

PROJECT LOCATION MAP  
NOT TO SCALE

PITTSFIELD CHARTER TOWNSHIP



# PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT PROJECT - LOHR ROAD MIDBLOCK CROSSING

PERMIT PLAN  
DECEMBER, 2019  
PROJECT NUMBER: 2075149600


ROAD	YEAR	ADT	POSTED SPEED
LOHR	2012	8,202	40

UTILITY CONTACTS	
Name: ATT (FORMERLY SBC) Addr: 550 S. MAPLE ROAD ANN ARBOR, MI 48103 Phone: 734-730-8013 Email: J4592@att.com Contact: JEFF LEHMAN, SR.	Name: DTE ELECTRIC Addr: ONE ENERGY PLAZA, 518 S8 DETROIT, MI 48226 Phone: 734-397-4447 Email: anthony.ignasiak@DTEenergy.com Contact: ANTHONY IGNASIAK
Name: COMCAST Addr: 25626 TELEGRAPH SOUTHFIELD, MI 48034 Phone: 248-809-2715 Email: CRAIG_PUDAS@CABLE.COMCAST.COM Contact: CRAIG PUDAS	Name: ANN ARBOR AREA TRANSPORTATION AUTHORITY Addr: 2007 S. INDUSTRIAL HWY., ANN ARBOR, MI 48104 Phone: 734.794.1758 Email: jmurphy@theride.org Contact: JEFF MURPHY
Name: LEVEL 3 NOW CENTURYLINK Addr: 1025 ELDORADO BLVD BROOMFIELD, CO 80021 Phone: 720-888-2061 Email: Judy.Henry@centurylink.com Contact: JUDY HENRY	Name: WATER RESOURCES COMMISSIONER'S OFFICE Addr: 705 N. ZEEB ROAD ANN ARBOR, MI 48103 Phone: 734.222.6844 Email: marsik@washtenaw.org Contact: THERESA MARSIK
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Name: PITTSFIELD CHARTER TOWNSHIP Addr: 6201 WEST MICHIGAN AVE ANN ARBOR, MI 48108 Phone: 734-822-2110 Email: utilities@pittsfield-mi.gov Contact: B. WEIRICH/C. LYON	

DRAWING INDEX:		
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Know what's below.  
Call before you dig.

**NOTE:**

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING MISS DIG PRIOR TO CONSTRUCTION.

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TRAFFIC NOTES
1. ACCESS TO ALL RESIDENTIAL AND COMMERCIAL DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
2. ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE MUST CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), LATEST EDITION.
3. ALL EXISTING PAVEMENT MARKINGS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS MUST BE REPLACED WITH POLYUREA FOR THE LONGITUDINAL, LANE LINES.
4. ALL SIGNS MATERIALS AND SUPPORTS MUST MEET NCHRP-350 CRASH WORTHY REQUIREMENTS.
5. THERE MUST BE NO HAULING OF MATERIALS INCLUDING TRUCKS ENTERING AND EXITING IN OR OUT OF THE SITE (WORK ZONE) BETWEEN THE HOURS OF 6:00 A.M. TO 9:00 A.M. AND 2:00 P.M. TO 7:00 P.M., MONDAY THROUGH FRIDAY.
6. TWO WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. SEE SHEET C-05 FOR MAINTENANCE OF TRAFFIC DETAILS.
TRAFFIC SIGN AND SIGNAL NOTES
1. CONTACT WASHTENAW COUNTY ROAD COMMISSION AND PITTSFIELD TOWNSHIP SEVEN WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
2. ALL SIGNS SHALL BE INSTALLED, REMOVED AND/OR SALVAGED ACCORDING TO THE CURRENT EDITION OF "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE CURRENT EDITION OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
3. ALL SIGNS ON THE PLANS THAT DO NOT HAVE A RECOMMENDATION ARE TO BE RETAINED.
4. ANY PERMANENT SIGNS REQUIRING RELOCATION DUE TO CONTRACTOR OPERATIONS SHALL BE SALVAGED AND RESET BY THE CONTRACTOR AT LOCATIONS DESIGNATED BY THE ENGINEER. SIGNS AND POSTS DAMAGED DURING THE REMOVAL AND STORAGE OPERATIONS SHALL BE REPLACED WITH NEW SIGNS AND POSTS. THE COST OF THIS WORK SHALL BE BORNE BY THE CONTRACTOR.
5. WHERE PROPOSED ON PLAN SHEETS, SIGNS AND STRUCTURES SHALL BE FABRICATED IN ACCORDANCE TO TYPICAL PLANS, STANDARDS, AND/OR DETAILS AT THE LOCATIONS DESCRIBED, ELSE AS SHOWN ON PLAN SHEETS. WHEN A SIGN IS PROPOSED LESS THAN 50 FEET FROM AN EXISTING SIGN, OR WHEN TWO SIGNS ARE PROPOSED WITHIN 50 FEET OF EACH OTHER, THE LATERAL OFFSET OF THE LEADING SIGN SHALL BE NO LESS THAN THE LATERAL OFFSET OF THE TRAILING SIGN PLUS ONE-HALF THE WIDTH OF THE TRAILING SIGN. THE COST OF RELOCATING AN EXISTING SIGN TO COMPLY WITH THIS STANDARD SHALL BE INCLUDED IN THE COST TO INSTALL THE PROPOSED SIGN.
6. SIGN LAYOUTS SHALL BE ACCORDING TO THE CURRENT ENGLISH EDITION OF THE "STANDARD HIGHWAY SIGNS" MANUAL OR AS DETAILED ON THE PLANS.
7. HANDLING AND INSTALLATION OF ALL SIGNS SHALL CONFORM WITH THE SHEETING MANUFACTURER'S SPECIFICATIONS AND GUIDELINES. SIGNS THAT HAVE WRINKLED OR TWISTED SHEETING MAY BE REJECTED.
8. WHEN ATTACHING SIGNS TO SUPPORTS, TIGHTEN THE NUT, NOT THE BOLT HEAD.
9. NYLON WASHERS SHALL BE PLACED BETWEEN THE STEEL WASHER AND THE SIGN FACE SHEETING. THE NYLON WASHERS ARE TO BE CONSIDERED PART OF THE ATTACHING DEVICES AND HARDWARE. NYLON WASHERS SHALL HAVE A 3/8 INCH INNER DIAMETER, A 7/8 OUTER DIAMETER AND A 1/18 INCH THICKNESS.
10. ALL ACTUAL HEIGHTS OF NEW OVERHEAD SIGN STRUCTURES MUST BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER PRIOR TO END SUPPORT STRUCTURES BEING FABRICATED.
11. TURF ESTABLISHMENT/SLOPE RESTORATION SHALL BE APPLIED TO THE GROUND SURFACE AREAS DISTURBED BY SIGNING OPERATIONS AND CONFORM TO NECESSARY TREATMENTS AND WORKMANSHIP SPECIFIED IN THE CURRENT EDITION OF MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 816.
12. ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED STREET LIGHTING AND MAST ARM POLES SHALL BE INCLUDED IN THE PAY ITEM AND NO EXTRA PAYMENT SHALL BE MADE.
13. EXISTING O.H. AND T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS.
14. INSTALL PEDESTALS AND POLES SO AS NOT TO INTERFERE WITH TRAFFIC.
15. CONTRACTOR SHALL CONTACT ENGINEER 72 HOURS PRIOR TO POURING FOUNDATIONS IN ORDER TO VERIFY SOIL CONDITION, DEPTH AND DETERMINE IF CASING IS REQUIRED.
16. ALL TRAFFIC STREET SIGNS SUCH AS "NO PARKING", "NO STANDING", ETC. SHALL BE TRANSFERRED FROM OLD STD. OR POLE TO NEW STD. OR POLE AT SAME LOCATION OR IN CLOSE PROXIMITY BY THE CONTRACTOR.
17. A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL AND 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED FACILITIES AND EXISTING U.G. WATER FACILITIES.
18. NO CHANGES FROM PLANS IN LOCATION OF SUPPORTING STRUCTURES PLACEMENT OR RRFB ASSEMBLY EQUIPMENT WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
19. THE CURRENT BASIS OF ACCEPTANCE FOR THIS MATERIAL IS NOW PART OF THE MDOT QPL (QUALIFIED PRODUCTS LIST). THIS CAN BE FOUND IN THE MATERIALS ACCEPTANCE REQUIREMENT TABLE, PUBLISHED IN THE MQAP AND REPEATED FOR CONVENIENCE IN THE MATERIALS SOURCE GUIDE.

THE FOLLOWING ITEMS OF WORK ARE NOT  
DETAILED ON THE PLAN, PROFILE OR DETAIL SHEETS:

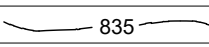
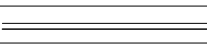
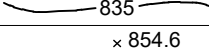
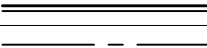
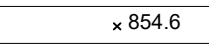
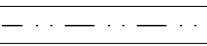
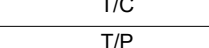
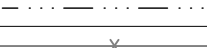
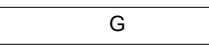
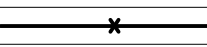
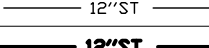
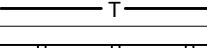

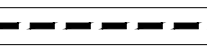

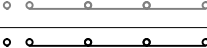

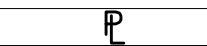

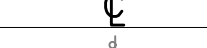





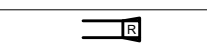
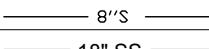

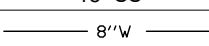
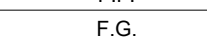
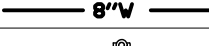
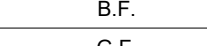


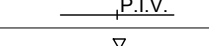
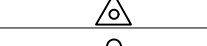
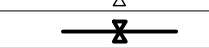
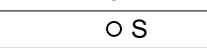
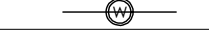


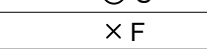
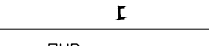
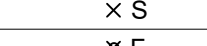
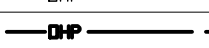
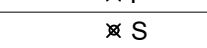
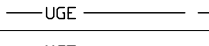
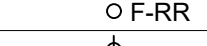


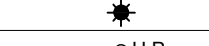



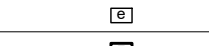

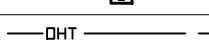
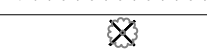
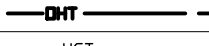
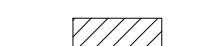
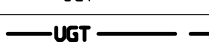

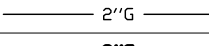

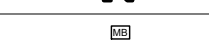

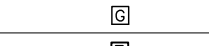
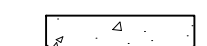
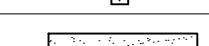
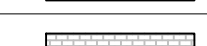
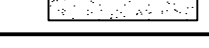







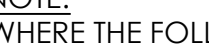





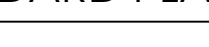
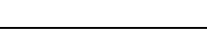
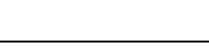
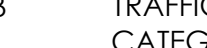




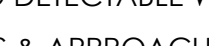

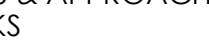
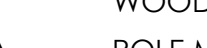

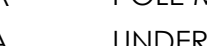




#	DESCRIPTION	QNTY	UNIT
1500001	MOBILIZATION, MAX 10%	1	LSUM
2057021	_SUBGRADE UNDERCUTTING, MODIFIED	30	CYD
2090001	PROJECT CLEANUP	1	LSUM
2097051	_AUDIO VIDEO DVD, SPECIAL	1	LSUM
8120022	BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, FURN	5	EA
8120023	BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, OPER	5	EA
8120026	PEDESTRIAN TYPE II BARRICADE, TEMP	3	EA
8120035	CHANNELIZING DEVICE, 42 INCH, FLOURESCENT, FURN	100	EA
8120036	CHANNELIZING DEVICE, 42 INCH, FLOURESCENT, OPER	100	EA
8120140	LIGHTED ARROW, TYPE C, FURN	2	EA
8120141	LIGHTED ARROW, TYPE C, OPER	2	EA
8120170	MINOR TRAF DEVICES	1	LSUM
8120350	SIGN TYPE B, TEMP, PRISMATIC, FURN	250	SFT
8120351	SIGN TYPE B, TEMP, PRISMATIC, OPER	250	SFT
8120370	TRAF REGULATOR CONTROL	1	LSUM
8167011	_TURF ESTABLISHMENT, PERFORMANCE	500	SYD

GENERAL NOTES
1. THIS PROJECT MAY NOT UTILIZE ALL SYMBOLS, NOTES, AND ABBREVIATIONS SHOWN ON THIS SHEET.
2. ALL ITEMS INCIDENTAL TO AND/OR REQUIRED TO COMPLETE THE INSTALLATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTIONS FOR ALL WORK AS REQUIRED.
4. ALL MATERIAL AND EQUIPMENT SHALL BE STORED IN SUCH A MANNER TO PREVENT BREAKAGE OR PHYSICAL DAMAGE. STORE EQUIPMENT IN ITS ORIGINAL PACKAGING MATERIALS AND PROVIDE PROTECTIVE COVER TO KEEP OUT RAIN, DIRT, AND FOREIGN OBJECTS.
5. ALL WORK ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS, INCLUDING SOIL EROSION AND SEDIMENTATION CONTROL, OF PITTSFIELD TOWNSHIP.
6. ALL CONSTRUCTION AND MATERIALS ARE TO COMPLY WITH PITTSFIELD TOWNSHIP AND/OR WASHTENAW COUNTY STANDARDS AS THEIR JURISDICTION MAY APPLY.
7. ALL PAVEMENT CONSTRUCTION SHALL IN GENERAL BE PERFORMED PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATION FOR CONSTRUCTION EARTHWORK AND PAVING AND ALSO CONSTRUCTION DETAILS AS SPECIED ON THE APPROVED CONSTRUCTION PLANS. DENSITY FOR AGGREGATE BASE TO BE 98% MAXIMUM UNIT WEIGHT AT OPTIMUM MOISTURE CONTENT.
8. ALL YARD AREAS SHALL BE COMPACTED TO A MINIMUM OF 90% OF MODIFIED PROCTOR ASTM D-1557, FOR THAT SOIL. BACKFILL SHALL BE BROWN COMPACTABLE MATERIAL FREE OF BLUE CLAY, MARL, ORGANICS OR ANY OTHER DELETERIOUS MATERIAL.
9. ALL DISTURBED AREAS TO BE REPLACED WITH A MINIMUM OF 3" OF TOPSOIL AND SEEDED. GRASS SEED: 210LB/ACRE. FERTILIZER: 150LB/ACRE. STRAW MULCH: 3" IN DEPTH, 1.5-TON/ACRE. ALL MULCH MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC. HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%.
10. PAVEMENT REMOVALS SHALL EXTEND TO THE LIMITS SHOWN ON THE PLANS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE REMOVAL OF MORE OF LESS PAVEMENT THAN SHOWN ON THE PLANS IS NOT ACCEPTABLE UNLESS OTHERWISE APPROVED BY THE ENGINEER. TEMPORARY SHEETING AND SHORING MUST BE USED IN AREAS WHERE WORK IS IN CLOSE PROXIMITY TO PAVEMENT OR UTILITIES NOT INDICATED FOR REMOVAL. A PRE-CONSTRUCTION WALKTHROUGH WILL BE NECESSARY WITH OWNER, ENGINEER AND CONTRACTOR PRIOR TO SAWCUTTING.
11. PAYMENT FOR SAWCUTTING OF PAVEMENT AND DRIVEWAY REMOVALS IS INCLUDED WITH THE PAVEMENT REMOVAL PAY ITEM.
12. REPLACEMENT OF MAILBOXES, SIGNS, FENCES (ALL TYPES), LIGHT POLES, BRICK PAVERS, LANDSCAPE ITEMS, RETAINING WALLS, BUSHES, SHRUBS, TREES UNDER 6" DBH AND ALL OTHER MISCELLANEOUS ITEMS NOT EXPLICITLY NOTED ON THE PLANS, BUT REMOVED BY THE CONTRACTOR DURING WORK OPERATIONS, IS REQUIRED. THIS WORK IS TO BE PAID FOR UNDER THE TURF ESTABLISHMENT PAY ITEM.
13. AS NOTED ABOVE, CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AT A MINIMUM TO THEIR ORIGINAL CONDITION AS DEPICTED IN THE PRE-CONSTRUCTION AUDIO/VIDEO DVD.
14. ALL GRADES AND DRAINAGE PATTERNS SHALL BE RESTORED TO THE EXISTING CONDITION OR MODIFIED ONLY TO ALLOW FOR SUPERIOR DRAINAGE.
15. THE CONTRACTOR SHALL FURNISH AND INSTALL SILT FENCE, TREE FENCE AND INLET FILTERS AS DIRECTED BY THE ENGINEER AND/OR SPECIFIED ON THE DRAWINGS PRIOR TO THE START OF ANY EXCAVATION. REFER TO DRAWING 04 FOR SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS.
16. THE CONTRACTOR SHALL PROTECT ALL TREES NOT INDICATED FOR REMOVAL. NO TREES ARE TO BE REMOVED WITHOUT EXPRESSED APPROVAL OF THE PROPERTY OWNER, OR THE GOVERNMENTAL BODY HAVING JURISDICTION THEREOF. AND OF THE ENGINEER. CONTRACTOR SHALL PERFORM A WALK THROUGH WITH THE ENGINEER TO REVIEW ALL TREES DESIGNATED FOR REMOVAL PRIOR TO CONSTRUCTION.
17. CONTRACTOR SHALL TAKE CARE WHEN WORKING NEAR EXISTING UTILITY POLES. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT APPROVED BY THE UTILITY COMPANY HAVING JURISDICTION FOR UTILITY POLES FOUND TO BE INTERFERING WITH CONSTRUCTION. TEMPORARY UTILITY POLE SUPPORTS SHALL BE PAID FOR UNDER UTILITY EXPLORATION AND COORDINATION PAY ITEM.
18. BENCHMARKS AS SHOWN ON THE PLAN SHEETS ARE BASED ON NAVD88 DATUM.
19. NO MATERIALS CAN BE STORED IN THE ROAD RIGHTS-OF-WAY.
20. ALL ITEMS ARE TO BE CONSTRUCTED ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD PLANS, UNLESS OTHERWISE INDICATED.
21. EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP FOR ALL IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS.
22. FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL DIAL 811 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 THUS 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.
23. CONTRACTOR SHALL COORDINATE EAST SIDEWALK INSTALLATION WITH FOUNTAIN BLUE DEVELOPER.
24. SHOP DRAWINGS AND MATERIAL CERTIFICATES, PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL FURNISH MATERIAL SOURCE LISTS AND CERTIFICATIONS TO THE PROJECT ENGINEER VERIFYING THAT ALL MATERIALS USED ON THE PROJECT ARE IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND WASHTENAW COUNTY ROAD COMMISSION SPECIFICATIONS. SHOP DRAWINGS AND/OR CATALOG CUTS SHALL BE REQUIRED FOR MAJOR MATERIALS.

