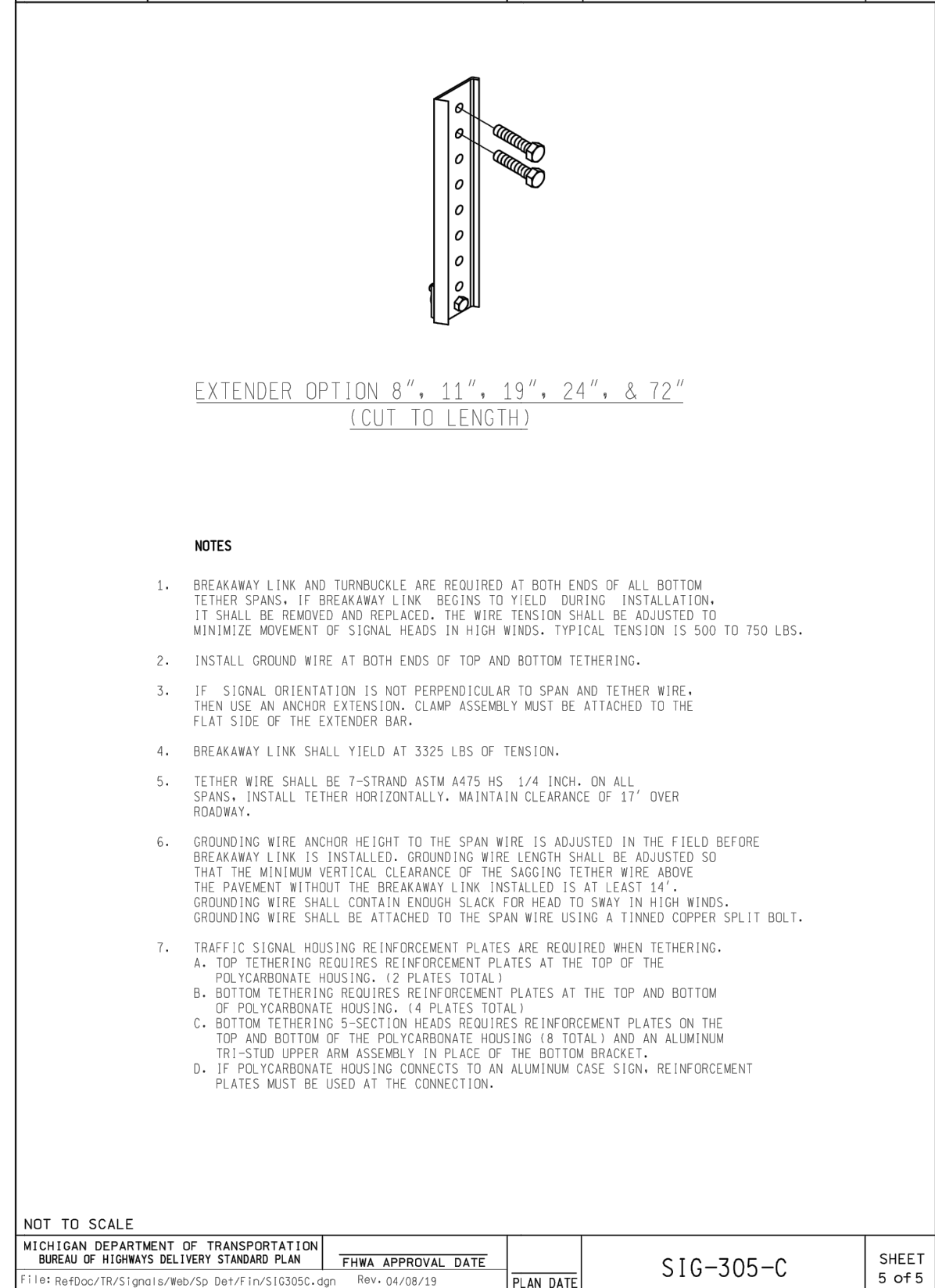
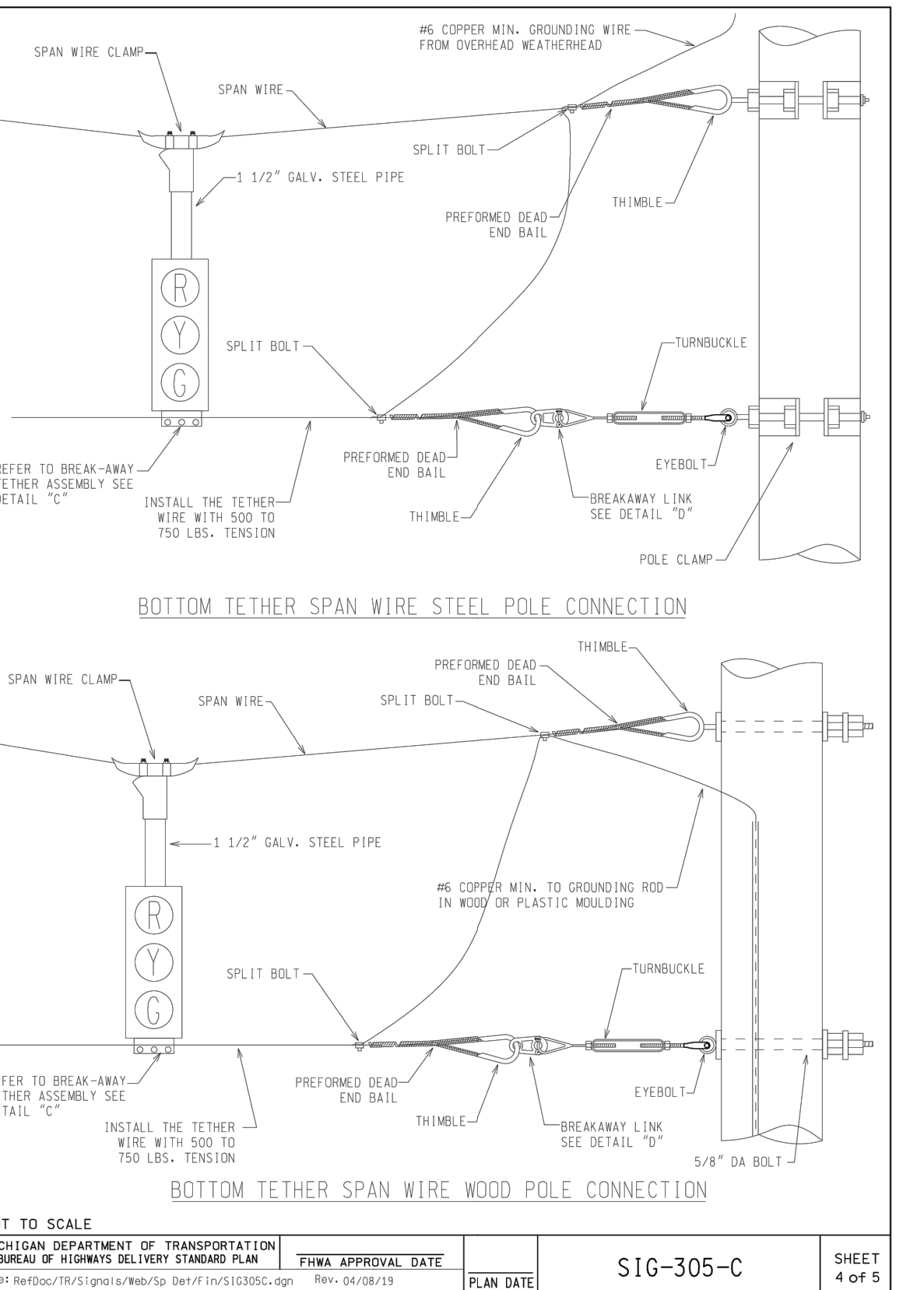
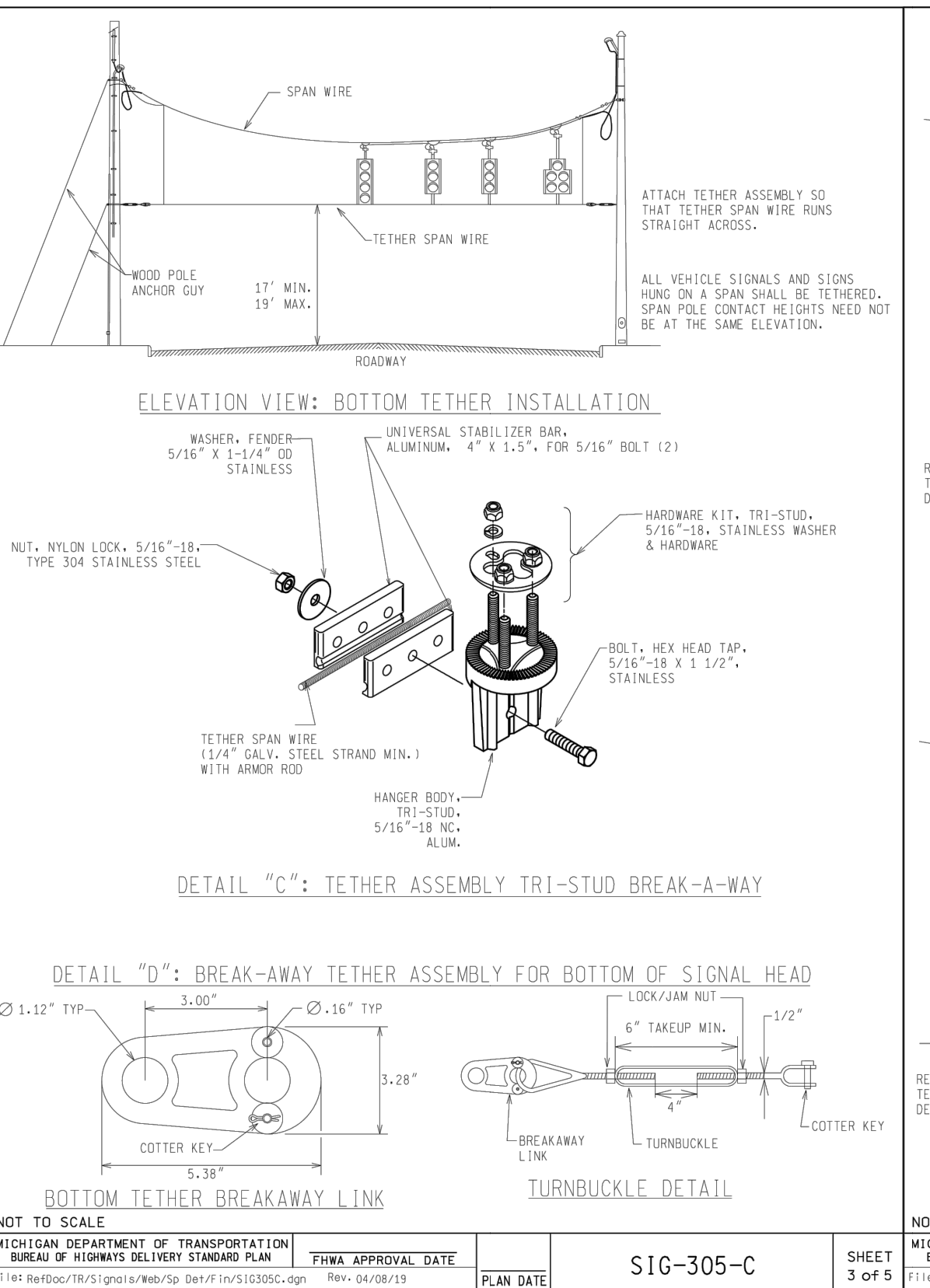
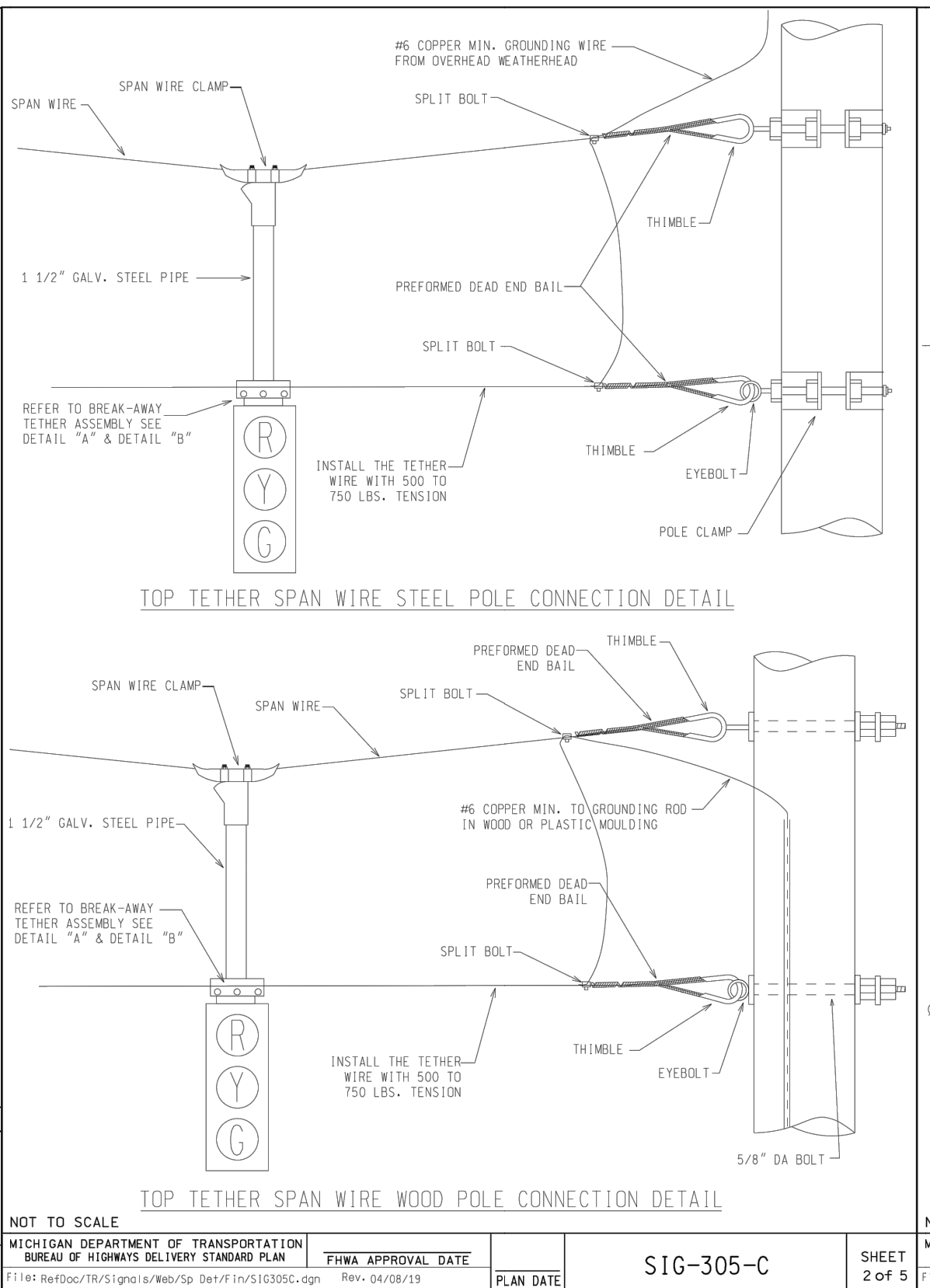
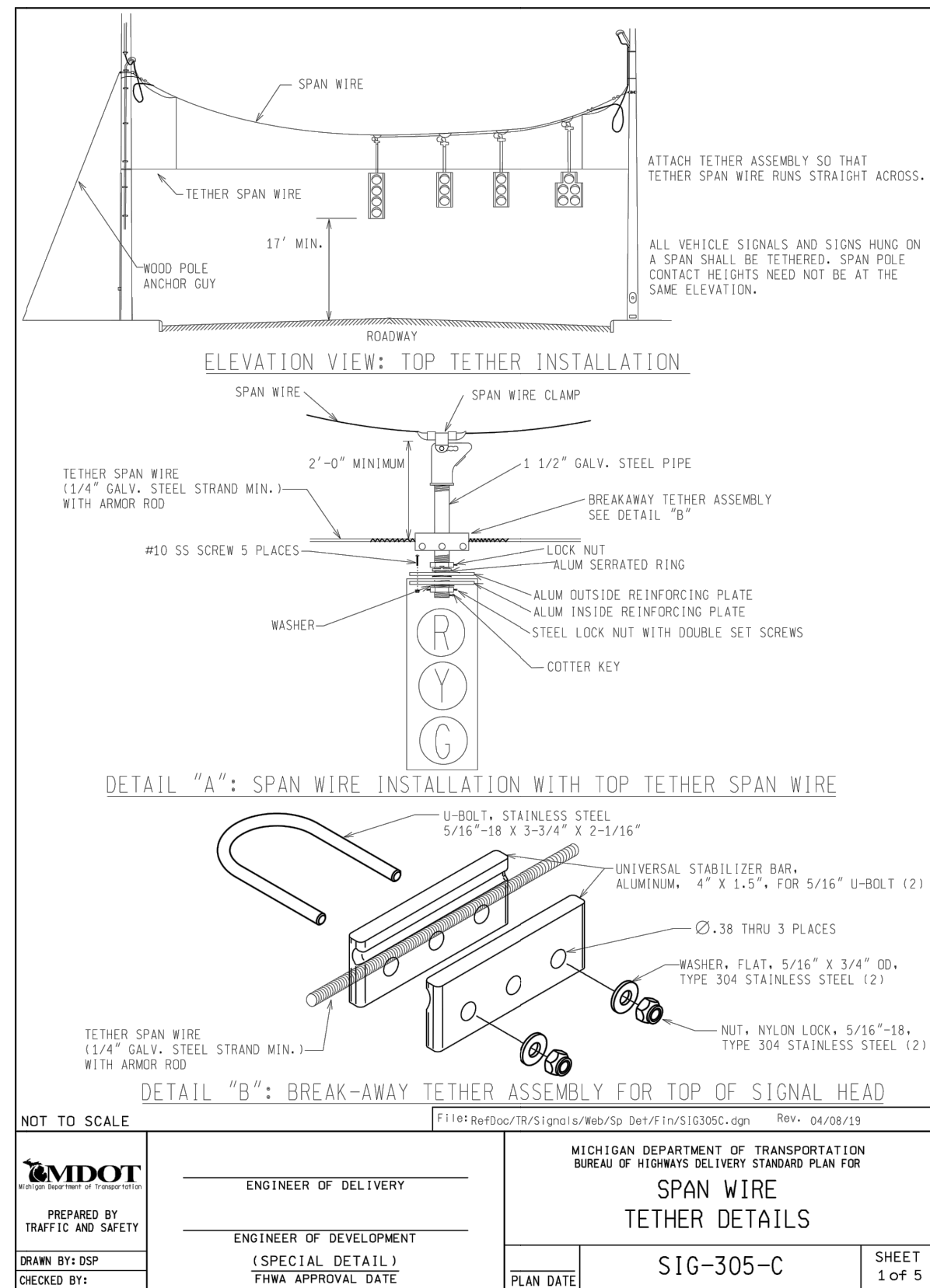
DRAWING NO. 2021-008-SSD7