MDOT STANDARD PLANS	
SHEET NO.	TITLE (ROAD)
R-1-G*	DRAINAGE STRUCTURES
R-15-K	COVER K
R-28-J*	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
R-29-I	DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALKS
R-30-G	CONCRETE CURB AND CONCRETE CURB & GUTTER
R-80-E	GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS AND SEWER BULKHEADS
R-82-D	BEDDING AND FILLING AROUND PIPE CULVERTS
R-83-C	UTILITY TRENCHES
R-96-E	SOIL EROSION & SEDIMENTATION CONTROL MEASURES
R-100-H	SEEDING AND TREE PLANTING
SHEET NO.	TITLE (PAVEMENT MARKINGS)
PAVE-P45-C	INTERSECTION, STOP BAR & CROSSWALK MARKINGS
SHEET NO.	TITLE (SIGNING)
SIGN-120-E	ROADSIDE SIGN LOCATIONS & SUPPORT SPACING
SIGN-100-G	STANDARD SIGN INSTALLATIONS
SIGN-200-D	STEEL POSTS
SIGN-740-B	MISCELLANEOUS SIGN CONNECTION DETAILS

NOTE:  
WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD PLANS GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

SHEET NO.	TITLE (TRAFFIC SIGNAL)
SIG-032-B	TRAFFIC SIGNAL MAST ARM POLE AND MAST ARM DETAILS - CATEGORY III
SIG-040-A	TRAFFIC SIGNAL MAST ARM STANDARD FOUNDATION
SIG-070-A	PEDESTAL FOUNDATIONS
SIG-100-A	CONTROLLER CABINET MOUNTED ON STEEL OR WOOD POLES
SIG-110-A	POLE MOUNTED TS CONTROLLER CABINET
SIG-211-A	UNDERGROUND SERVICE/DISCONNECT WOOD POLES
SIG-240-A	HANDHOLE - PRECAST, POLYMER CONCRETE
SIG-400-A	PEDESTRIAN PUSH BUTTON DETAILS
SHEET NO.	TITLE
WZD-100-A*	GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS
WZD-125-E*	TEMPORARY TRAFFIC CONTROL DEVICES
WCRC STANDARD PLANS	
SHEET NO.	TITLE (ROAD)
WASH-19	RECTANGULAR RAPID FLASHING BEACON

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXIST. CONTOUR		EXIST. CURB AND GUTTER
	PROP. CONTOUR		PROP. CURB AND GUTTER
	EXIST. SPOT ELEVATION		CENTERLINE OF DITCH
	PROP. SPOT ELEVATION		EDGE OF WATER
	TOP OF CURB		EDGE OF WETLAND
	TOP OF PAVEMENT		EXISTING FENCE
	GUTTER		PROPOSED FENCE
	EXIST. STORM SEWER		TREE PROTECTION FENCE
	PROP. STORM SEWER		SILT FENCE
	EXIST. MANHOLE		CLEARING LIMITS
	PROP. MANHOLE		EXIST. GUARDRAIL
	PROP. EDGE DRAIN		PROP. GUARDRAIL
	EXIST. CATCH BASIN/INLET		PROPERTY LINE
	PROP. CATCH BASIN/INLET		CENTERLINE
	CULVERT		EXIST. SIGN
	INLET FILTER		PROP. SIGN
	PROP. AIR RELEASE VALVE		ENCLOSED TRASH AREA
	PROP. BYPASS CONNECTION		DRAINAGE DIRECTION
	PROP. CLEANOUT		SIDEWALK RAMP
	EXIST. SANITARY SEWER		BARRIER FREE PARKING
	PROP. SANITARY SEWER		FINISH FLOOR ELEV.
	EXIST. WATER MAIN		FINISH GRADE ELEV.
	PROP. WATER MAIN		BASEMENT FLOOR ELEV.
	EXIST. HYDRANT		GARAGE FLOOR ELEV.
	PROP. HYDRANT		SECTION CORNER
	EXIST. POST INDICATOR VALVE		CONTROL POINT
	EXIST. GATE VALVE AND BOX/STOP BOX		FOUND IRON PIPE
	PROP. CURB STOP BOX		SET IRON PIPE
	EXIST. GATE VALVE AND WELL		FOUND CONCRETE MONUMENT
	PROP. GATE VALVE AND WELL		SET CONCRETE MONUMENT
	PROP. REDUCER		FOUND PK NAIL
	PROP. END CAP		SET PK NAIL
	EXIST. OVERHEAD ELECTRIC		FOUND LEADED CHISEL HOLE
	PROP. OVERHEAD ELECTRIC		SET LEADED CHISEL HOLE
	EXIST. UNDERGROUND ELECTRIC		FOUND REROD
	PROP. UNDERGROUND ELECTRIC		APPROX. LOCATION OF SOIL BORING
	EXIST. LIGHT POLE		APPROX. LOCATION OF MONITORING WELL
	PROP. LIGHT POLE		APPROX. LOCATION OF PENETRATION TEST
	EXIST. UTILITY POLE		EXIST. DECIDUOUS TREE
	GUY WIRE		EXIST. EVERGREEN TREE
	EXIST. ELECTRIC TRANSFORMER		EXIST. SHRUB
	PROP. ELECTRIC TRANSFORMER		EXIST. TREE OR BRUSH LIMIT
	EXIST. OVERHEAD TELEPHONE		TREE TO BE REMOVED
	PROP. OVERHEAD TELEPHONE		REMOVE AND REPLACE
	EXIST. UNDERGROUND TELEPHONE		BITUMINOUS PAVEMENT
	PROP. UNDERGROUND TELEPHONE		GRAVEL PAVEMENT
	EXIST. GAS		CONCRETE PAVEMENT
	PROP. GAS		BRICK PAVERS
	EXIST. MAILBOX		MAST ARM
	EXIST. GAS RISER		PEDESTAL
	EXIST. TELEPHONE RISER		
	COMPACTED SAND BACKFILL		



# Stantec

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www.stantec.com

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Notes

D - PERMIT REV 2		CAM	MDP 2019.12.20
C - PERMIT REV 1		CAM	MDP 2019.10.24
B - PERMIT PLAN		CAM	MDP 2019.06.07
A - PRELIMINARY PLAN		CAM	MDP 2018.10.12
Issued		By	Acqd YTTY.MM.DD
File Name: 149600C-02	BWA	BWA	CAM 2018.08.25
	Dwn.	Dsgn.	Chkd. YTTY.MM.DD

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Client/Project  
PITTSFIELD CHARTER TOWNSHIP

PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD  
Pittsfield Township, MI

Title

GENERAL NOTES, LEGEND, SYMBOLS  
AND ABBREVIATIONS

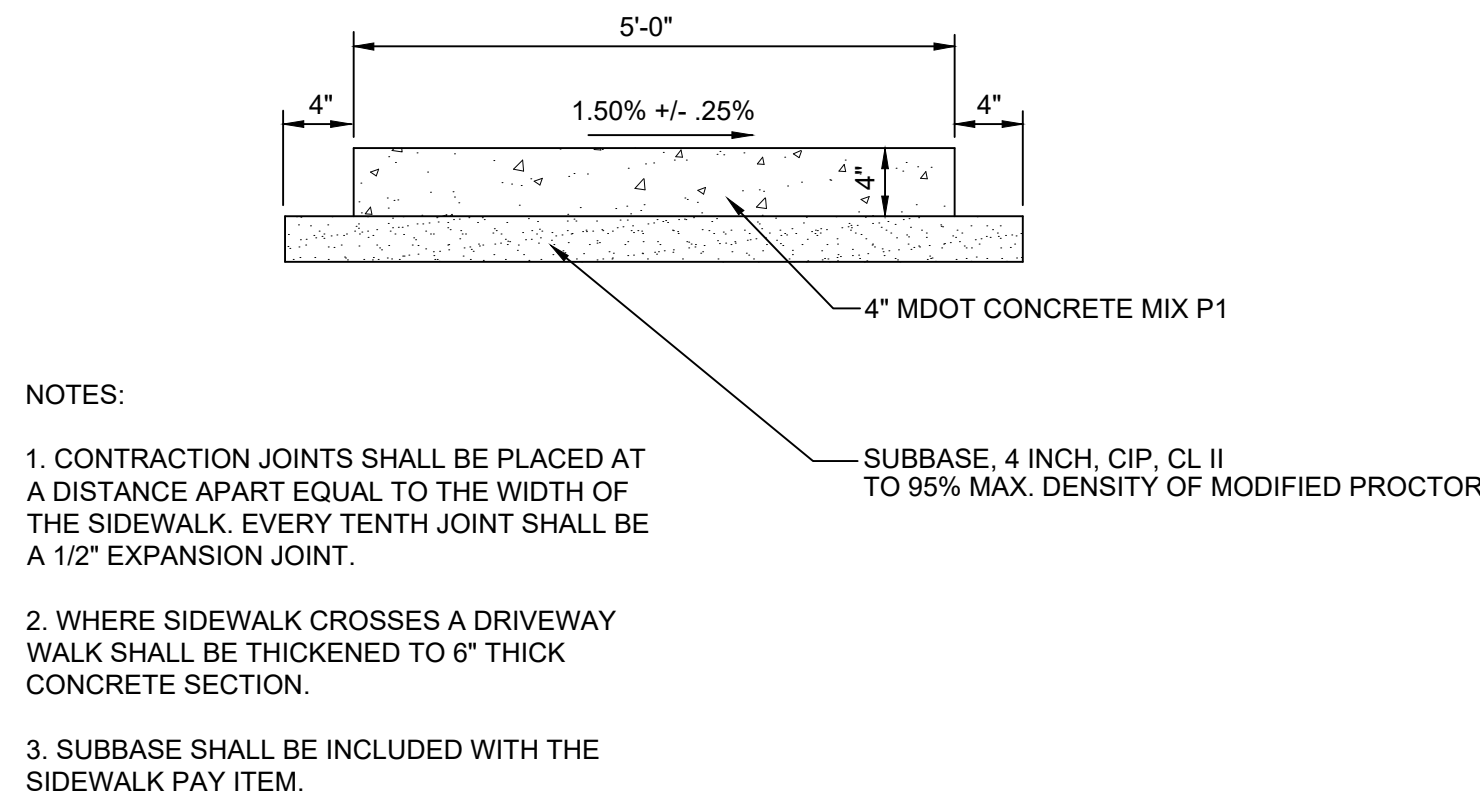
Project No. 2075149600	Scale
Revision 0	Sheet 2 of 13
	Drawing No. <b>C-02</b>