SHEET NO. 145 OF 155

APPROVED BY: _____

DLZ

LEIGH C. MERRILL P.E., MICHIGAN NO. 6201061025



ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	SHEET 1 of 5
ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	SHEET 2 of 5
ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	SHEET 3 of 5
ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE	SIG-305-C	SHEET 4 of 5

LEGEND

EXISTING FENCE	---//---//---
CONTOUR	---847---
STORM SEWER & CAT. BAS.	---T---
WATER MAIN & VALVE-IN-WELL	---W---
WATER MAIN & VALVE-IN-BOX	---W---
EXISTING SANITARY SEWER & MANHOLE	---S---
UTILITY POLE & GUY	---O/H---
FIRE HYDRANT ASSEMBLY	---F---
LIGHT POLE	---O---
END SECTION	---)---
EXISTING TELEPHONE	---t---
GAS LINE	---G---
CABLE T.V.	---TV---
ELECTRIC	---E---
SIGN	---b---
EXISTING RD. & GRADE	---&---
LEFT EDGE/RD. GRADE	---&---
RIGHT EDGE/RD. GRADE	---&---
CURB & GUTTER	---&---
EDGE/GRAVEL	---&---
PROPOSED SANITARY SEWER & MANHOLE	---S---
STORM SEWER & CAT. BAS.	---T---
WATER MAIN W/F.H. ASSEM.	---W---
CONTOUR	---847---
ROAD & GRADE	---&---
SEE ABOVE	
BENCH MARK	
SURVEY BOOK	

REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

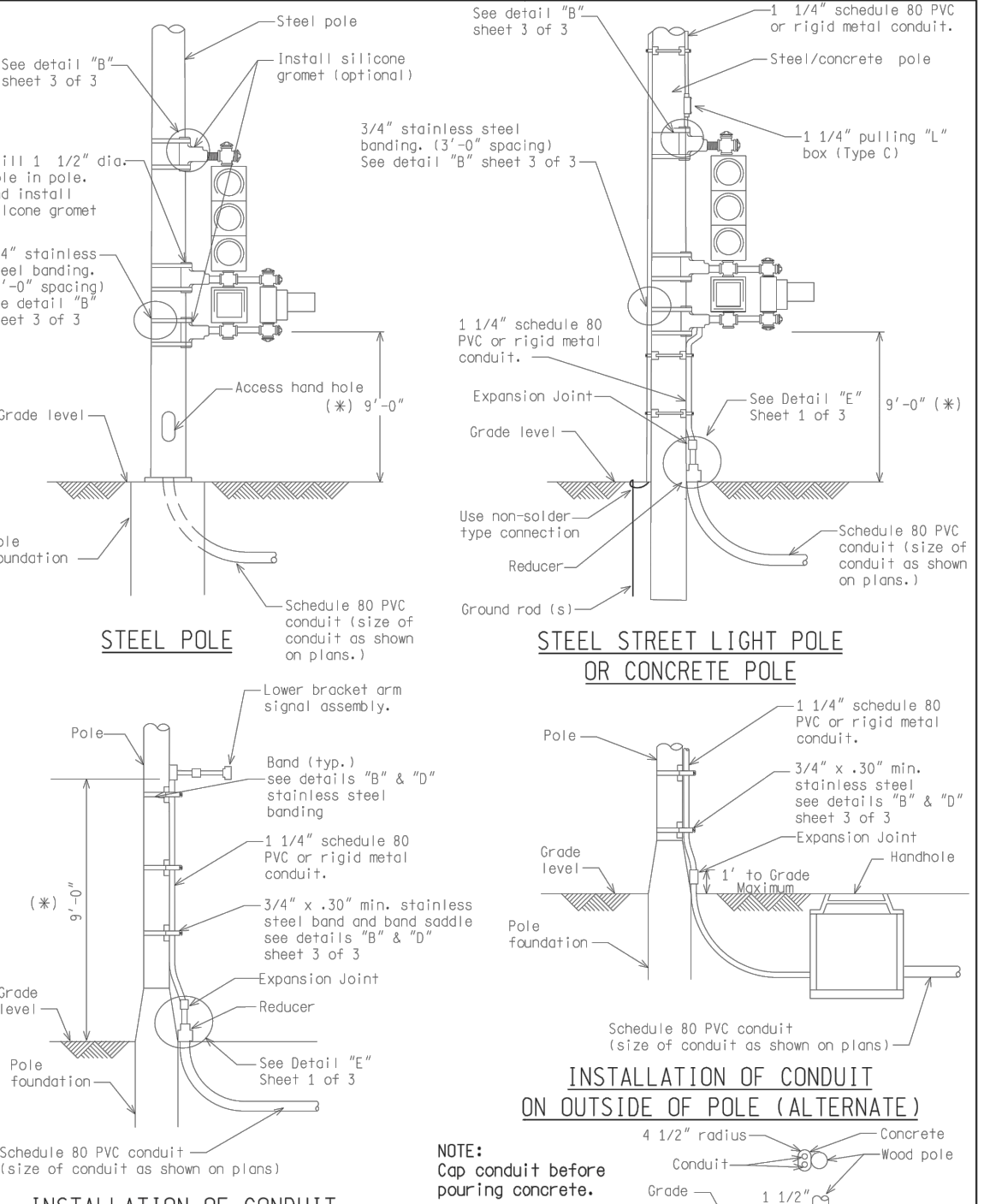
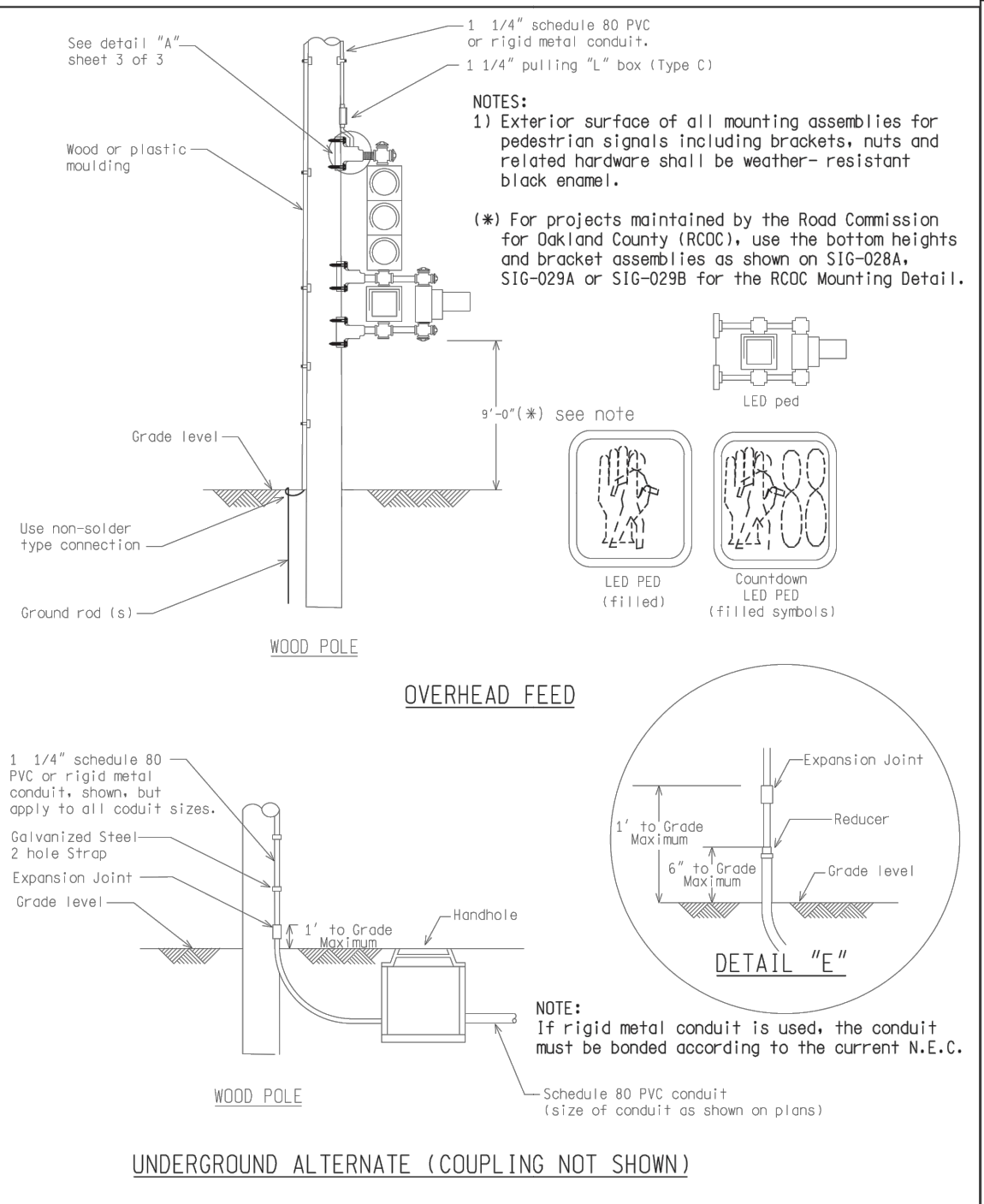
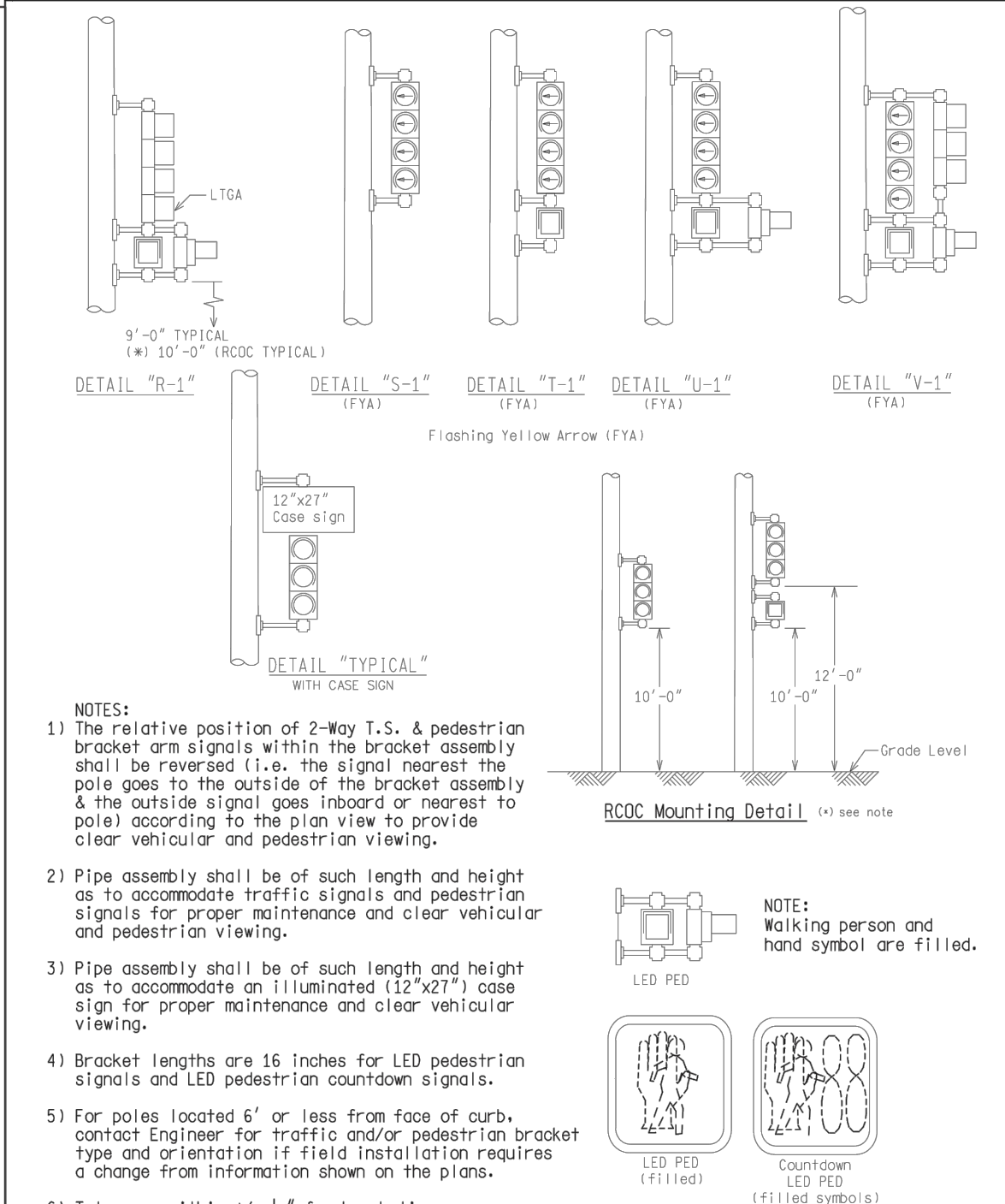
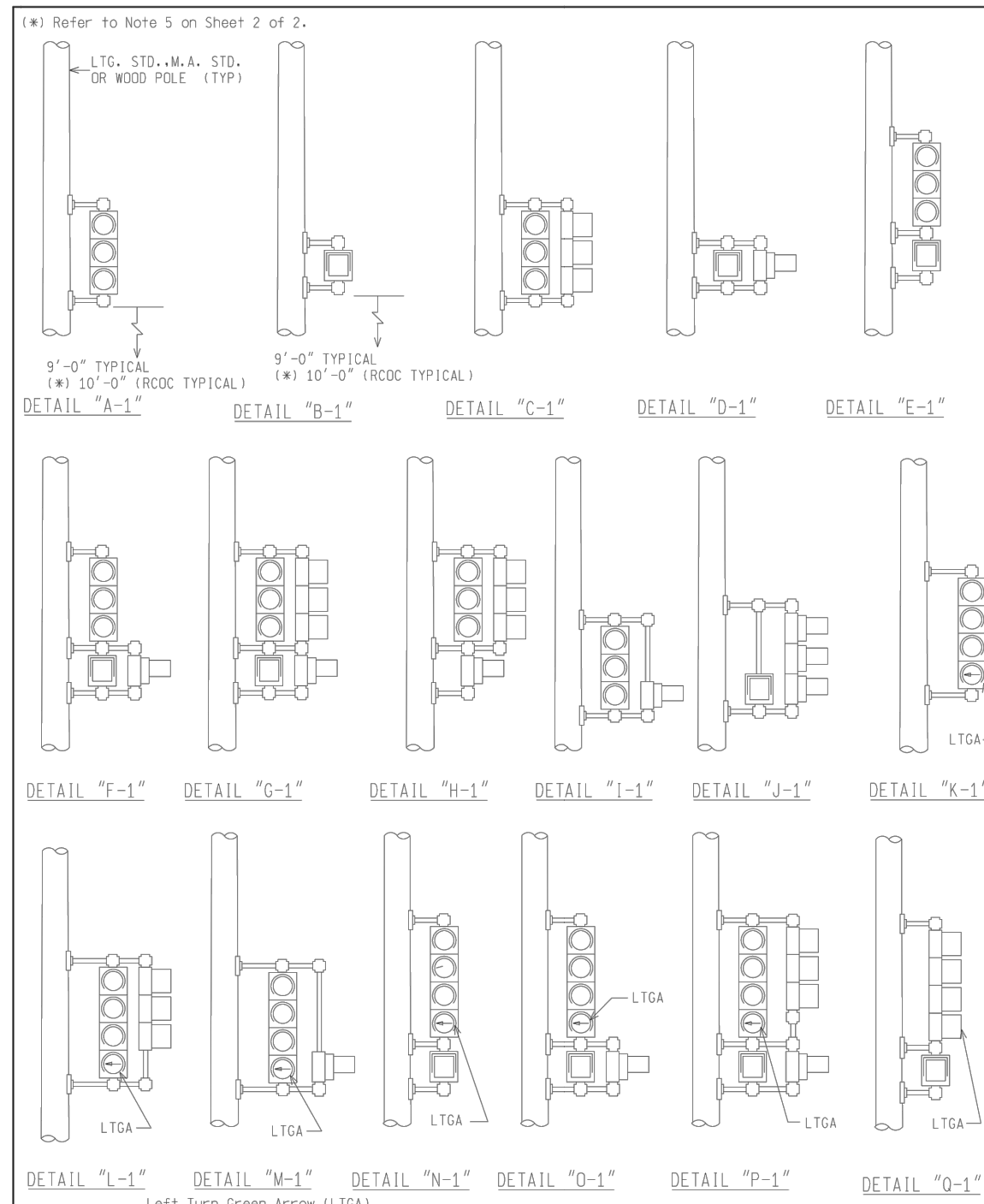
E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