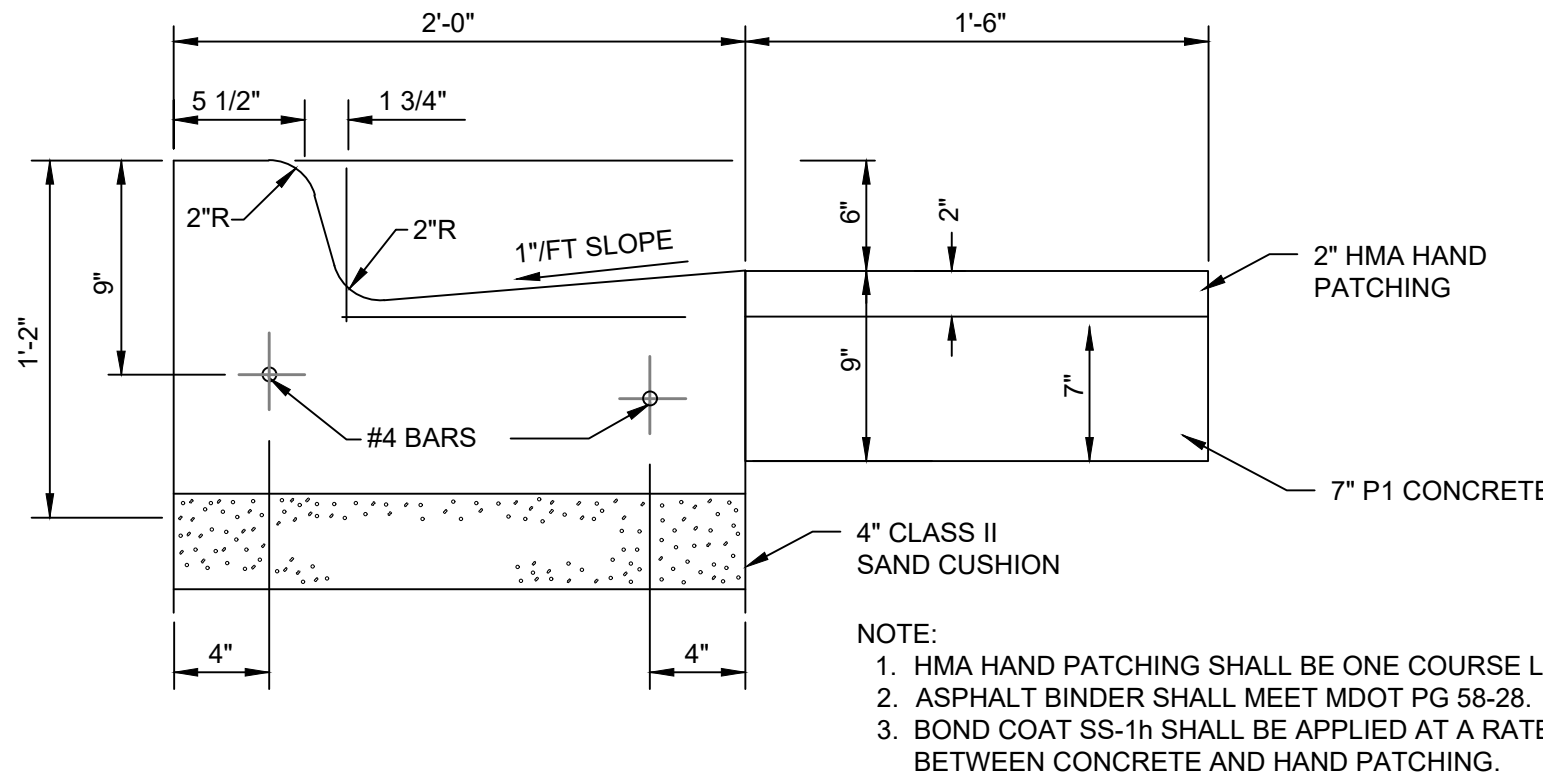
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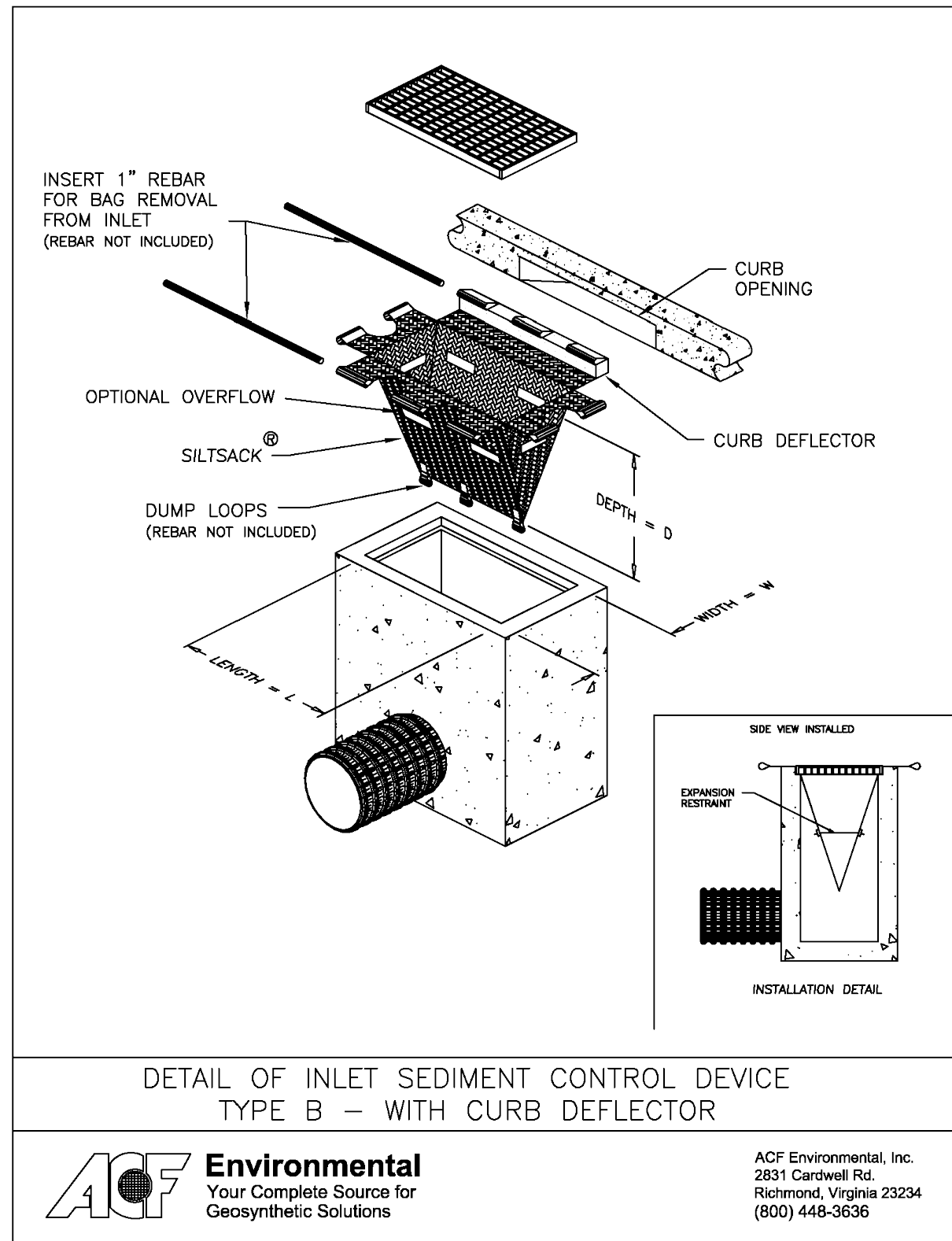
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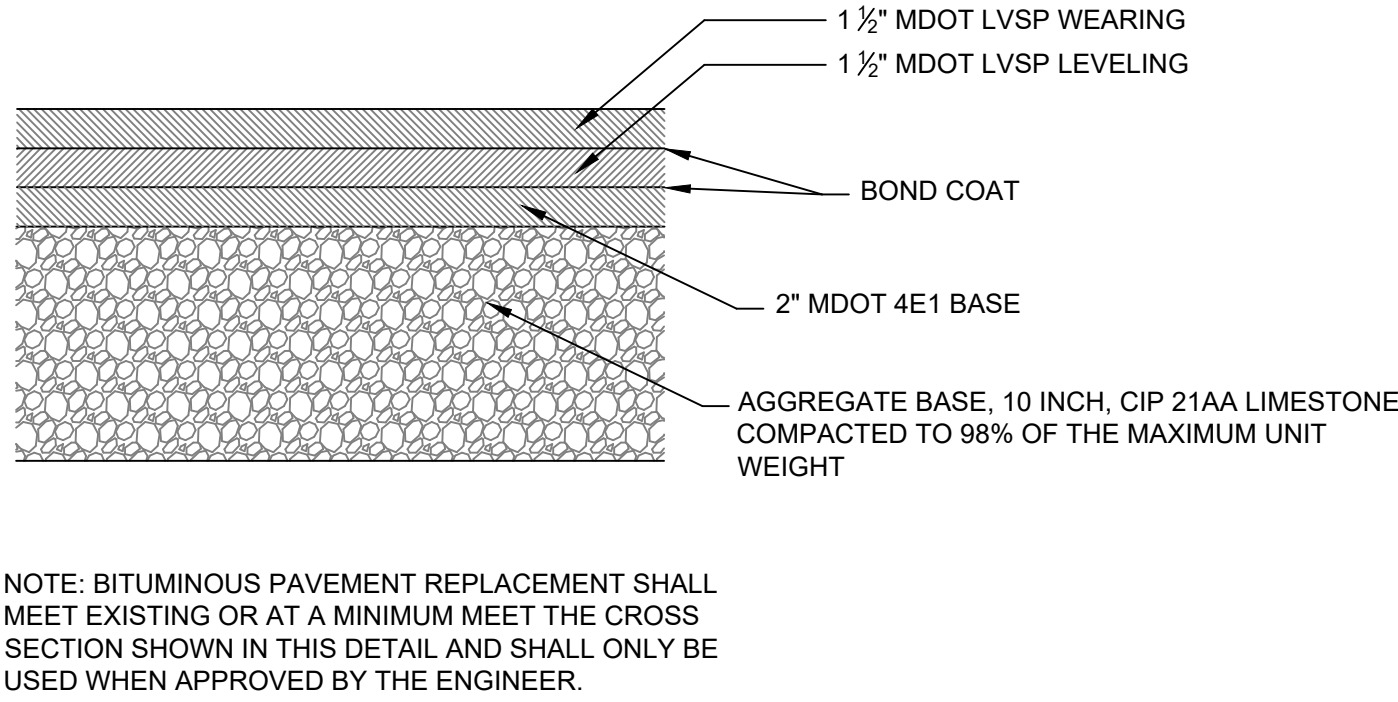
TYPICAL CONCRETE SIDEWALK SECTION  
SCALE: NONE



MDOT F4 CURB & GUTTER SECTION  
SCALE: NONE



SILT SACK® SPECIFICATIONS			
NOTE: THE SILT SACK® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.			
REGULAR FLOW SILT SACK® (FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)			
PROPERTIES	TEST METHOD	UNITS	
GRAB TENSILE STRENGTH	ASTM D-4632	200 LBS	
GRAB TENSILE ELONGATION	ASTM D-4632	20 %	
PUNCTURE	ASTM D-4632	120 LBS	
MULLEN BURST	ASTM D-3786	800 PSI	
TRIAXIAL TEAR	ASTM D-4553	120 LBS	
UV RESISTANCE	ASTM D-4303	90 %	
APPEARANT OPENING SIZE	ASTM D-4751	40 US SIEVE	
FLOW RATE	ASTM D-4491	40 GAL/MIN/50 FT	
PERMITTIVITY	ASTM D-4491	0.55 SEC -1	
HI-FLOW SILT SACK® (FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)			
PROPERTIES	TEST METHOD	UNITS	
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS	
GRAB TENSILE ELONGATION	ASTM D-4632	20 %	
PUNCTURE	ASTM D-4632	125 LBS	
MULLEN BURST	ASTM D-3786	450 PSI	
TRIAXIAL TEAR	ASTM D-4553	45 LBS	
UV RESISTANCE	ASTM D-4303	90 %	
APPEARANT OPENING SIZE	ASTM D-4751	20 US SIEVE	
FLOW RATE	ASTM D-4491	200 GAL/MIN/50 FT	
PERMITTIVITY	ASTM D-4491	15 SEC -1	
OIL-ABSORBANT SILT SACK® (FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)			
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILT SACK CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLION INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILT SACK WITH A WOVEN PILLION INSERT.			



BITUMINOUS ROAD AND COMMERCIAL DRIVEWAY PAVEMENT SECTION  
SCALE: NONE

HMA APPLICATION TABLE

ITEM	APPLICATION RATE	PERFORMANCE GRADE	REMARKS	MINIMUM AWI
LVSP	165 lb/ square yard	58-28	WEARING COURSE, LOHR RD. (1 1/2 INCH LIFT)	220
LVSP	165 lb/ square yard	58-28	LEVELING COURSE, LOHR RD. (1 1/2 INCH LIFT)	220
4E1	220 lb/ square yard	58-28	BASE COURSE, LOHR RD. (2 INCH LIFT)	220

BITUMINOUS BOND COAT: THE FOLLOWING RATES OF BITUMINOUS BOND COAT (SS-1h) SHALL BE USED UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

(A.) 0.10 GAL/SQ. YD. SHALL BE APPLIED OVER ALL EXISTING PAVEMENTS AND PAVEMENT SURFACES.

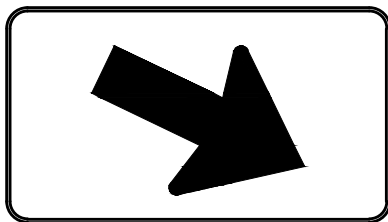
(B.) 0.10 GAL/SQ. YD. SHALL BE APPLIED BETWEEN SUBSEQUENT HMA COURSES.



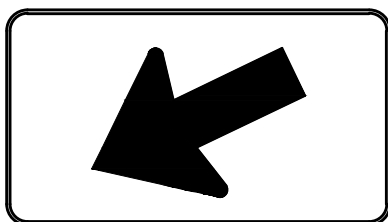
R10-25  
(9 x 12)



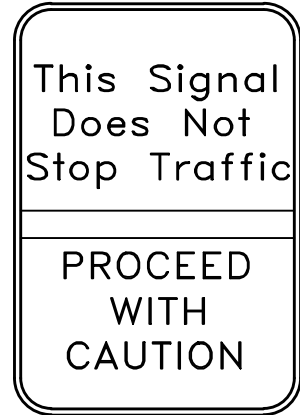
W11-2  
(30 x 30)



W16-7p  
(L&R)  
(18 x 24)



W16-9P  
(18 x 24)



SPECIAL SIGN  
(12 x 18)

STANDARD SIGN DETAILS

SCALE: NONE



Know what's below.  
Call before you dig.

NOTE:

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING MISS DIG PRIOR TO CONSTRUCTION.

SILT SACK

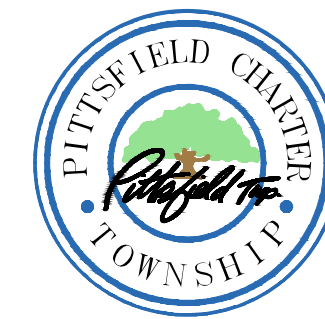
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PITTSFIELD CHARTER TOWNSHIP

PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD

Pittsfield Township, MI

Title

TYPICAL CROSS SECTIONS AND DETAILS

Project No.

2075149600

Scale

Revision

0

Sheet

3 of 13

Drawn No.

C-03

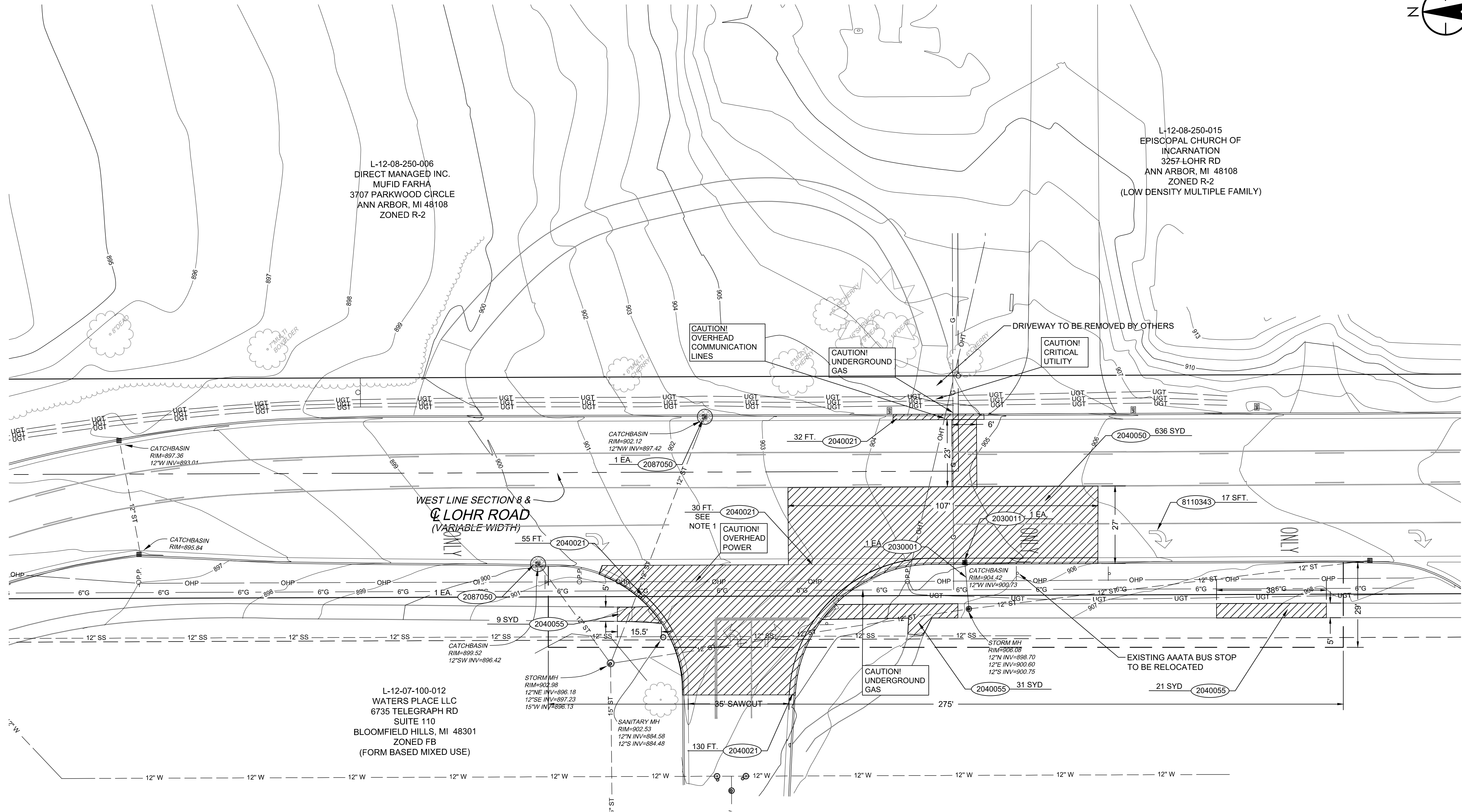
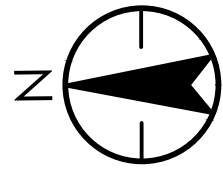


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Notes

- CURB SHALL BE REMOVED TO CLOSEST JOINT.
- SAWCUT ALL PAVEMENT REMOVALS, TO BE INCLUDED IN PAVT, REM PAY ITEM.