SCALE: NTS, 0 INCH, 1

DRAWING NO. 2021-008-SSD8

SHEET NO. 146 OF 155

APPROVED BY: _____

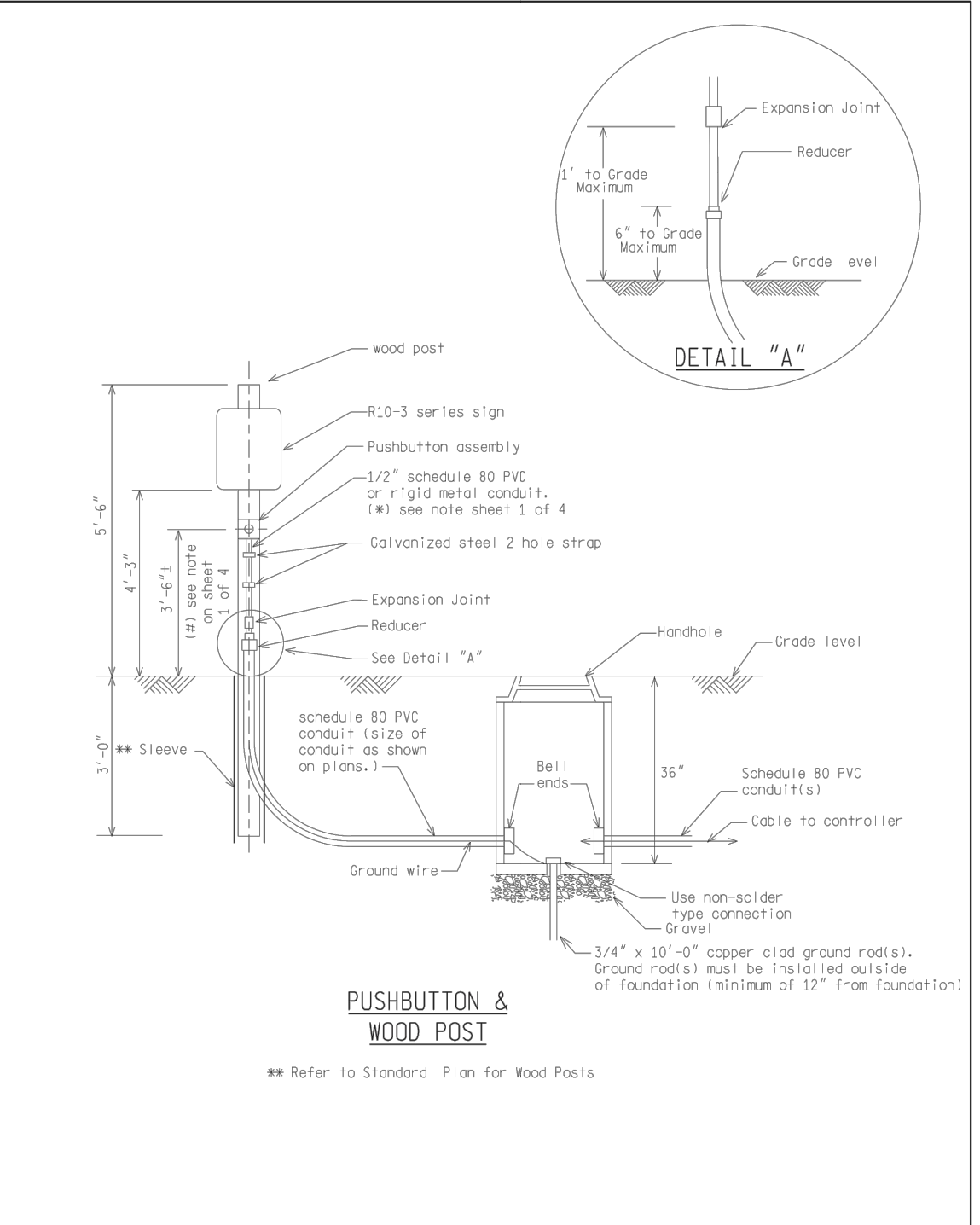
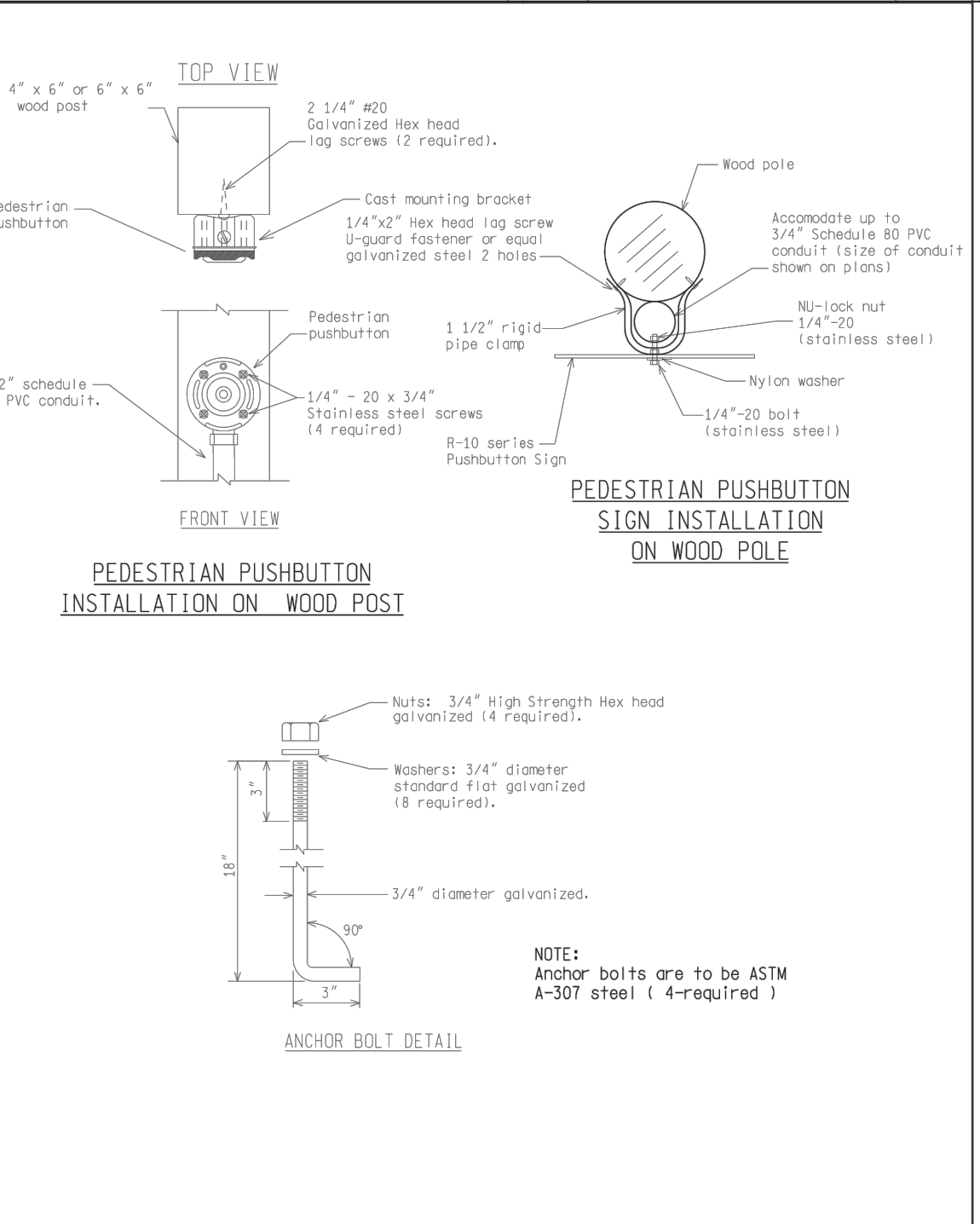
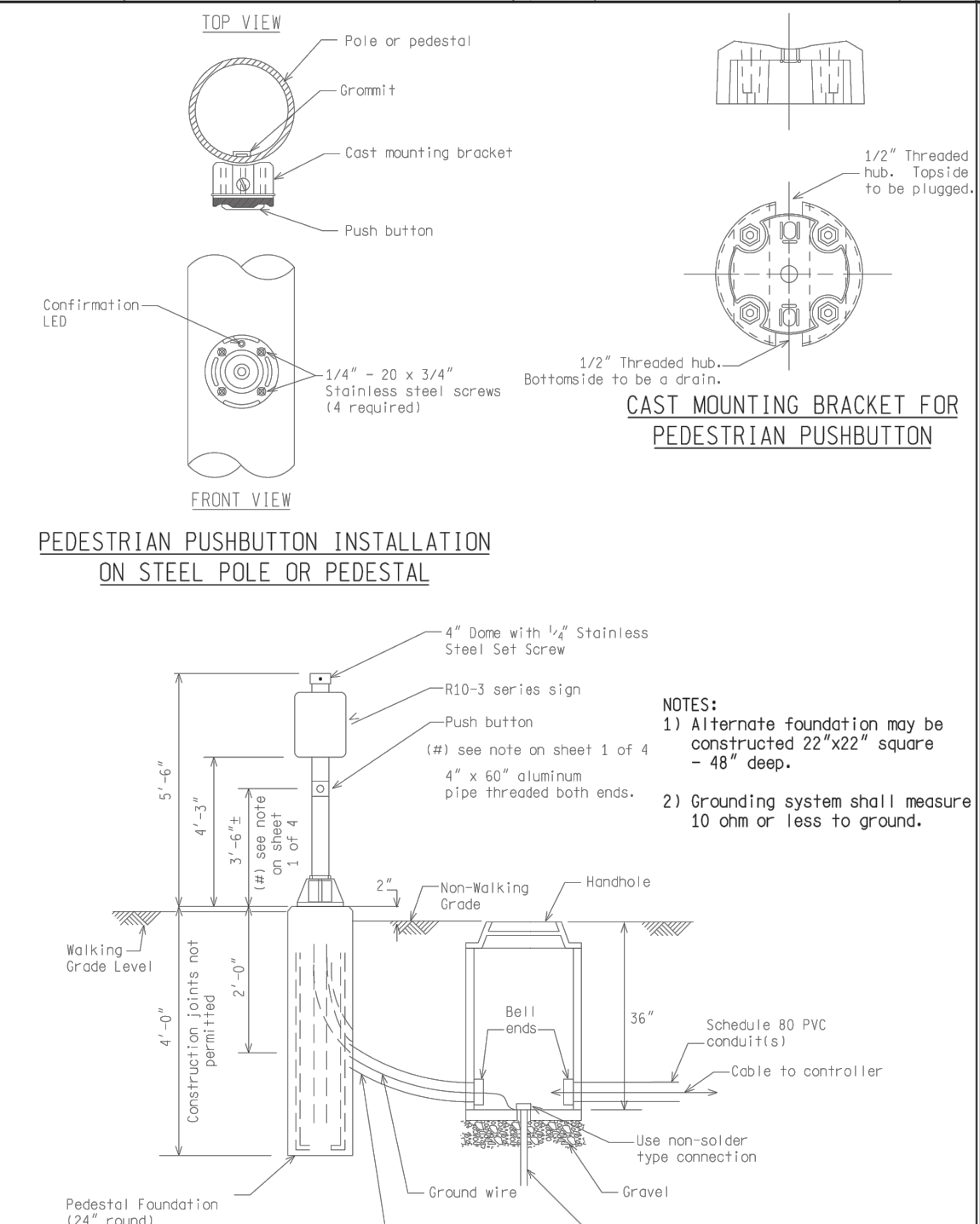
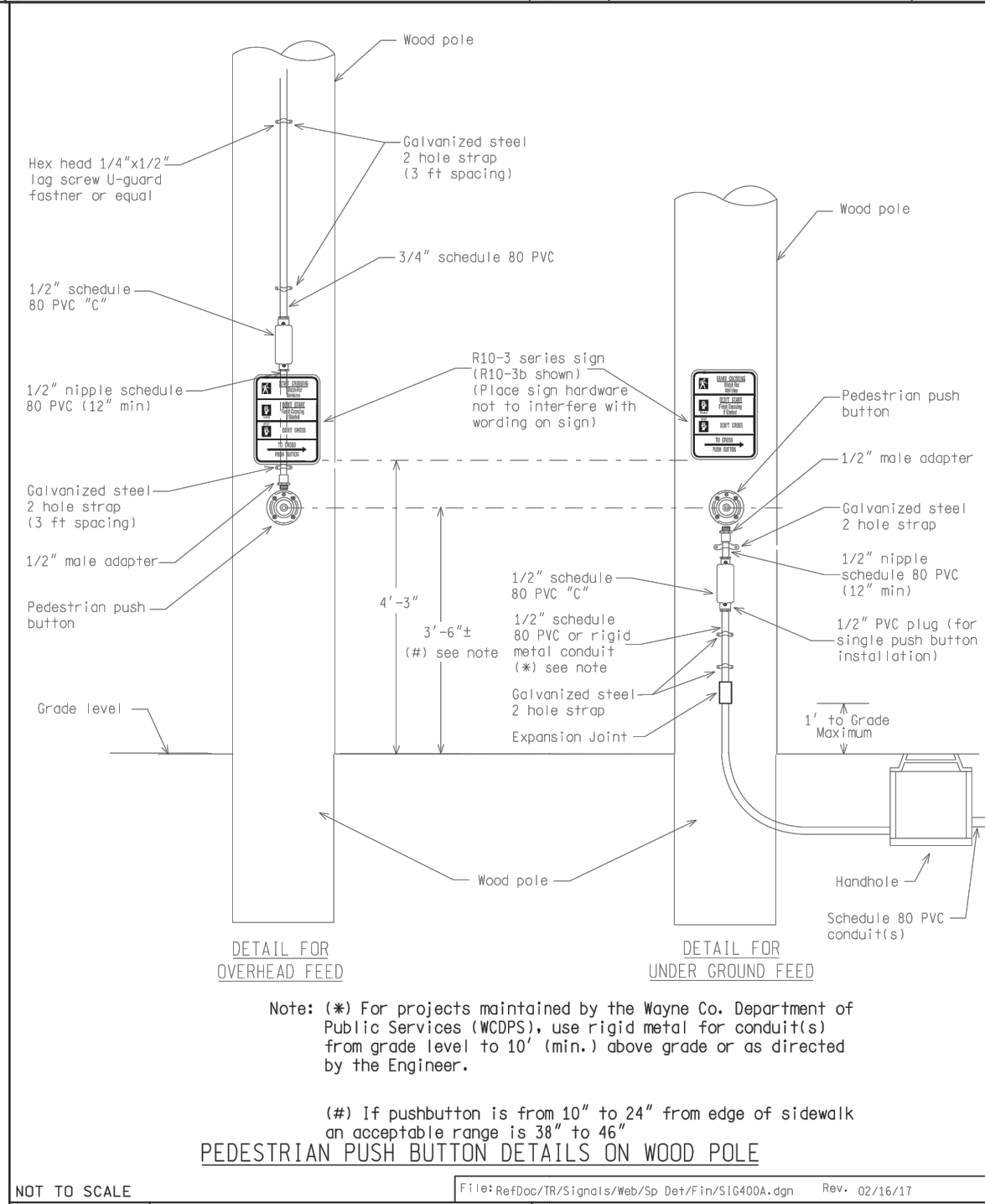
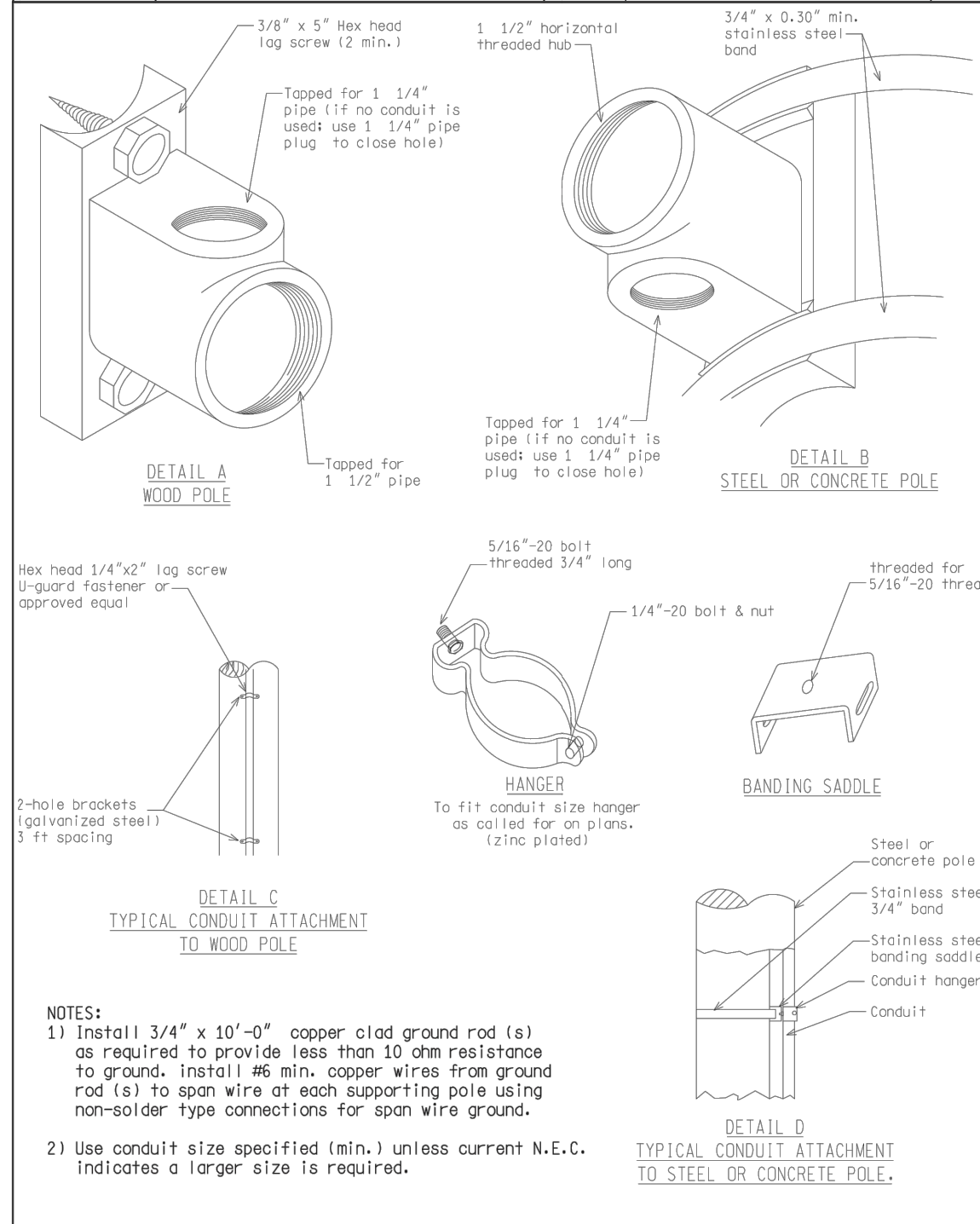


ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-340-A	SHEET 1 OF 2
ENGINEER OF DEVELOPMENT	POLE MOUNTED SIGNAL DISPLAYS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG340A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-340-A	SHEET 2 OF 2
ENGINEER OF DEVELOPMENT	POLE MOUNTED SIGNAL DISPLAYS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG340A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-341-A	SHEET 1 OF 3
ENGINEER OF DEVELOPMENT	POLE MOUNTING DETAILS FOR SIGNALS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG341A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-341-A	SHEET 2 OF 3
ENGINEER OF DEVELOPMENT	POLE MOUNTING DETAILS FOR SIGNALS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG341A.dgn Rev. 02/16/17



ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-341-A	SHEET 3 OF 3
ENGINEER OF DEVELOPMENT	PEDESTRIAN PUSH BUTTON DETAILS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG341A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-400-A	SHEET 1 OF 4
ENGINEER OF DEVELOPMENT	PEDESTRIAN PUSH BUTTON DETAILS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG400A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-400-A	SHEET 2 OF 4
ENGINEER OF DEVELOPMENT	PEDESTRIAN PUSH BUTTON DETAILS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG400A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-400-A	SHEET 3 OF 4
ENGINEER OF DEVELOPMENT	PEDESTRIAN PUSH BUTTON DETAILS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG400A.dgn Rev. 02/16/17

ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR	SIG-400-A	SHEET 4 OF 4
ENGINEER OF DEVELOPMENT	PEDESTRIAN PUSH BUTTON DETAILS	PLAN DATE	FILE: RefDoc/TR/Signal/Std/Sp/Def/FIN/SIG400A.dgn Rev. 02/16/17

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL SPECIAL DETAILS

SCALE	0 INCH 1
DRAWING NO.	2021-008-SSD9
SHEET NO.	147 OF 155

APPROVED BY: _____

TRAFFIC SIGNAL TIMING PERMIT

TRAFFIC SIGNAL TIMING PERMIT form containing timing tables, approach details, and control parameters.