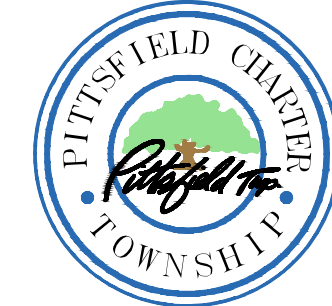
D	PERMIT REV 2	CAM	MDP	2019.12.20
C	PERMIT REV 1	CAM	MDP	2019.10.24
B	PERMIT PLAN	CAM	MDP	2019.06.07
A	PRELIMINARY PLAN	CAM	MDP	2018.10.12
Issued		By	Acqd	YYYY.MM.DD
File Name: 149600C-04		BWA	BWA	CAM
		Dwn.	Dsgn.	Chkd.
				YYYY.MM.DD

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PITTSFIELD CHARTER TOWNSHIP

PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD

Pittsfield Township, MI

Title

EXISTING CONDITIONS, DEMOLITION  
AND SESC PLAN

Project No.  
2075149600

Revision Sheet  
0 4 of 13

Scale  
0 20' 40'

Drawing No.

C-04



NOTE:

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#	DESCRIPTION	QNTY	UNIT
2030001	CULV. REM, LESS THAN 24 INCH	1	EA
2030011	DR STRUCTURE, REM	1	EA
2040021	CURB, REM	247	FT
2040050	PAVT, REM	636	SYD
2040055	SIDEWALK, REM	61	SYD
2080036	EROSION CONTROL, SILT FENCE	200	FT
2087050	_EROSION CONTROL, INLET PROTECTION, FABRIC DROP, MODIFIED	2	EA
8110343	REM SPEC MRKG	17	SFT



D

C

B

A

OFFSET FEET	MINIMUM MERGING TAPER LENGTH "L" (FEET)									
	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)									
	25	30	35	40	45	50	55	60	65	70
1	10	15	20	27	45	50	55	60	65	70
2	21	30	41	53	90	100	110	120	130	140
3	31	45	61	80	135	150	165	180	195	210
4	42	60	82	107	180	200	220	240	260	280
5	52	75	102	133	225	250	275	300	325	350
6	63	90	123	160	270	300	330	360	390	420
7	73	105	143	187	315	350	385	420	455	490
8	83	120	163	213	360	400	440	480	520	560
9	94	135	184	240	405	450	495	540	585	630
10	104	150	204	267	450	500	550	600	650	700
11	115	165	225	293	495	550	605	660	715	770
12	125	180	245	320	540	600	660	720	780	840
13	135	195	266	347	585	650	715	780	845	910
14	146	210	286	374	630	700	770	840	910	980
15	157	225	307	400	675	750	825	900	975	1050

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" =  $\frac{W \times S^2}{60}$  WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

"L" =  $S \times W$  WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER  
S = POSTED SPEED LIMIT IN MPH  
PRIOR TO WORK AREA  
W = WIDTH OF OFFSET

#### TYPES OF TAPERS

UPSTREAM TAPERS  
MERGING TAPER  
SHIFTING TAPER  
SHOULDER TAPER  
TWO-WAY TRAFFIC TAPER  
DOWNSTREAM TAPERS  
(USE IS OPTIONAL)

#### TAPER LENGTH

L - MINIMUM  
1/2 L - MINIMUM  
1/3 L - MINIMUM  
100' - MAXIMUM  
100' - MINIMUM  
(PER LANE)



Michigan Department of Transportation  
TRAFFIC AND SAFETY  
MAINTAINING TRAFFIC  
TYPICAL

DRAWN BY: CON/AE/SLF  
CHECKED BY: BMH  
JUNE 2006  
PLAN DATE:  
FILE: K:\DGN\TSR\STDS\ENGL\SH\MNTTR\M0200a.dgn  
REV: 08/21/2006  
MO020a  
SHEET 1 OF 2

#### DISTANCE BETWEEN TRAFFIC CONTROL DEVICES "D" AND LENGTH OF LONGITUDINAL BUFFER SPACE "B" WHERE WORKERS PRESENT SEQUENCES

"D" DISTANCES D (FEET)	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)									
	25	30	35	40	45	50	55	60	65	70
	250	300	350	400	450	500	550	600	650	700

#### GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"

SPEED* MPH	LENGTH FEET
20	33
25	50
30	83
35	132
40	181
45	230
50	279
55	329
60	411
65	476
70	542

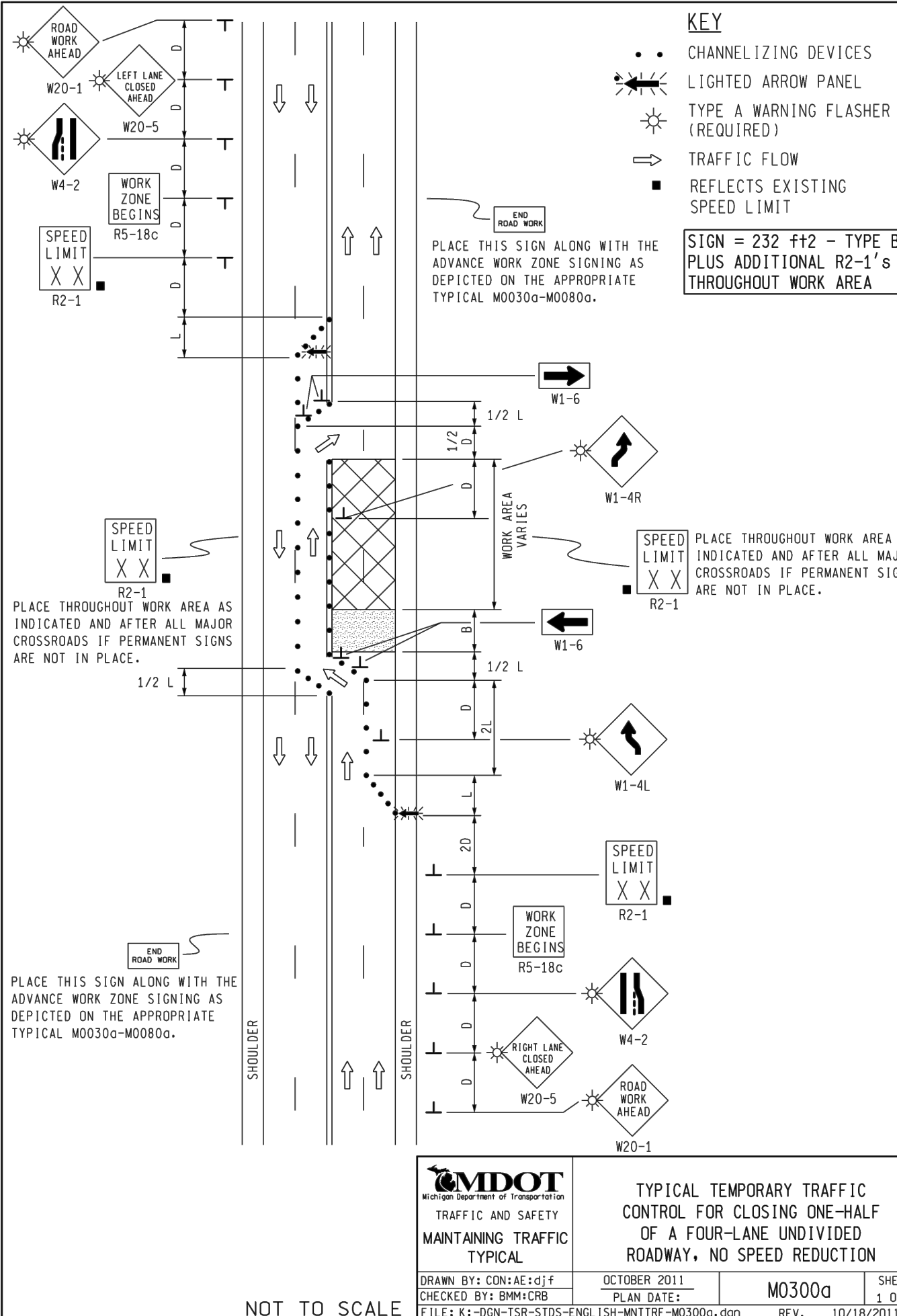
\* POSTED SPEED, OFF PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

1. BASED UPON AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) BRAKING DISTANCE PORTION OF STOPPING SIGHT DISTANCE FOR WET AND LEVEL PAVEMENTS (A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS), AASHTO. THIS AASHTO DOCUMENT ALSO RECOMMENDS ADJUSTMENTS FOR THE EFFECT OF GRADE ON STOPPING AND VARIATION FOR TRUCKS.



Michigan Department of Transportation  
TRAFFIC AND SAFETY  
MAINTAINING TRAFFIC  
TYPICAL

DRAWN BY: CON/AE/SLF  
CHECKED BY: BMH  
JUNE 2006  
PLAN DATE:  
FILE: K:\DGN\TSR\STDS\ENGL\SH\MNTTR\M0200a.dgn  
REV: 08/21/2006  
MO020a  
SHEET 2 OF 2



NOT TO SCALE

NOT TO SCALE

#### NOTES

- D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES  
L & 1/2 L = MINIMUM LENGTH OF TAPER  
B = LENGTH OF LONGITUDINAL BUFFER  
SEE M0020a FOR "D," "L," AND "B" VALUES
- ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
- DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- THE "WORK ZONE BEGINS" (RS-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES SHOULD BE EQUAL IN FEET TO THE POSTED SPEED IN MILES PER HOUR ON TAPER(S) AND TWICE THE POSTED SPEED IN THE PARALLEL AREA(S).
- FOR OVERNIGHT CLOSURES, TYPE III BARRICADES SHALL BE LIGHTED.
- THE TYPE A WARNING FLASHER SHOWN ON THE WARNING SIGNS SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
- ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS STIPULATED IN THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
- WHEN BUFFER AREAS ARE ESTABLISHED, THERE SHALL BE NO EQUIPMENT OR MATERIALS STORED OR WORK CONDUCTED IN THE BUFFER AREA.
- ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS, SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR DAYTIME-ONLY TRAFFIC PATTERNS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.
- THE LIGHTED ARROW PANEL SHALL BE LOCATED AT THE BEGINNING OF THE TAPER AS SHOWN. WHEN PHYSICAL LIMITATIONS RESTRICT ITS PLACEMENT AS INDICATED, THEN IT SHALL BE PLACED AS CLOSE TO THE BEGINNING OF THE TAPER AS POSSIBLE.

#### SIGN SIZES

DIAMOND WARNING - 48" x 48"  
W1-6 WARNING - 48" x 24"  
R2-1 REGULATORY - 48" x 60"  
RS-18c REGULATORY - 48" x 48"



Michigan Department of Transportation  
TRAFFIC AND SAFETY  
MAINTAINING TRAFFIC  
TYPICAL

DRAWN BY: CON/AE/SLF  
CHECKED BY: BMH/CHB  
OCTOBER 2011  
PLAN DATE:  
FILE: K:\DGN\TSR\STDS\ENGL\SH\MNTTR\M0300a.dgn  
REV: 10/18/2011  
M0300a  
SHEET 1 OF 2

NOT TO SCALE

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DIAMOND WARNING - 48" x 48"  
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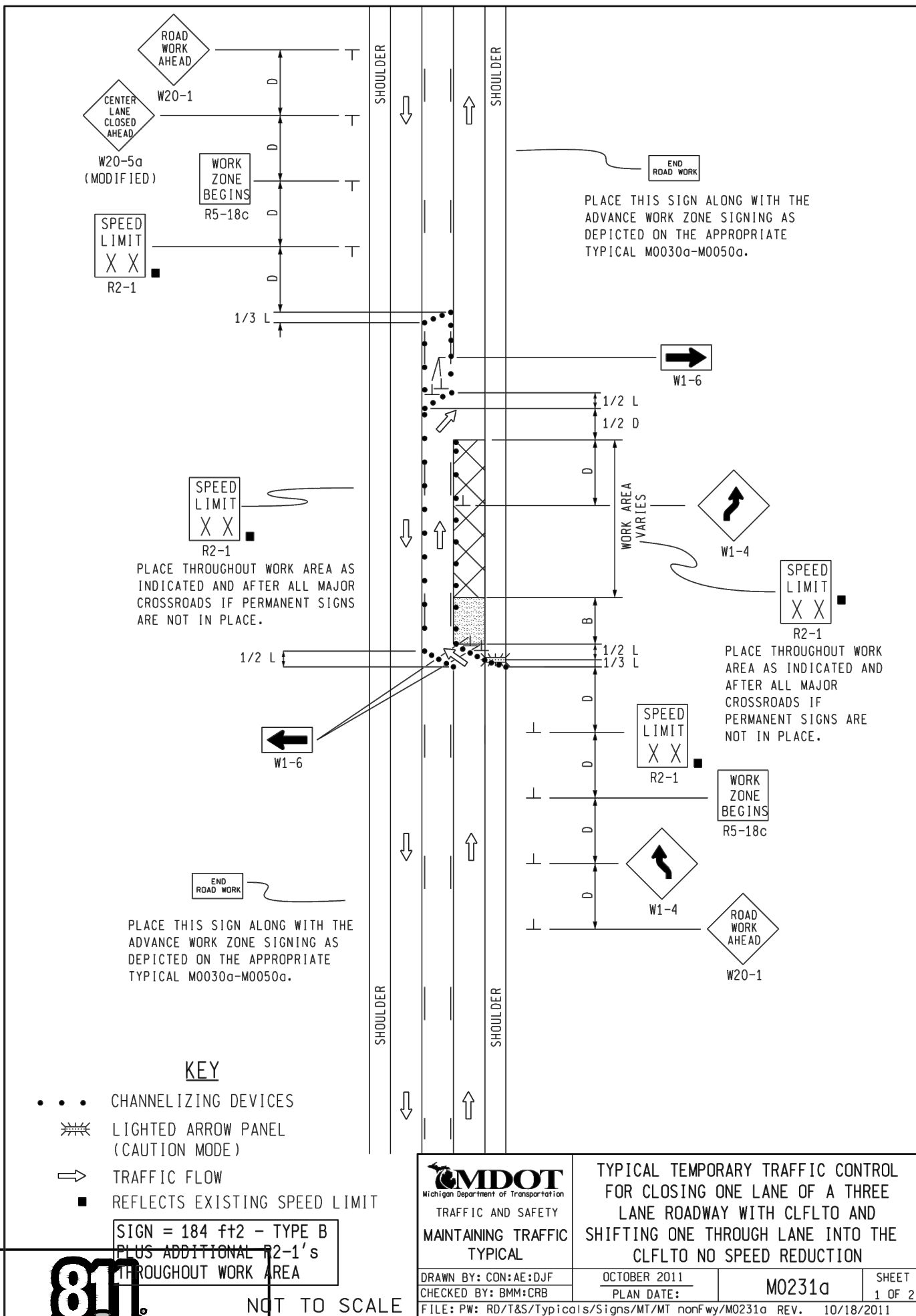
Michigan Department of Transportation  
TRAFFIC AND SAFETY  
MAINTAINING TRAFFIC  
TYPICAL

DRAWN BY: CON/AE/SLF  
CHECKED BY: BMH/CHB  
OCTOBER 2011  
PLAN DATE:  
FILE: P:\R2\TSR\Typical\Signs\MI\MT\m0231a REV: 10/18/2011  
M0231a  
SHEET 2 OF 2

NOT TO SCALE

#### STAGING NOTES:

- STAGE 1. FOLLOW TYPICAL M0300a TO CLOSE EAST LANE AND MIDDLE LANE OF LOHR ROAD. DIRECT TWO-WAY TRAFFIC TO WEST LANE AND RIGHT TURN ONLY LANE. REMOVE W20-5 IN THE TYPICAL, AND REPLACE W4-2 WITH W24-1. INSTALL HALF OF CULVERT UNDER ROAD AND DRAINAGE STRUCTURE.
- STAGE 2. FOLLOW TYPICAL M0231a TO CLOSE WEST LANE AND RIGHT TURN LANE OF LOHR ROAD. DIRECT TWO-WAY TRAFFIC TO EAST LANE AND MIDDLE LANE. COMPLETE REMAINING WORK.



#### KEY

- CHANNELIZING DEVICES
- LIGHTED ARROW PANEL (CAUTION MODE)
- TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT

SIGN = 184 F42 - TYPE B PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

811

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Stantec Consulting Michigan Inc.  
3754 Ranchero Drive  
Ann Arbor MI 48108-2771  
Tel: (734) 761-1010  
www.stantec.com

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#### Notes

- LANE CLOSURES SHALL ONLY BE TAKEN WHEN NECESSARY TO PERFORM WORK. WORK MUST BE STAGED SUCH THAT TWO WAY TRAFFIC IS MAINTAINED AT ALL TIME.
- WASHTENAW COUNTY ROAD COMMISSION MUST BE NOTIFIED SEVEN DAYS PRIOR TO LANE CLOSURES.
- LANE TAPERS SHALL BE PER MDOT TYPICAL m0020a.

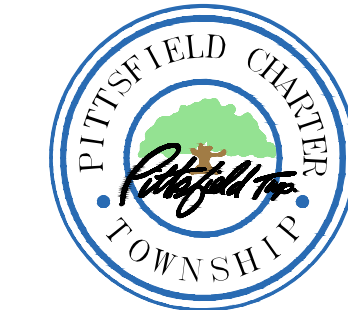
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C - PERMIT REV 1	CAM	MDP	2019.10.24
B - PERMIT PLAN	CAM	MDP	2019.06.07
A - PRELIMINARY PLAN	CAM	MDP	2018.10.12
Issued	By	Appd	YYYY.MM.DD
File Name: 149600C-05	BWA	BWA	CAM
	Dwn	Dsgn	Chkd: YYYY.MM.DD

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#### Client/Project

PITTSFIELD CHARTER TOWNSHIP

PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD

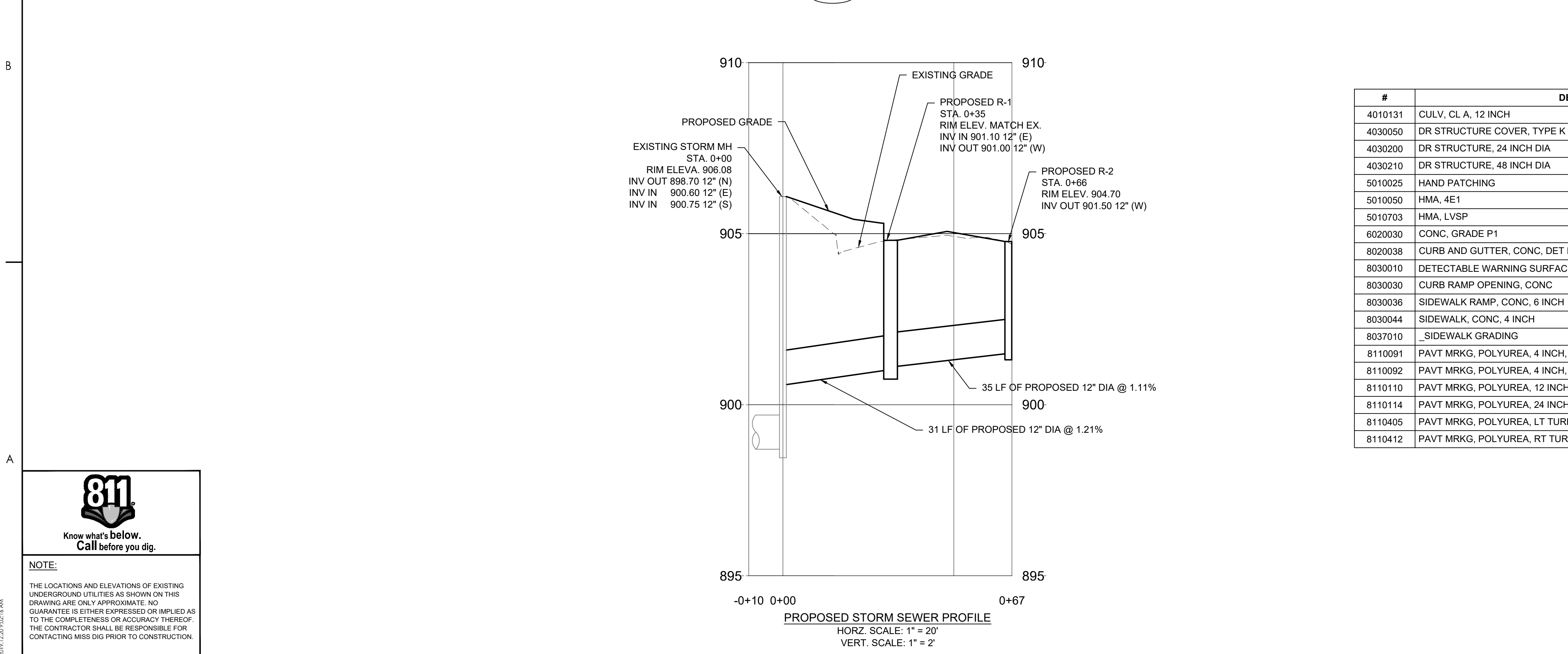
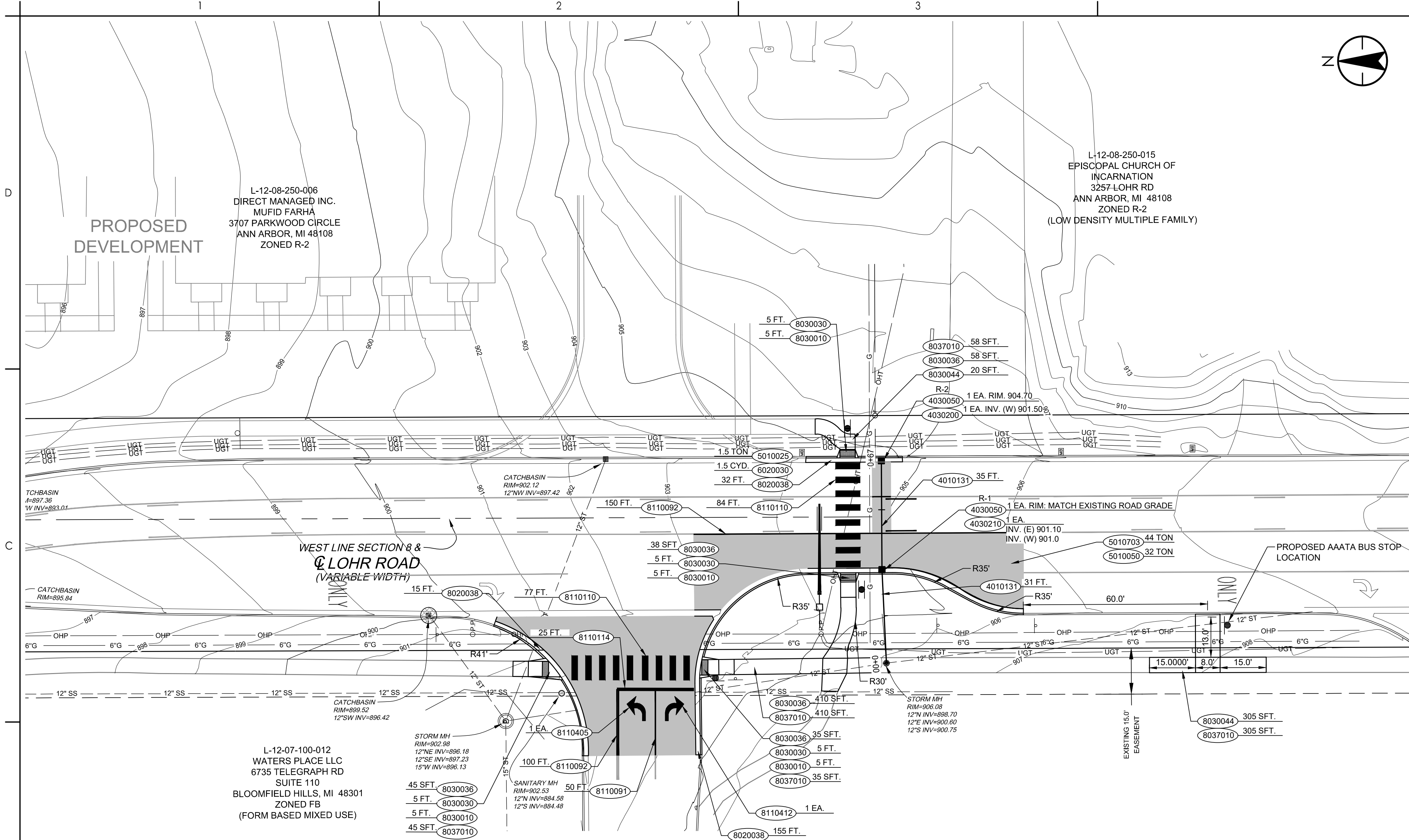
Pittsfield Township, MI

#### Title

TEMPORARY TRAFFIC CONTROL PLAN

Project No. 2075149600	Scale NONE
Revision Sheet 0 5 of 13	Drawing No. C-05





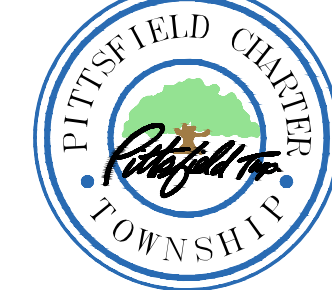
#	DESCRIPTION	QNTY	UNIT
4010131	CULV, CL A, 12 INCH	66	FT
4030050	DR STRUCTURE COVER, TYPE K	2	EA
4030200	DR STRUCTURE, 24 INCH DIA	1	EA
4030210	DR STRUCTURE, 48 INCH DIA	1	EA
5010025	HAND PATCHING	1.5	TON
5010050	HMA, 4E1	32	TON
5010703	HMA, LVSP	44	TON
6020030	CONC. GRADE P1	1.5	CYD
8020038	CURB AND GUTTER, CONC, DET F4	202	FT
8030010	DETECTABLE WARNING SURFACE	20	FT
8030030	CURB RAMP OPENING, CONC	20	FT
8030036	SIDEWALK RAMP, CONC, 6 INCH	586	SFT
8030044	SIDEWALK, CONC, 4 INCH	305	SFT
8037010	_SIDEWALK GRADING	891	SFT
8110091	PAVT MRKG, POLYUREA, 4 INCH, WHITE	25	FT
8110092	PAVT MRKG, POLYUREA, 4 INCH, YELLOW	250	FT
8110110	PAVT MRKG, POLYUREA, 12 INCH, CROSSWALK	161	FT
8110114	PAVT MRKG, POLYUREA, 24 INCH, STOP BAR	25	FT
8110405	PAVT MRKG, POLYUREA, LT TURN ARROW SYM	1	EA
8110412	PAVT MRKG, POLYUREA, RT TURN ARROW SYM	1	EA

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PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD

Pittsfield Township, MI

Title

CROSSING CONSTRUCTION PLAN

Project No.  
2075149600

Revision Sheet  
0 6 of 13

Scale  
0 20' 40'

Drawing No.

**C-06**



NOTE:

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UNDERGROUND UTILITIES AS SHOWN ON THIS  
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1. CONTOURS SHOW EXISTING GRADES



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D	PERMIT REV 2	CAM	MDP	2019.12.20
C	PERMIT REV 1	CAM	MDP	2019.10.24
B	PERMIT PLAN	CAM	MDP	2019.06.07
A	PRELIMINARY PLAN	CAM	MDP	2018.10.12
Issued		By	Appd	YYYY.MM.DD
File Name: 147600C-07		BWA	BWA	2018.08.25
		Dwn.	Dsgn. Chkd.	YYYY.MM.DD

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PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD

Pittsfield Township, MI

Title

## DETAILED GRADING PLAN

Project No.  
2075149600

Scale  
0 10' 20'

Drawing No.

**C-07**



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Notes

- SEE SHEET C-02 FOR TRAFFIC AND SAFETY NOTES.
- COST OF PHOTOCELL IS INCLUDED IN THE COST OF THE CASE SIGN PAY ITEM.
- UNDERGROUND CONDUIT SHALL BE BURIED MINIMUM 24" BELOW GRADE.
- SERVICE DISCONNECT SHALL BE 60A/60A NEMA 4X STAINLESS STEEL PER MDOT STANDARD PLANS SIG-211 SERIES.
- SIDE POLE CABINET SHALL BE SIZED PER STANDARD PLAN SIG-100 SERIES FLASHING BEACON CABINET AND MANUFACTURER'S RECOMMENDATION FOR BRACKETING.
- PEDESTAL BASE SHALL BE ALUMINUM SQUARE BASE PER MDOT STANDARD PLAN SIG-070 SERIES.
- BANDING IS NOT PERMITTED FOR ATTACHING EQUIPEMENT TO MAST ARMS. ALL ITEMS ATTACHED TO POLES SAHLL BE DONE USING THE BLIND-NUT METHOD. RRFB EQUIPMENT TO BE ATTACHED PER MANUFACTURER'S RECOMMENDATION.
- PUSHBUTTON LOCATIONS SHALL BE MAXIMUM 10' FROM FACE OF BUTTON TO NEAREST LEVEL LANDING EDGE.
- UTILITY OWNERS TO RELOCATE OVERHEAD LINES IF IN CONFLICT WITH SIGNAL EQUIPMENT.
- HAND DIG SIGNAL POLE FOUNDATIONS NEAR UNDERGROUND UTILITIES.
- CONTACT DTE ENERGY FOR ELECTRICAL SERVICE CONNECTION. ESTIMATED COST TO CONTRACTOR \$3,500.
- CONTRACTOR TO COORDINATE INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT WITH WCR. SIGNAL ASSEMBLIES MUST BE INSPECTED BY WCR PRIOR TO INSTALLATION.
- RRFB SHALL BE PER WCR STANDARD DETAIL WASH-19.
- MAST ARM DETAILS SHALL BE PER MDOT STANDARD PLAN SIG-032 AND SIG-040 SERIES. MAST ARM FINISH SHALL BE POWDER COATED BLACK.
- CONTRACTOR TO VERIFY STORM SEWER DEPTH PRIOR TO DIRECTIONAL BORE OF CONDUIT.