CLEAR PAGE 1

CLEAR ALL

ADVANCED TIMING PARAMETERS FORM

ADVANCED TIMING PARAMETERS FORM with sections for system information, phasing, detection, and coordination data.

CLEAR PAGE 2

LEGEND

Legend table listing symbols for existing and proposed infrastructure like fences, sewers, telephones, and curbs.



E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL TIMING PERMITS

Scale table showing 0 to 1 inch scale.

DRAWING NO. 2021-08-TSTP1

SHEET NO. 148 OF 155

Revision table with columns for REV. NO., DESCRIPTION, DATE, DR. BY, and CH. BY.

APPROVED BY

EPAC Permit 4-2-21

TRAFFIC SIGNAL TIMING PERMIT

APPROACH	PHASE	1	2	3	4	5	6	7	8		TIMING INSTALLED
		EB-Left	WB-Thru	SB-Left	NB-Thru	WB-Left	EB-Thru	NB-Left	SB-Thru		
MINIMUM GREEN		5	10	5	5	5	10	5	7		
PASSAGE		2.0	0.0	2.0	3.0	2.0	0.0	2.0	3.0		
MAXIMUM NO. 1		31	47	21	41	32	46	28	34		
MAXIMUM NO. 2											
YELLOW CHANGE		3.6	3.6	3.1	3.1	3.6	3.6	3.1	3.1		
RED CLEARANCE		2.5	2.5	3.3	3.3	2.5	2.5	3.3	3.3		
WALK		8		7		9		10			
PEDESTRIAN CLEARANCE		17		19		17		14			
EXTENDED PED. CLEARANCE		3		3		3		3			
REST IN WALK		0		0		0		0			
INITIALIZATION		1	4	1	4	1	4	1	4		
NON-ACT RESPONSE		0	0	0	0	0	0	0	0		
VEHICLE RECALL		2	3	0	0	2	3	0	0		
PEDESTRIAN RECALL		0		0		0		0			
NON-LOCK MEMORY		0	0	0	0	0	0	0	0		
DUAL ENTRY		0	1	0	1	0	1	0	1		
DIAL 1	SPLIT 1	90	12	33	12	33	12	33	0	0	0
DIAL 2	SPLIT 1	120	26	37	17	40	22	41	25	32	0
DIAL 3	SPLIT 1	140	31	47	21	41	32	46	28	34	0
DIAL	SPLIT										
DIAL	SPLIT										
DIAL	SPLIT										
	MODE	0	1	0	0	0	1	0	0		
PHASE	Hours of Operation:										
1 Fuller	EB-Left	D1/S1/O1: Normal									
2 Fuller	WB-Thru	D2/S1/O1: 07:00 to 09:00 Monday-Friday									
3 Maiden	SB-Left	D3/S1/O1: 14:00 to 17:00 Monday-Friday									
4 EMCD	NB-Thru										
5 Fuller	WB-Left										
6 Fuller	EB-Thru										
7 EMCD	NB-Left										
8 Maiden	SB-Thru										
OVERLAPS		Overlap Phase	Load Bays	Phases Overlapped	T.G. (s)	Y (s)	R (s)	-GY	+GRN		
		=									
		=									
		=									
		=									
		=									
		=									
		=									
		=									
		=									
		=									
		=									

REMARKS: This timing plan is for EMCD bridge construction Stage 1.

PREPARED BY: DLZ DATE: 09/09/22

FLASH HOURS: [] DAILY [] NONE [x]

NIGHT FLASH: FY = FR =

CONFLICT FLASH: FY = FR = All Directions

CONTROLLER TYPE: [x] EPAC [] PRE-EMPT [] [] Other: [] COUNTDOWN PEDS [x]

LOCATION: Fuller & Maiden/EMCD
CITY/TWP: Ann Arbor
COUNTY: Washtenaw
MILE POINT: CONTROL SECTION-SPOT # 126
Job # (If Applicable):

CLEAR PAGE 1

CLEAR ALL

Page 3 included only if Pre-Empt Checked

EPAC Permit 4-2-21

ADVANCED TIMING PARAMETERS FORM

SYSTEM INFORMATION	LEFT-TURN PHASING						RING AND BARRIER STRUCTURE										
	Permissive-Protected		Protected-Only				B1		B2		B3		B4				
Phase # / Description	Lead	Lag	Split	Lead	Lag		R1	1	2	3	4	B3	B4				
								5	6	7	8						
Controller Type:							R2										
[x] EPAC							R3										
[] Other:							R4										
System Type:	VEHICULAR AND PEDESTRIAN DETECTION						DISAPPEARING LEGEND CASE SIGNS										
[] Closed Loop	Vehicular Detection						Pedestrian Detection										
[] Stand By	Movements and Call Delay (s)						Push-Button Crossing Locations										
[] Group 1	Approach	Left	Thru	Right	Loop	Video	Other										
[] Group 2	NB	[x]	[x]	[x]	[]	[x]	[]	All legs									
Address:	SB	[x]	[x]	[x]	[]	[x]	[]										
[x] TBC	WB	[x]	[x]	[x]	[]	[x]	[]										
[] TBC/GPS	EB	[x]	[x]	[x]	[]	[x]	[]										
[] None		[]	[]	[]	[]	[]	[]										
[] Other:		[]	[]	[]	[]	[]	[]										
If TBC, Sync by:	ADDITIONAL DIAL SPLIT DATA						COORDINATION DATA										
[x] TOD	DIAL	SPLIT	CYCLE	PHASE	1	2	3	4	5	6	7	8	O1	O2	O3	Operation Mode	1
[] Event	DIAL	SPLIT	CYCLE													Coordination Mode	0
	DIAL	SPLIT	CYCLE													Maximum Mode	0
Interconnect Type:	DIAL	SPLIT	CYCLE													Correction Mode	3
[] Hardwire	DIAL	SPLIT	CYCLE													Offset Mode	0
[] Fiber-Optic	DIAL	SPLIT	CYCLE													Force Mode	0
[] Radio	DIAL	SPLIT	CYCLE													Max Dwell	0
[] Cell Modem	DIAL	SPLIT	CYCLE													Yield Period	0
[] None	DIAL	SPLIT	CYCLE														
[x] Other:	DIAL	SPLIT	CYCLE														
If Cell Modem:	REMARKS:						ADDITIONAL OVERLAP DATA										
Phone #							Overlap Phase	Load Bays	Phases Overlapped	T.G. (s)	Y (s)	R (s)	-GY	+GRN			
Controller Status:							=										
[] Primary							=										
[] Secondary							=										
[] Isolated							=										
[x] TBC							=										
If Secondary, Primary Location:	PREPARED BY: DLZ DATE: 09/09/22						LOCATION:		Fuller & Maiden/EMCD								
Primary Spot # :	[] MDOT [] County [] City [x] Consultant						CONTROL SECTION-SPOT #		126								

CLEAR PAGE 2

Page 2 of 3

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.

DLZ

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL TIMING PERMITS

SCALE: 0 INCH 1

DRAWING NO. **2021-08-TSTP2**

SHEET NO. 149 OF 155

APPROVED BY: _____

EPAC Permit 4-2-21

TRAFFIC SIGNAL TIMING PERMIT

APPROACH	PHASE	1	2	3	4	5	6	7	8	TIMING INSTALLED	
MINIMUM GREEN	SB-Left	5	7	7	10					REMARKS: This timing plan is for EMCD bridge construction Stages 1, 2, and 3. Anything outside of the weekday peak hours, maintain existing timings. Phase 4 Leading Pedestrian Interval = 5 sec.	
PASSAGE	SB	4.0	4.0	4.0	4.0						
MAXIMUM NO. 1	NB	24	40	30	45						
MAXIMUM NO. 2	WB	23	23	46	45						
YELLOW CHANGE		3.1	3.1	3.1	3.1						
RED CLEARANCE		3.7	3.7	3.7	2.7						
WALK				7	7						
PEDESTRIAN CLEARANCE				20	17						
EXTENDED PED. CLEARANCE				3	3						
REST IN WALK				1	0						
INITIALIZATION		1	4	4	1						
NON-ACT RESPONSE		0	0	0	0						
VEHICLE RECALL		0	0	0	0						
PEDESTRIAN RECALL		0	0	2	2						
NON-LOCK MEMORY		1	0	0	0						
DUAL ENTRY		0	1	1	0						
DIAL 1 SPLIT 1	MODE	80	15	46	31	34				PREPARED BY: DLZ	DATE: 09/09/22
DIAL 2 SPLIT 1		80	24	52	28	28				FLASH HOURS:	
DIAL 3 SPLIT 1		90	15	46	31	44				20:00 to 05:45	DAILY <input checked="" type="checkbox"/> NONE <input type="checkbox"/>
DIAL 3 SPLIT 2		90	15	46	31	44				20:00 to 06:30	Saturday & Sunday
DIAL SPLIT										NIGHT FLASH:	
DIAL SPLIT										FY =	FR = All directions
PHASE		Hours of Operation:								CONFLICT FLASH:	
1 Observatory SB-Left		D1/S1/O1: Normal								FY =	
2 Observatory SB-Thru		D2/S1/O1: 09:00 to 15:15 Monday-Friday								FR = All directions	
3 Observatory NB-Thru		D3/S1/O1: 06:30 to 09:00 Monday-Friday								CONTRROLLER TYPE:	
4 EMCD WB		D3/S2/O1: 15:15 to 18:30 Monday-Friday								PRE-EMPT <input type="checkbox"/>	
5										COUNTDOWN PEDS <input checked="" type="checkbox"/>	
6										LOCATION:	
7										EMCD at Observatory	
8 All Peds										CITY/TWP: Ann Arbor	
										COUNTY: Washtenaw	
										MILE POINT	
										CONTROL SECTION-SPOT #	
										23	
										Job # (If Applicable):	

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Page 3 included only if Pre-Empt Checked