D	PERMIT REV 2	CAM	MDP	2019.12.20
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B	PERMIT PLAN	CAM	MDP	2019.06.07
A	PRELIMINARY PLAN	CAM	MDP	2018.10.12
Issued		By	Acqd	YYYY.MM.DD
File Name: 149600C-08		BWA	BWA	CAM
		Dwn	Dsgn	Chkd: YYYY.MM.DD

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PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT  
PROJECTS - LOHR ROAD

Pittsfield Township, MI

Title

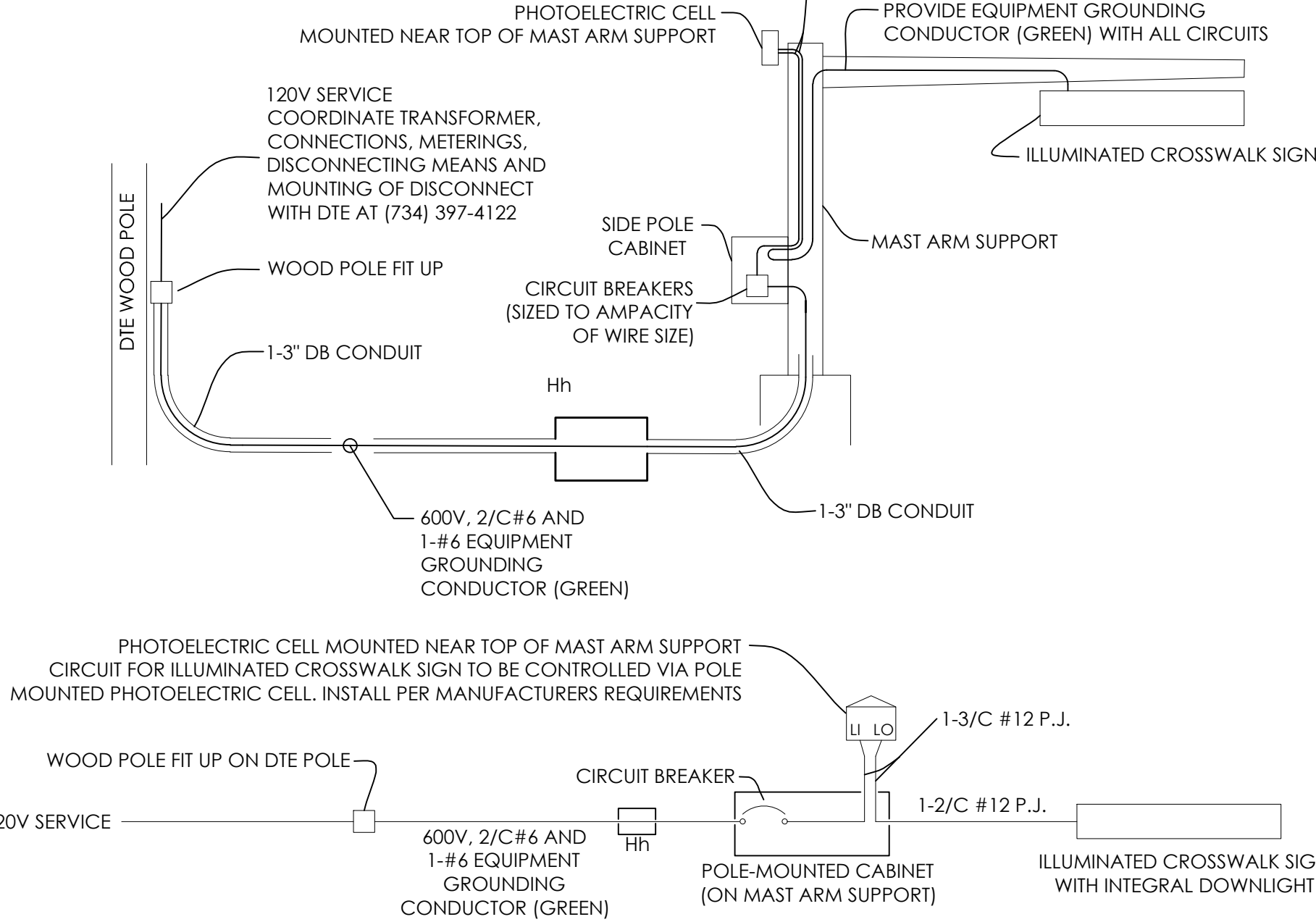
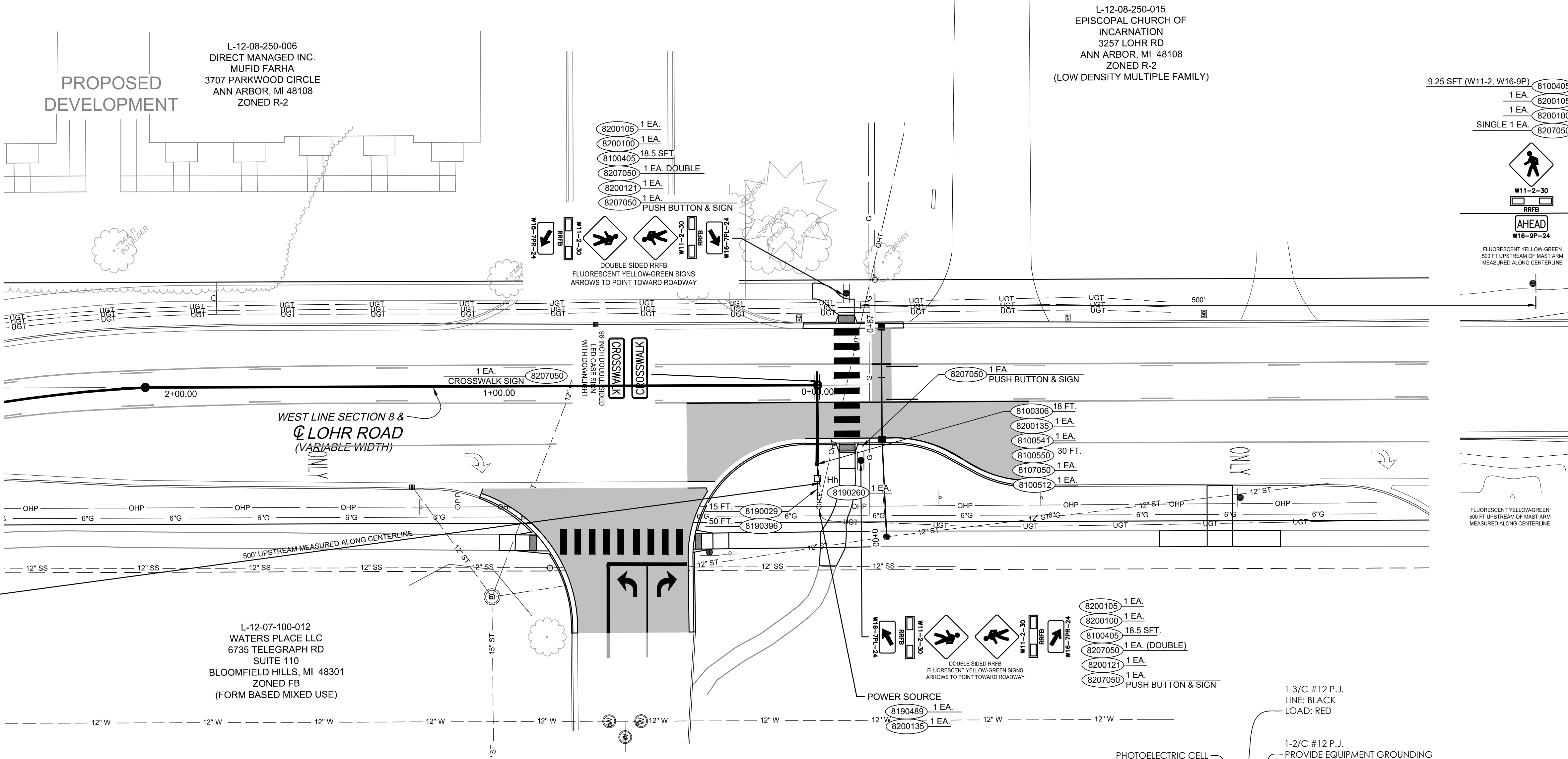
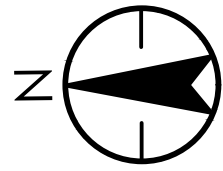
**PROPOSED TRAFFIC CONTROL  
DEVICE PLAN**

Project No.  
2075149600

Revision Sheet  
0 8 of 13

Scale  
0 20' 40'

Drawing No.  
**C-08**



**WIRING DIAGRAM**  
(N.T.S)

#	DESCRIPTION	QNTY	UNIT
8100306	MAST ARM STD FDN, CASED	18	FT
8100405	SIGN, TYPE IIIB	55.5	SFT
8100512	MAST ARM POLE, CAT III, BLACK	1	EA
8100541	MAST ARM, 25 FOOT, CAT III, BLACK	1	EA
8107050	_SIDE POLE CABINET	1	EA
8190029	CONDUIT, DB, 1, 3 INCH	15	FT
8190260	Hh, ROUND	1	EA
8190396	CABLE, SEC, 600V, 1, 2/C #6	50	FT
8190489	WOOD POLE, FIT UP, METERED SEC ELEC SERV	1	EA
8200100	PEDESTAL, ALUM	4	EA
8200105	PEDESTAL, FDN	4	EA
8200116	POWER CO. (EST COST TO CONTRACTOR)	3500	DLR
8200135	SERV DISCONNECT	1	EA
8207050	PUSHBUTTON AND SIGN, MODIFIED	2	EA
8207050	_FLSH BEACON, RECTANGULAR RAPID, SOLAR POWERED, SINGLE SIDED	2	EA
8207050	_FLSH BEACON, RECTANGULAR RAPID, SOLAR POWERED, DOUBLE SIDED	2	EA
8207050	_CROSSWALK SIGN, TWO WAY, ILLUMINTED (LED) WITH DOWNLIGHT	1	EA

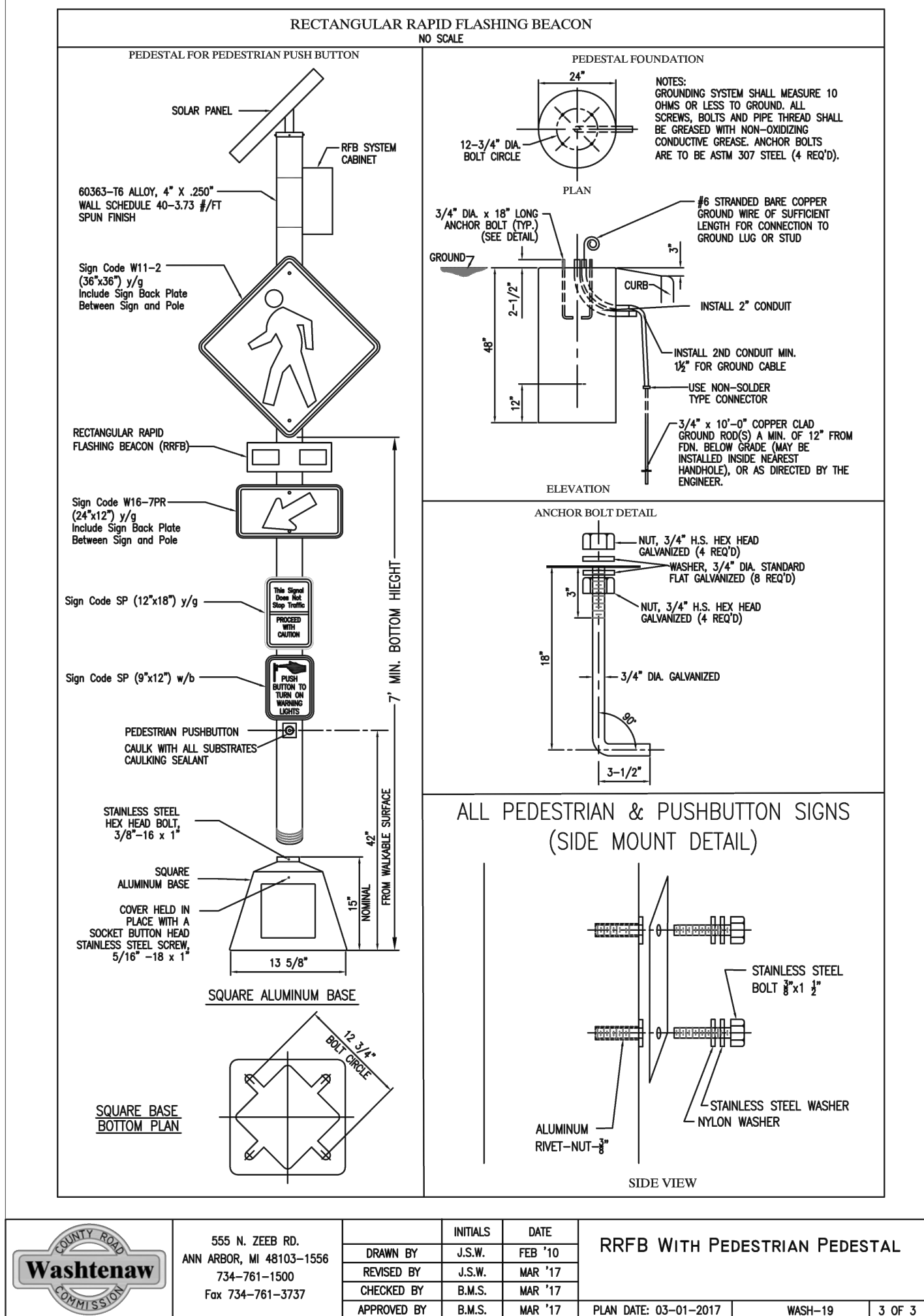
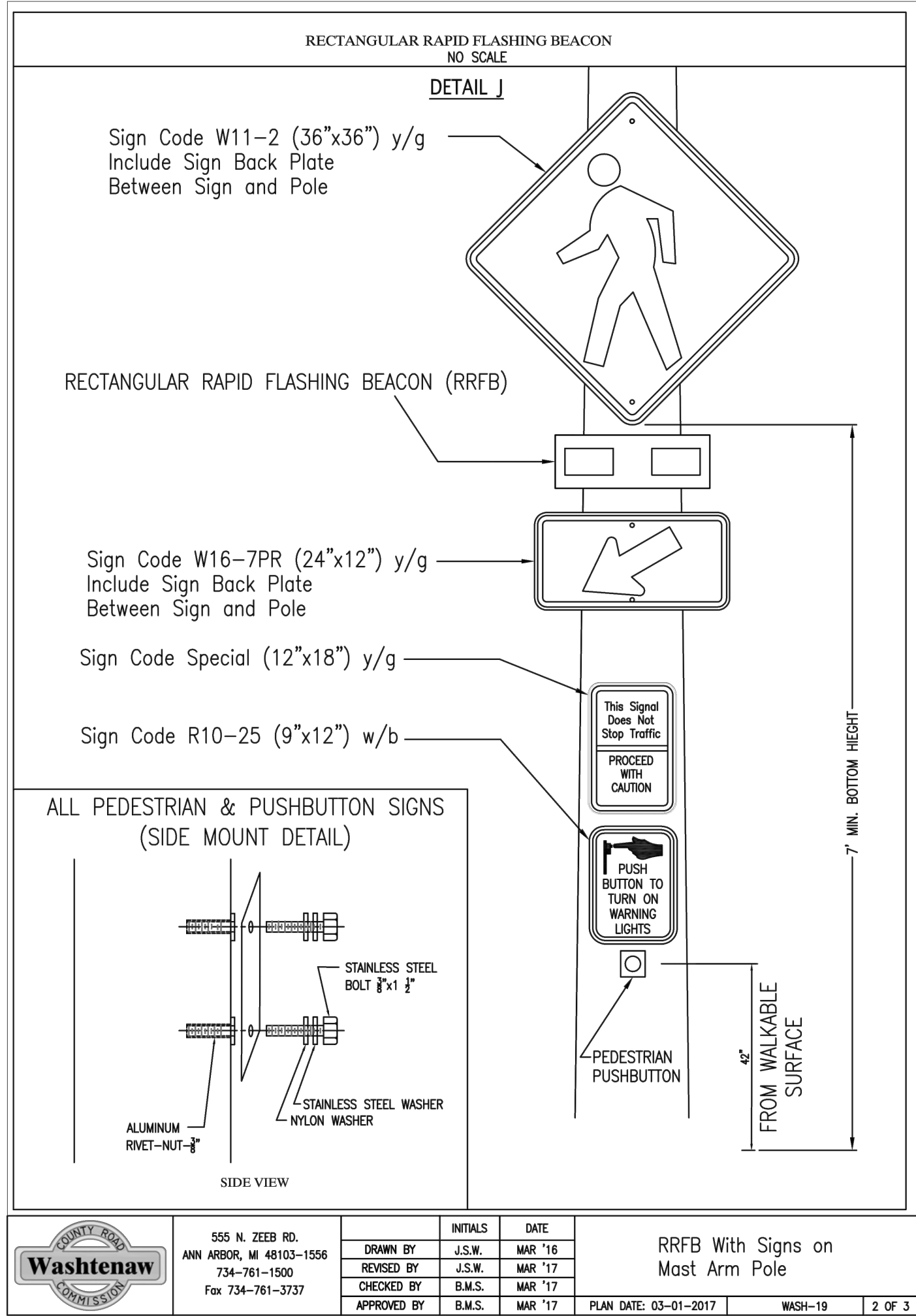
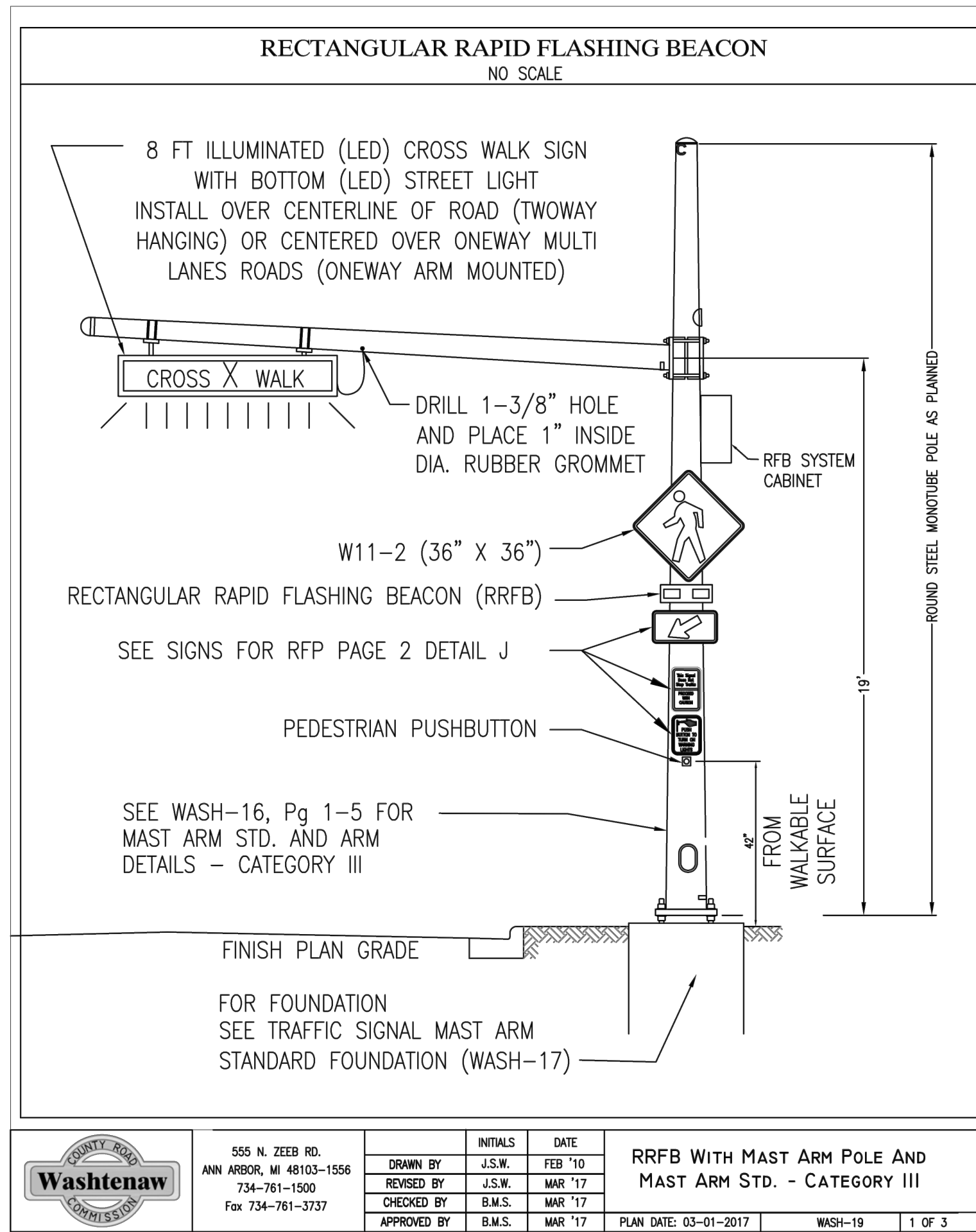