EPAC Permit 4-2-21


ADVANCED TIMING PARAMETERS FORM

SYSTEM INFORMATION	LEFT-TURN PHASING	RING AND BARRIER STRUCTURE	
Controller Type: <input checked="" type="checkbox"/> EPAC <input type="checkbox"/> Other: System Type: <input type="checkbox"/> Closed Loop <input type="checkbox"/> Stand By <input type="checkbox"/> Group 1 <input type="checkbox"/> Group 2 Address: <input checked="" type="checkbox"/> TBC <input type="checkbox"/> TBC/GPS <input type="checkbox"/> None <input type="checkbox"/> Other: If TBC, Sync by: <input checked="" type="checkbox"/> TOD <input type="checkbox"/> Event Interconnect Type: <input type="checkbox"/> Hardware <input type="checkbox"/> Fiber-Optic <input type="checkbox"/> Radio <input type="checkbox"/> Cell Modem <input checked="" type="checkbox"/> None <input type="checkbox"/> Other: If Cell Modem: Phone #: Controller Status: <input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Isolated <input checked="" type="checkbox"/> TBC If Secondary, Primary Location: Primary Spot # :	Phase # / Description Phase 1/SB Observatory LT Vehicular Detection Approach: SB Observatory, NB Observatory, WB EMCD Movements and Call Delay (s): Left, Thru, Right Type: Loop, Video, Other Pedestrian Detection Push-Button Crossing Locations	RING AND BARRIER STRUCTURE R1, R2, R3, R4 B1, B2, B3, B4 DISAPPEARING LEGEND CASE SIGNS	
	ADDITIONAL DIAL SPLIT DATA PHASE 1, 2, 3, 4, 5, 6, 7, 8, O1, O2, O3 DIAL SPLIT CYCLE DIAL SPLIT CYCLE DIAL SPLIT CYCLE DIAL SPLIT CYCLE DIAL SPLIT CYCLE DIAL SPLIT CYCLE DIAL SPLIT CYCLE DIAL SPLIT CYCLE		COORDINATION DATA Operation Mode: 1 Coordination Mode: 0 Maximum Mode: 0 Correction Mode: 3 Offset Mode: 0 Force Mode: 0 Max Dwell: 0 Yield Period: 0
	REMARKS: ADDITIONAL OVERLAP DATA Overlap Phase, Load Bays, Phases Overlapped, T.G. (s), Y (s), R (s), -GY, +GRN PREPARED BY: DLZ DATE: 09/09/22 LOCATION: EMCD at Observatory CONTROL SECTION-SPOT # 23 <input type="checkbox"/> MDOT <input type="checkbox"/> County <input type="checkbox"/> City <input checked="" type="checkbox"/> Consultant		
	CLEAR PAGE 2		

Page 2 of 3

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
--- CONTOUR	--- UTILITY POLE & GUY	--- GAS LINE	--- LEFT EDGE/RD. GRADE	--- STORM SEWER & CAT. BAS.	--- SEE ABOVE
--- STORM SEWER & CAT. BAS.	--- FIRE HYDRANT ASSEMBLY	--- CABLE T.V.	--- RIGHT EDGE/RD. GRADE	--- WATER MAIN W/F.H. ASSEM.	--- BENCH MARK
--- WATER MAIN & VALVE-IN-WELL	--- LIGHT POLE	--- ELECTRIC	--- CURB & GUTTER	--- CONTOUR	--- SURVEY BOOK
--- WATER MAIN & VALVE-IN-BOX	--- END SECTION	--- SIGN	--- EDGE/GRAVEL	--- ROAD & GRADE	--- REV. NO.



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE
TRAFFIC SIGNAL TIMING PERMITS

SCALE
NTS 0 1 INCH

DRAWING NO.
2021-08-TSTP3

SHEET NO. 150 OF 155

REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

APPROVED BY: _____

TRAFFIC SIGNAL TIMING PERMIT

TRAFFIC SIGNAL TIMING PERMIT form containing tables for PHASE, CYCLE, and MODE, along with timing details and remarks.

CLEAR PAGE 1

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ADVANCED TIMING PARAMETERS FORM

ADVANCED TIMING PARAMETERS FORM with sections for SYSTEM INFORMATION, LEFT-TURN PHASING, RING AND BARRIER STRUCTURE, and VEHICULAR AND PEDESTRIAN DETECTION.

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PREEMPTION INFORMATION FORM

PREEMPTION INFORMATION FORM with multiple tables for Preempt Description and Preempt System Data.

CLEAR PAGE 3 Page 3 of 3

LEGEND

Legend table listing symbols for existing and proposed infrastructure like fences, sewers, telephones, and curbs.

DLZ logo and project management information including drawing number 2021-08-TSTP4.

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR header and drawing details.

TRAFFIC SIGNAL TIMING PERMIT

APPROACH	PHASE	1	2	3	4	5	6	7	8	TIMING INSTALLED		
		EB-Left	WB-Thru		NB-Thru	WB-Left	EB-Thru		SB-Thru			
MINIMUM GREEN		5	10		5	5	10		7	REMARKS This timing plan is for EMCD bridge construction Stage 2.		
PASSAGE		2.0	0.0		3.0	2.0	0.0		3.0			
MAXIMUM NO. 1		24	45		70	25	45		70			
MAXIMUM NO. 2												
YELLOW CHANGE		3.6	3.6		3.1	3.6	3.6		3.1			
RED CLEARANCE		2.5	2.5		3.3	2.5	2.5		3.3			
WALK			8			8			10			
PEDESTRIAN CLEARANCE			17			19			14			
EXTENDED PED. CLEARANCE			3			3			3			
REST IN WALK			0			0			0			
INITIALIZATION		1	4		4	1	4		4			
NON-ACT RESPONSE		0	0		0	0	0		0			
VEHICLE RECALL		2	3		0	2	3		0			
PEDESTRIAN RECALL			0			0			0			
NON-LOCK MEMORY			0			0			0			
DUAL ENTRY			0			1			1			
DIAL 1	SPLIT	1	90	12	35	43	12	35	43	0	0	0
DIAL 2	SPLIT	1	120	22	42	56	23	41	56	0	0	0
DIAL 3	SPLIT	1	140	24	46	70	24	46	70	0	0	0
DIAL	SPLIT											
DIAL	SPLIT											
DIAL	SPLIT											
PHASE		MODE	0	1		0	0	1				

PREPARED BY: DLZ DATE: 09/09/22

FLASH HOURS: DAILY NONE

NIGHT FLASH: FY = FR =

CONFLICT FLASH: FY = FR = All Directions

CONTROLLER TYPE: EPAC PRE-EMPT COUNTDOWN PEDS

LOCATION: Fuller & Maiden/EMCD
CITY/TWP: Ann Arbor
COUNTY: Washtenaw

MILE POINT: CONTROL SECTION-SPOT # 126

Job # (If Applicable):

CLEAR PAGE 1

CLEAR ALL

ADVANCED TIMING PARAMETERS FORM

SYSTEM INFORMATION	Phase # / Description	LEFT-TURN PHASING				RING AND BARRIER STRUCTURE										
		Permissive-Protected	Protected-Only	Protected-Only	Protected-Only	B1	B2	B3	B4							
Controller Type: <input checked="" type="checkbox"/> EPAC <input type="checkbox"/> Other:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R1	1	2		4						
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R2	5	6		8						
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R3										
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R4										
System Type: <input type="checkbox"/> Closed Loop <input type="checkbox"/> Stand By <input type="checkbox"/> Group 1 <input type="checkbox"/> Group 2 Address: <input checked="" type="checkbox"/> TBC <input type="checkbox"/> TBC/GPS <input type="checkbox"/> None <input type="checkbox"/> Other:		VEHICULAR AND PEDESTRIAN DETECTION				DISAPPEARING LEGEND CASE SIGNS										
	Approach	Movements and Call Delay (s)				Type	Push-Button Crossing Locations									
	NB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All legs									
	SB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
WB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
EB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
If TBC, Sync by: <input checked="" type="checkbox"/> TOD <input type="checkbox"/> Event		ADDITIONAL DIAL SPLIT DATA								COORDINATION DATA						
	DIAL	SPLIT	CYCLE	1	2	3	4	5	6	7	8	O1	O2	O3	Operation Mode	1
	DIAL	SPLIT	CYCLE												Coordination Mode	0
	DIAL	SPLIT	CYCLE												Maximum Mode	0
														Correction Mode	3	
														Offset Mode	0	
														Force Mode	0	
														Max Dwell	0	
														Yield Period	0	
Interconnect Type: <input type="checkbox"/> Hardwire <input type="checkbox"/> Fiber-Optic <input type="checkbox"/> Radio <input type="checkbox"/> Cell Modem <input checked="" type="checkbox"/> None <input type="checkbox"/> Other:		ADDITIONAL OVERLAP DATA														
		Overlap Phase		Load Bays	Phases Overlapped	T.G. (s)	Y (s)	R (s)	-G/Y	+GRN						
		=														
		=														
If Cell Modem: Phone #		REMARKS:														
Controller Status: <input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Isolated <input checked="" type="checkbox"/> TBC		PREPARED BY: DLZ DATE: 09/09/22								LOCATION: Fuller & Maiden/EMCD						
		<input type="checkbox"/> MDOT <input type="checkbox"/> County <input type="checkbox"/> City <input checked="" type="checkbox"/> Consultant								CONTROL SECTION-SPOT # 126						

CLEAR PAGE 2

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	BENCH MARK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	SURVEY BOOK
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	REV. NO.



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL TIMING PERMITS

SCALE NTS 0 INCH 1

DRAWING NO. 2021-08-TSTP6 SHEET NO. 153 OF 155

REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

APPROVED BY

EPAC Permit 4-2-21

TRAFFIC SIGNAL TIMING PERMIT

APPROACH	PHASE	1	2	3	4	5	6	7	8	TIMING INSTALLED	
		EBWB			NB				NB		
MINIMUM GREEN		15			8				8	REMARKS This timing plan is for EMCD bridge construction Stage 3.	
PASSAGE		0.0			3.0				3.0		
MAXIMUM NO. 1		59			41				41		
MAXIMUM NO. 2		0			0				0		
YELLOW CHANGE		3.1			3.1				3.0		
RED CLEARANCE		2.5			2.5				2.9		
WALK		8							8		
PEDESTRIAN CLEARANCE		16							12		
EXTENDED PED. CLEARANCE		3							0		
REST IN WALK		1							0		
INITIALIZATION		4			1				1		
NON-ACT RESPONSE		0			0				0		
VEHICLE RECALL		3			0				0		
PEDESTRIAN RECALL		0			0				0		
NON-LOCK MEMORY		0			0				0		
DUAL ENTRY		0			1				1		
DIAL 1	SPLIT	1	90	55	35				35	65	
DIAL 2	SPLIT	1	120	69	31				31	5	
DIAL 3	SPLIT	1	140	59	41				41	37	
DIAL	SPLIT										
DIAL	SPLIT										
DIAL	SPLIT										
DIAL	SPLIT										
DIAL	SPLIT										
	MODE		1		0				0		
PHASE	Hours of Operation:										
1	D1/S1/O1: Normal										
2 EMCD	EBWB	D2/S1/O1: 07:00 to 09:00 Monday-Friday									
3	D3/S1/O1: 14:00 to 17:00 Monday-Friday										
4 Cancer Center	NB										
5											
6											
7											
8 WMCD	NB										

Overlap Phase	Load Bays	Phases Overlapped	T.G. (s)	Y (s)	R (s)	-GY	+GRN
=							
=							
=							