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NOTE:

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File Name: 149600C-09	BWA	BWA	CAM	2018.08.25
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PROJECTS - LOHR ROAD

Pittsfield Township, MI

Title

WCRC STANDARD DETAILS

Project No. 2075149600	Scale NONE
Revision Sheet 0 9 of 13	Drawing No. <b>C-09</b>



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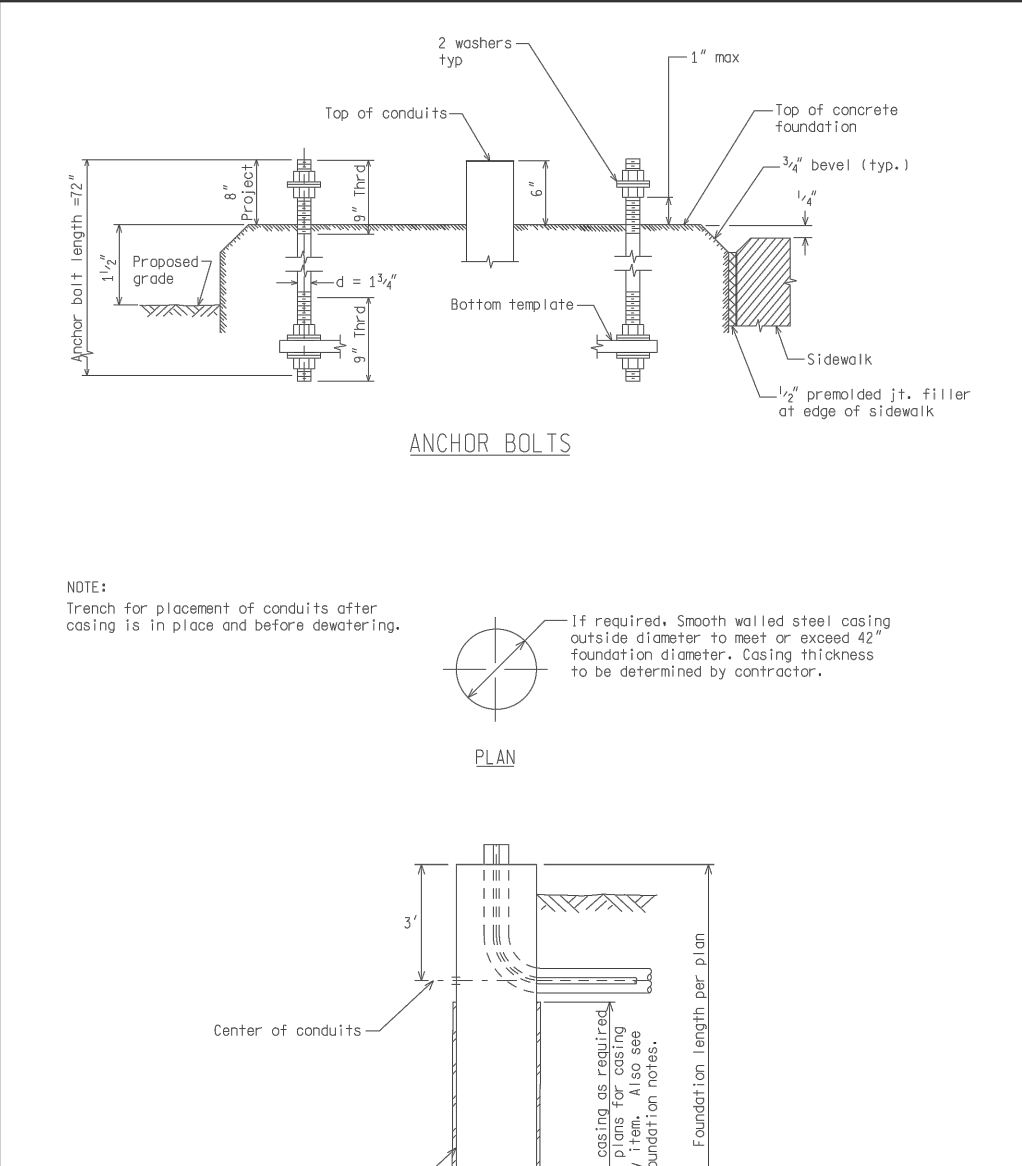
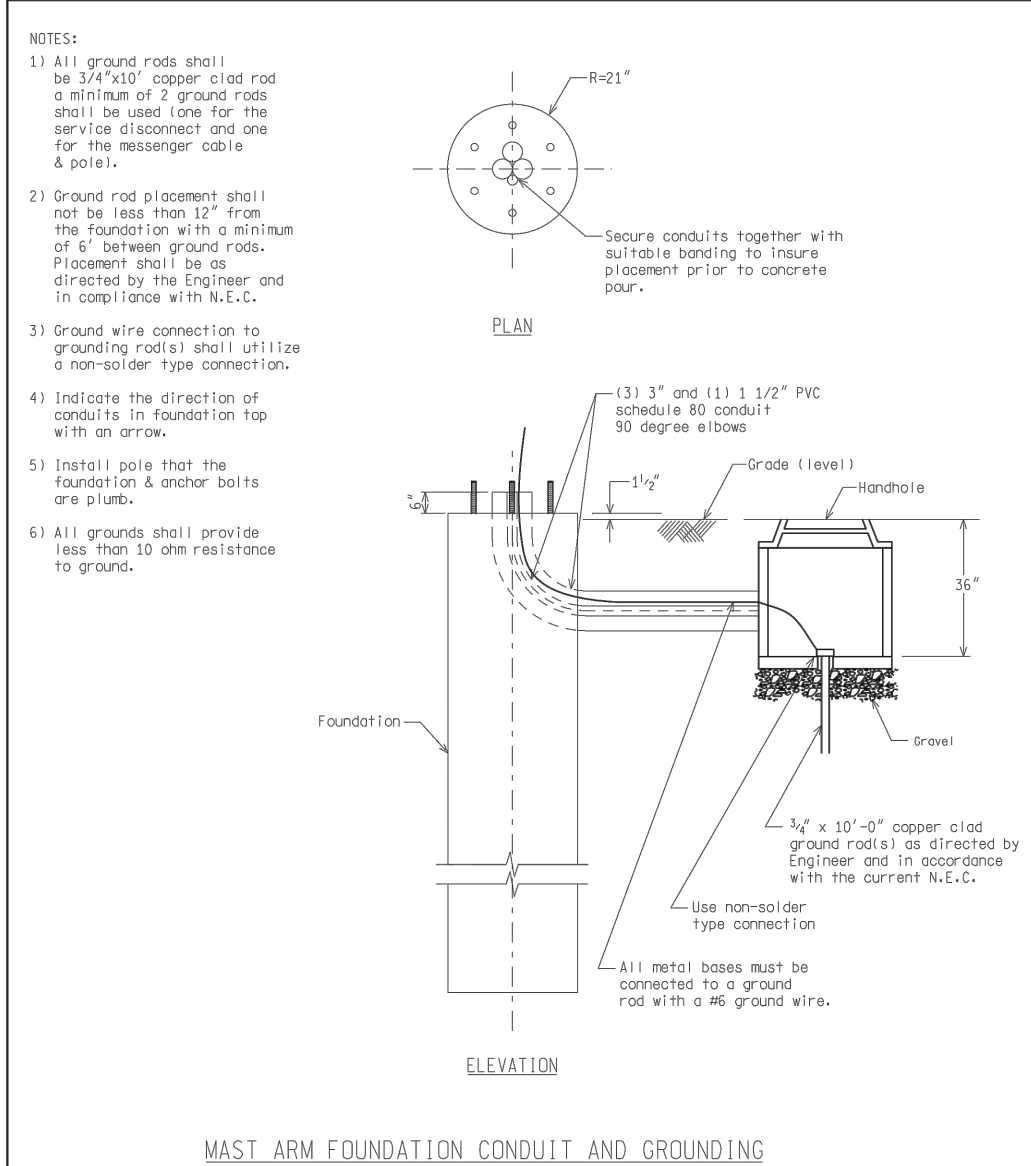