PREPARED BY: DLZ DATE: 09/09/22

FLASH HOURS: DAILY NONE

NIGHT FLASH: None Other

FY = _____ FR = _____

CONFLICT FLASH: None Other

FY = _____ FR = All Directions

CONTROLLER TYPE: EPAC PRE-EMPT COUNTDOWN PEDS Other

LOCATION: EMCD at WMCD & Cancer Center

CITY/TWP: Ann Arbor

COUNTY: Washtenaw

MILE POINT CONTROL SECTION-SPOT # 139

Job # (If Applicable): _____

CLEAR PAGE 1

CLEAR ALL

Page 1 of 3

Page 3 included only if Pre-Empt Checked

EPAC Permit 4-2-21

ADVANCED TIMING PARAMETERS FORM


SYSTEM INFORMATION	LEFT-TURN PHASING				RING AND BARRIER STRUCTURE																							
	Phase # / Description	Permissive-Protected	Protected-Only		B1	B2	B3	B4																				
Controller Type:																												
<input checked="" type="checkbox"/> EPAC																												
<input type="checkbox"/> Other:																												
System Type:	VEHICULAR AND PEDESTRIAN DETECTION				DISAPPEARING LEGEND CASE SIGNS																							
<input type="checkbox"/> Closed Loop	<table border="1"> <thead> <tr> <th>Approach</th> <th>Movements and Call Delay (s)</th> <th>Type</th> <th>Push-Button Crossing Locations</th> </tr> <tr> <td></td> <td>Left Thru Right Loop Video Other</td> <td></td> <td></td> </tr> </thead> <tbody> <tr> <td>NB (WMCD)</td> <td><input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/></td> <td></td> <td>S Leg of EMCD at Cancer Ctr</td> </tr> <tr> <td>NB (Cancer Center)</td> <td><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></td> <td></td> <td>E Leg of EMCD at Cancer Ctr</td> </tr> <tr> <td></td> <td><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></td> <td></td> <td>S Leg of WMCD at EMCD</td> </tr> </tbody> </table>				Approach	Movements and Call Delay (s)	Type	Push-Button Crossing Locations		Left Thru Right Loop Video Other			NB (WMCD)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		S Leg of EMCD at Cancer Ctr	NB (Cancer Center)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		E Leg of EMCD at Cancer Ctr		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		S Leg of WMCD at EMCD				
Approach	Movements and Call Delay (s)	Type	Push-Button Crossing Locations																									
	Left Thru Right Loop Video Other																											
NB (WMCD)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		S Leg of EMCD at Cancer Ctr																									
NB (Cancer Center)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		E Leg of EMCD at Cancer Ctr																									
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		S Leg of WMCD at EMCD																									
<input type="checkbox"/> Stand By																												
<input type="checkbox"/> Group 1																												
<input type="checkbox"/> Group 2																												
Address:																												
<input checked="" type="checkbox"/> TBC																												
<input type="checkbox"/> TBC/GPS																												
<input type="checkbox"/> None																												
<input type="checkbox"/> Other:																												
If TBC, Sync by:																												
<input checked="" type="checkbox"/> TOD																												
<input type="checkbox"/> Event																												
Interconnect Type:																												
<input type="checkbox"/> Hardwire																												
<input type="checkbox"/> Fiber-Optic																												
<input type="checkbox"/> Radio																												
<input type="checkbox"/> Cell Modem																												
<input checked="" type="checkbox"/> None																												
<input type="checkbox"/> Other:																												
If Cell Modem:																												
Phone #																												
Controller Status:																												
<input type="checkbox"/> Primary																												
<input type="checkbox"/> Secondary																												
<input type="checkbox"/> Isolated																												
<input checked="" type="checkbox"/> TBC																												
If Secondary, Primary Location:																												
Primary Spot #:																												
REMARKS:																												
PREPARED BY: DLZ DATE: 09/09/22					LOCATION: EMCD at WMCD & Cancer Center																							
<input type="checkbox"/> MDOT <input type="checkbox"/> County <input type="checkbox"/> City <input checked="" type="checkbox"/> Consultant					CONTROL SECTION-SPOT # 139																							

CLEAR PAGE 2

Page 2 of 3

LEGEND

EXISTING FENCE	--- --- ---	EXISTING SANITARY SEWER & MANHOLE	S --- O	EXISTING TELEPHONE	t ---	EXISTING RD. & GRADE	--- --- ---	PROPOSED SANITARY SEWER & MANHOLE	S --- O	PROPOSED CURB & GUTTER	--- --- ---
CONTOUR	--- --- ---	UTILITY POLE & GUY	--- --- ---	GAS LINE	G ---	LEFT EDGE/RD. GRADE	--- --- ---	STORM SEWER & CAT. BAS.	S ---	SEE ABOVE	
STORM SEWER & CAT. BAS.	--- --- ---	FIRE HYDRANT ASSEMBLY	--- --- ---	CABLE T.V.	t ---	RIGHT EDGE/RD. GRADE	--- --- ---	WATER MAIN W/F.H. ASSEM.	W ---	BENCH MARK	
WATER MAIN & VALVE-IN-WELL	--- --- ---	LIGHT POLE	--- --- ---	ELECTRIC	e ---	CURB & GUTTER	--- --- ---	CONTOUR	--- --- ---	SURVEY BOOK	
WATER MAIN & VALVE-IN-BOX	--- --- ---	END SECTION	--- --- ---	SIGN	β ---	EDGE/GRAVEL	--- --- ---	ROAD & GRADE	--- --- ---	REV. NO.	



REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL TIMING PERMITS

SCALE NTS	0 INCH 1
DRAWING NO.	2021-08-TSTP7
SHEET NO.	154 OF 155

APPROVED BY: _____

TRAFFIC SIGNAL TIMING PERMIT

APPROACH	PHASE	1	2	3	4	5	6	7	8		TIMING INSTALLED
		EB-Left	WB-Thru		NB-Thru	WB-Left	EB-Thru		SB-Thru		
MINIMUM GREEN		5	10		5	5	10		7		REMARKS This timing plan is for EMCD bridge construction Stage 3.
PASSAGE		2.0	0.0		3.0	2.0	0.0		3.0		
MAXIMUM NO. 1		25	45		70	25	45		70		
MAXIMUM NO. 2											
YELLOW CHANGE		3.6	3.6		3.1	3.6	3.6		3.1		
RED CLEARANCE		2.5	2.5		3.3	2.5	3.3		3.3		
WALK			8		7		9		10		
PEDESTRIAN CLEARANCE			17		19		17		14		
EXTENDED PED. CLEARANCE			3		3		3		3		
REST IN WALK			0		0		0		0		
INITIALIZATION		1	4		4	1	4		4		
NON-ACT RESPONSE		0	0		0	0	0		0		
VEHICLE RECALL		2	3		0	2	3		0		
PEDESTRIAN RECALL		0	0		0	0	0		0		
NON-LOCK MEMORY		0	0		0	0	0		0		
DUAL ENTRY		0	1		1	0	1		1		

DIAL	1	SPLIT	1	CYCLE	12	35	43	12	35	43	0	0	0
DIAL 2	120	23	40	57	23	40	57	70	0	0	0	0	
DIAL 3	140	25	45	70	25	45	70						

PHASE	Hours of Operation:
1 Fuller EB-Left	D1/S1/O1: Normal D2/S1/O1: 07:00 to 09:00 Monday-Friday D3/S1/O1: 14:00 to 17:00 Monday-Friday
2 Fuller WB-Thru	
3 Maiden SB-Left	
4 EMCD NB-Thru	
5 Fuller WB-Left	
6 Fuller EB-Thru	
7 EMCD NB-Left	
8 Maiden SB-Thru	

OVERLAPS	Load	Phases	T.G. (s)	Y (s)	R (s)	-GY	+GRN
Overlap Phase							

PREPARED BY: DLZ	DATE: 09/09/22
FLASH HOURS:	<input type="checkbox"/> DAILY <input type="checkbox"/> NONE <input checked="" type="checkbox"/>
NIGHT FLASH:	FY = FR =
CONFLICT FLASH:	FY = FR = All Directions
CONTROL TYPE:	PRE-EMPT <input type="checkbox"/> <input checked="" type="checkbox"/> EPAC COUNTDOWN PEDS <input checked="" type="checkbox"/>
LOCATION:	Fuller & Maiden/EMCD
CITY/TWP:	Ann Arbor
COUNTY:	Washtenaw
MILE POINT	CONTROL SECTION-SPOT #
	126
Job # (if Applicable):	

CLEAR PAGE 1

CLEAR ALL

ADVANCED TIMING PARAMETERS FORM

SYSTEM INFORMATION	LEFT-TURN PHASING					RING AND BARRIER STRUCTURE							
	Phase # / Description	Permissive-Protected	Protected-Only	Split	Lag	R1	B1	B2	B3	B4	R2	R3	R4
Controller Type: <input checked="" type="checkbox"/> EPAC <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
System Type: <input type="checkbox"/> Closed Loop <input type="checkbox"/> Stand By <input type="checkbox"/> Group 1 <input type="checkbox"/> Group 2 Address: <input checked="" type="checkbox"/> TBC <input type="checkbox"/> TBC/GPS <input type="checkbox"/> None <input type="checkbox"/> Other: If TBC, Sync by: <input checked="" type="checkbox"/> TOD <input type="checkbox"/> Event	Vehicular Detection Movements and Call Delay (s)					Pedestrian Detection Push-Button Crossing Locations							
Interconnect Type: <input type="checkbox"/> Hardwire <input type="checkbox"/> Fiber-Optic <input type="checkbox"/> Radio <input type="checkbox"/> Cell Modem <input checked="" type="checkbox"/> None <input type="checkbox"/> Other: If Cell Modem: Phone #	Approach NB SB WB EB					Type Loop Video Other							
Controller Status: <input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Isolated <input checked="" type="checkbox"/> TBC If Secondary: Primary Location: Primary Spot #:	Additional Dial Split Data PHASE 1 2 3 4 5 6 7 8 O1 O2 O3												
PREPARED BY: DLZ <input type="checkbox"/> MDOT <input type="checkbox"/> County <input type="checkbox"/> City <input checked="" type="checkbox"/> Consultant	REMARKS:					COORDINATION DATA Operation Mode 1 Coordination Mode 0 Maximum Mode 0 Correction Mode 3 Offset Mode 0 Force Mode 0 Max Dwell 0 Yield Period 0							
	ADDITIONAL OVERLAP DATA Overlap Phase Load Bays Phases Overlapped T.G. (s) Y (s) R (s) -GY +GRN												
	DATE: 09/09/22					LOCATION: Fuller & Maiden/EMCD CONTROL SECTION-SPOT # 126							

CLEAR PAGE 2

LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
- CONTOUR	- UTILITY POLE & GUY	- GAS LINE	- LEFT EDGE/RD. GRADE	- STORM SEWER & CAT. BAS.	- SEE ABOVE
- STORM SEWER & CAT. BAS.	- FIRE HYDRANT ASSEMBLY	- CABLE T.V.	- RIGHT EDGE/RD. GRADE	- WATER MAIN W/F.H. ASSEM.	- BENCH MARK
- WATER MAIN & VALVE-IN-WELL	- LIGHT POLE	- ELECTRIC	- CURB & GUTTER	- CONTOUR	- SURVEY BOOK
- WATER MAIN & VALVE-IN-BOX	- END SECTION	- SIGN	- EDGE/GRAVEL	- ROAD & GRADE	- REV. NO.

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/6/23	INB	LCM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE TRAFFIC SIGNAL TIMING PERMITS

SCALE NTS	0	INCH	1
DRAWING NO.	2021-08-TSTP8		
SHEET NO.	155 OF 155		

APPROVED BY: _____