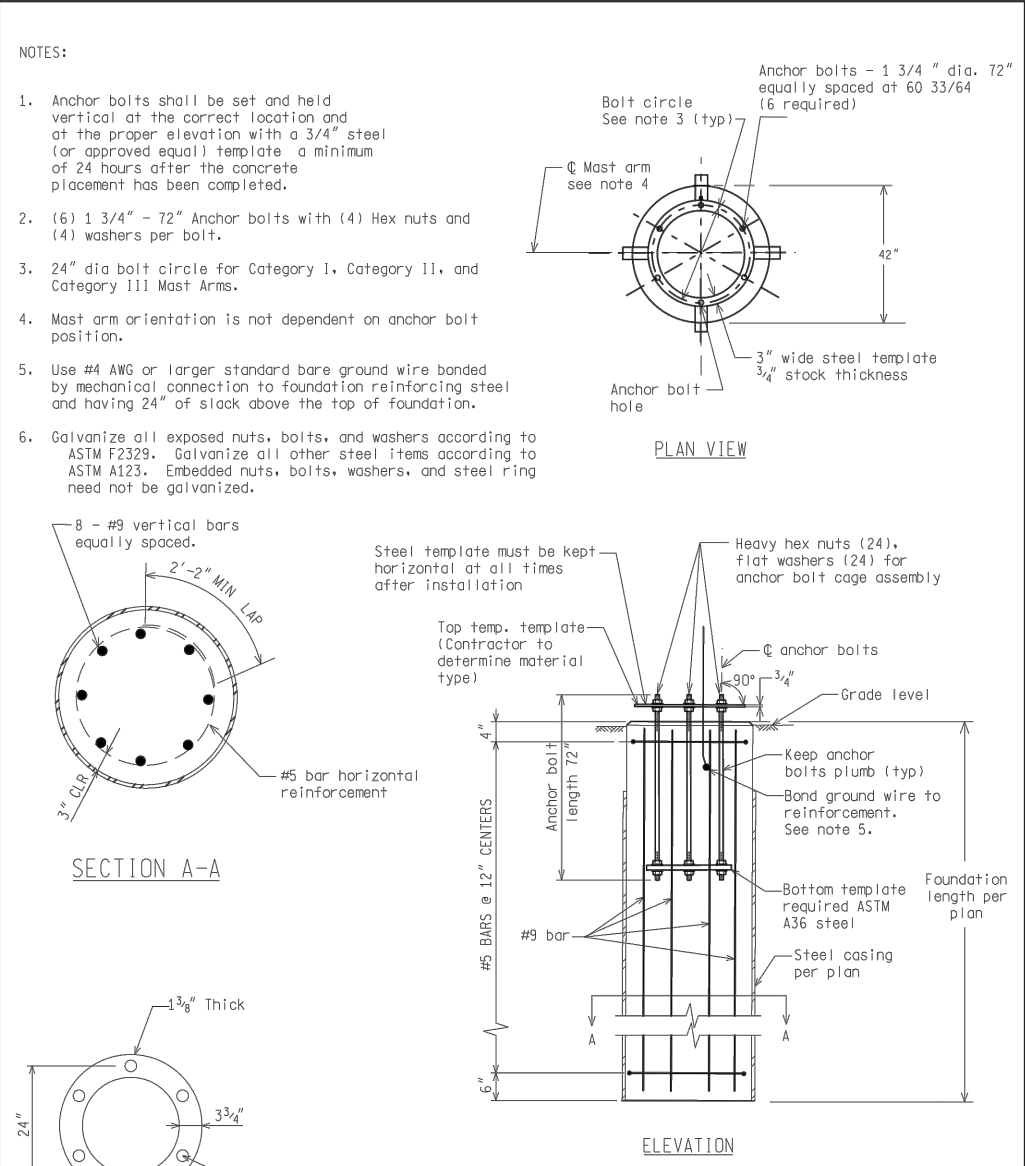
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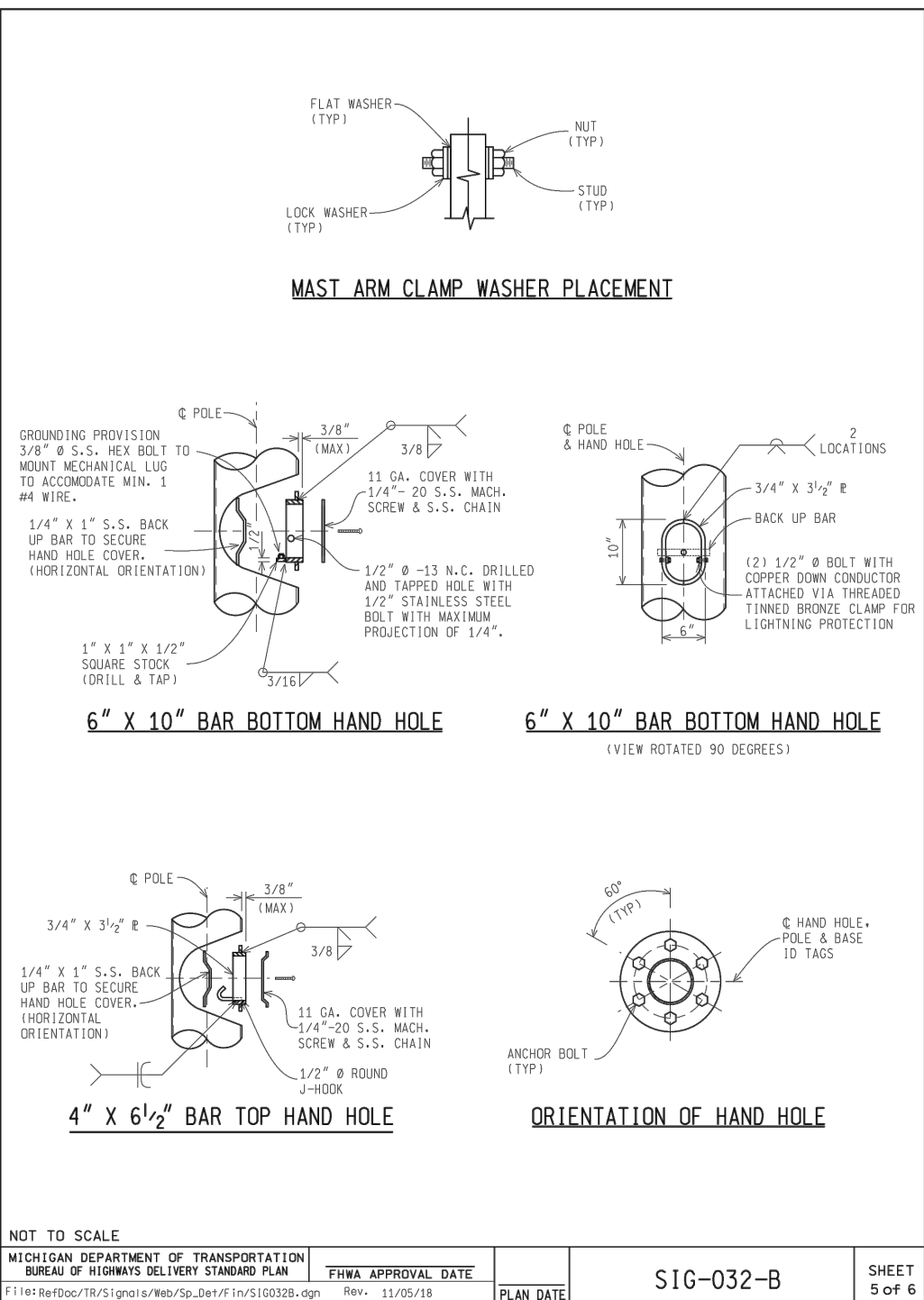
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PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT (SPECIAL DETAIL)	PLAN DATE
DRAWN BY		FRW, APPROVAL DATE	SHEET 1 OF 4
CHECKED BY			



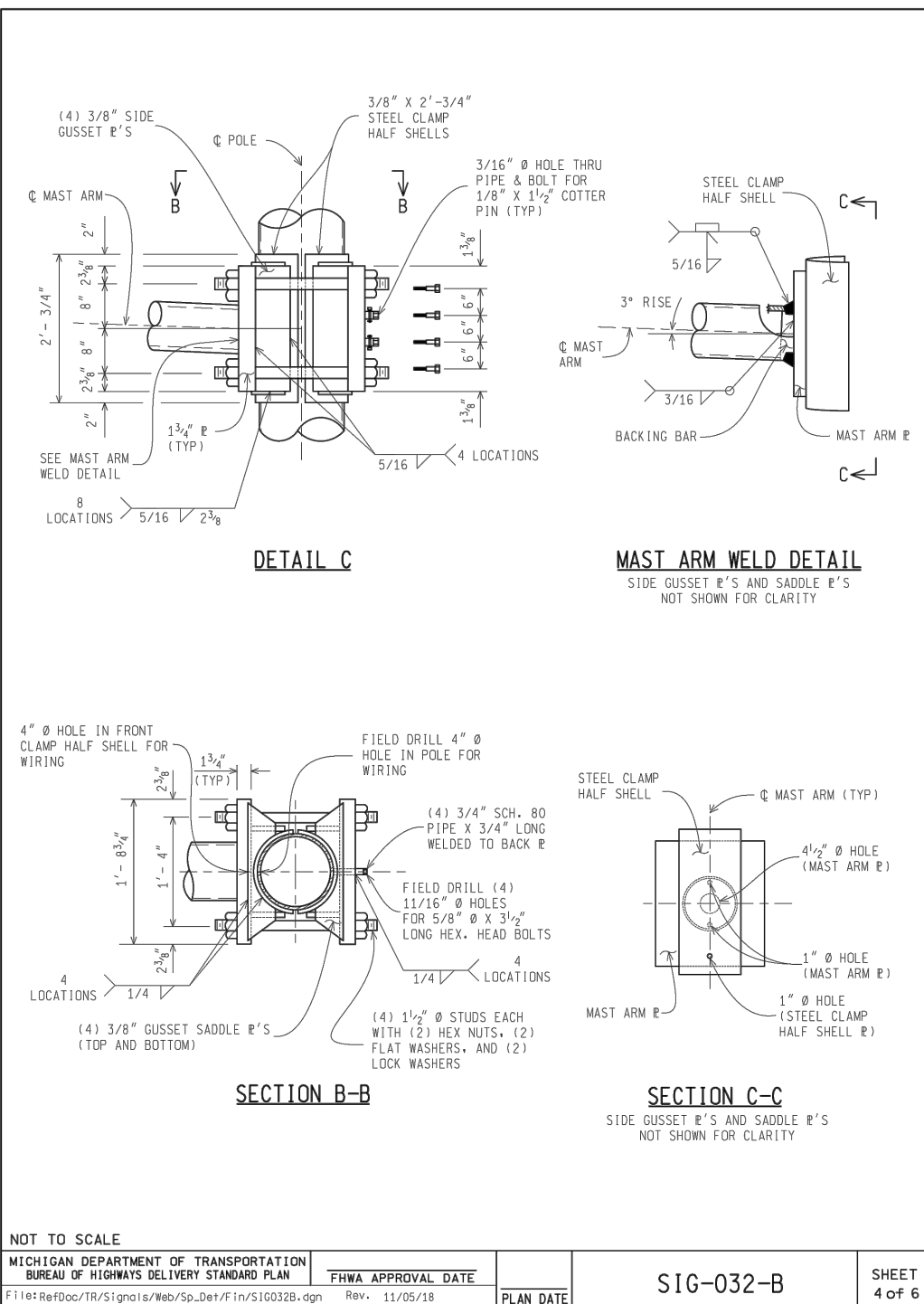
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PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT (SPECIAL DETAIL)	PLAN DATE
DRAWN BY		FRW, APPROVAL DATE	SHEET 2 OF 4
CHECKED BY			



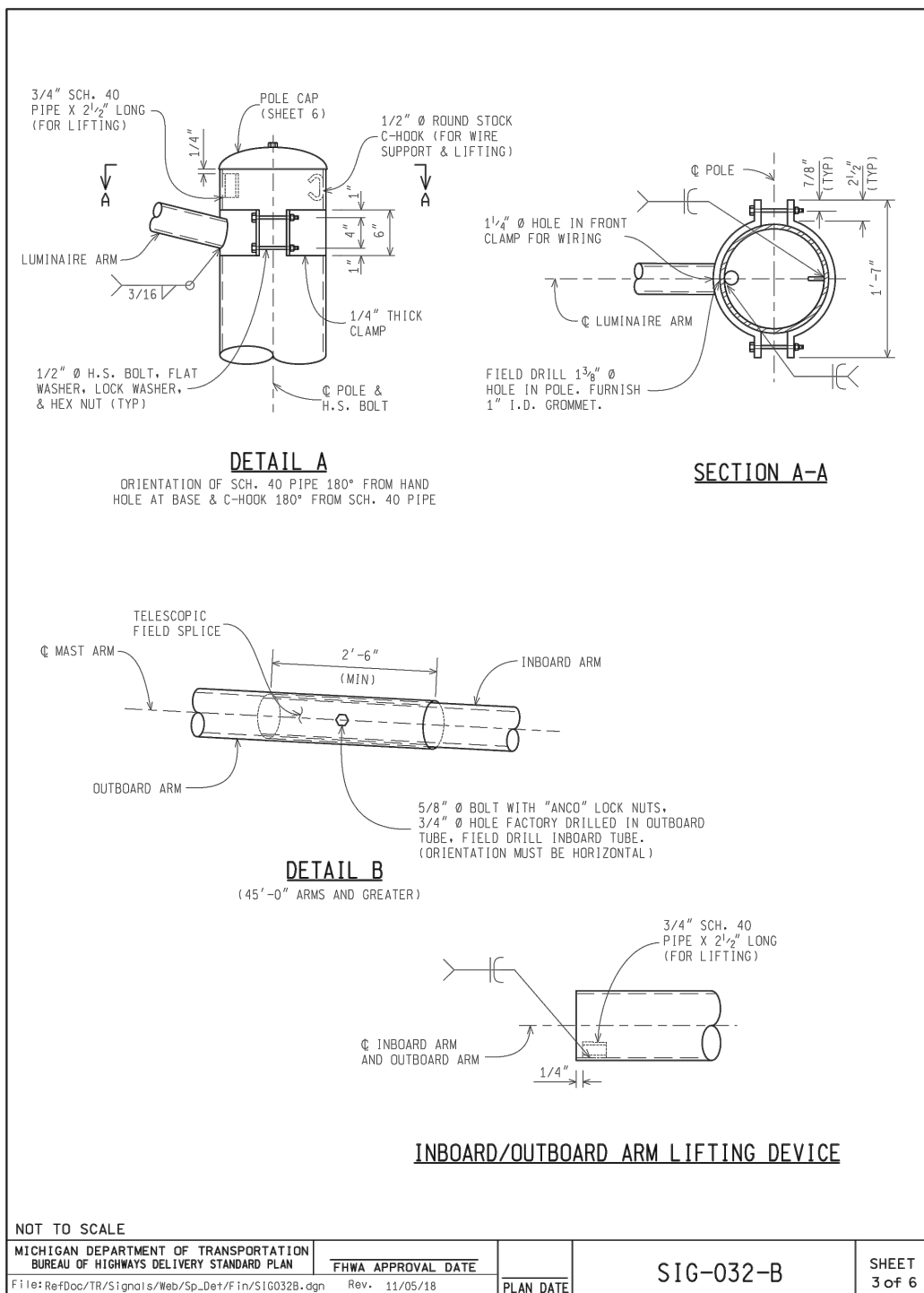
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN		(SPECIAL DETAIL) TRAFFIC SIGNAL MAST ARM STANDARD FOUNDATIONS	SIG-040-A
PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT (SPECIAL DETAIL)	PLAN DATE
DRAWN BY		FRW, APPROVAL DATE	SHEET 3 OF 4
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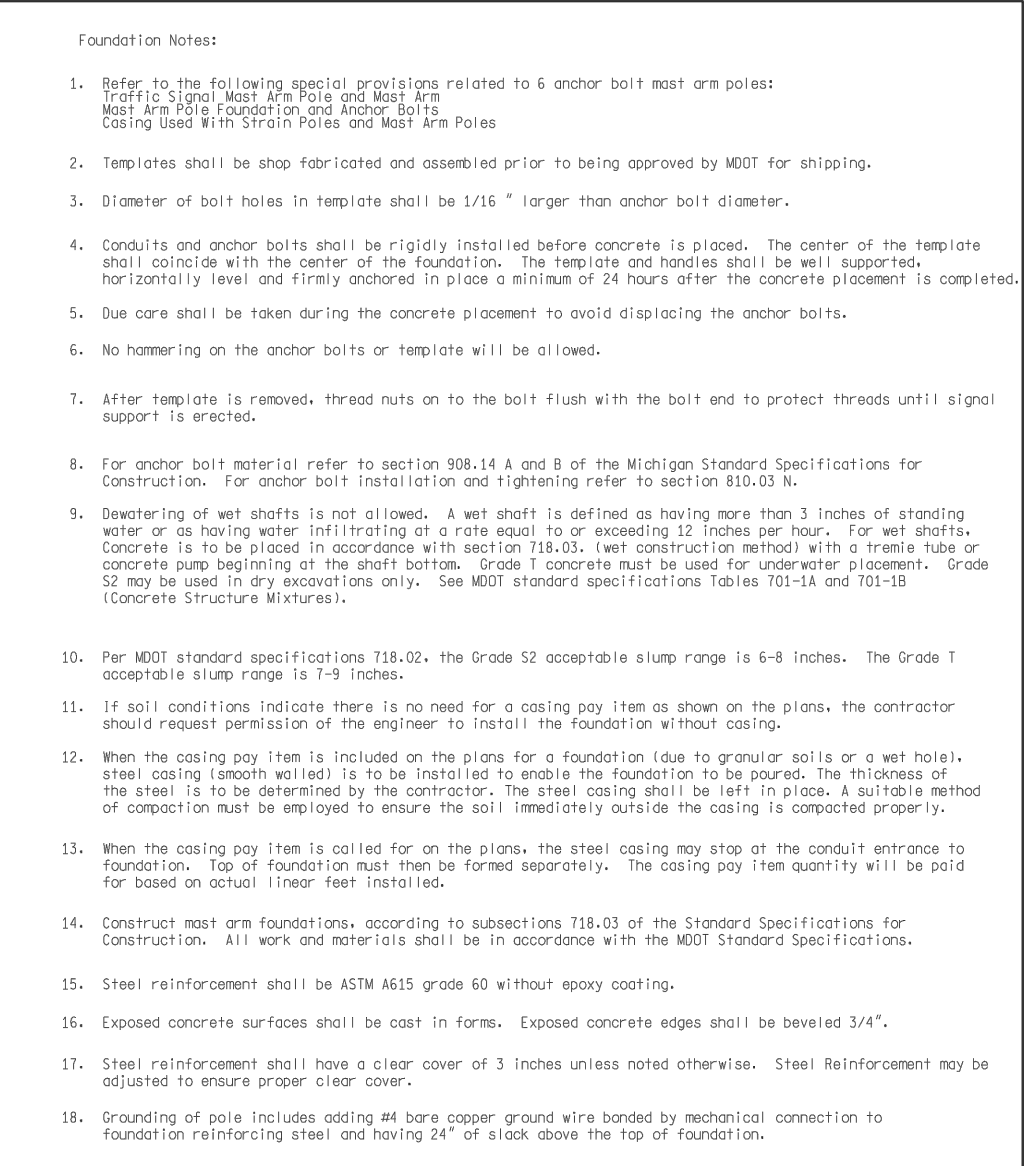
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PREPARED BY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE
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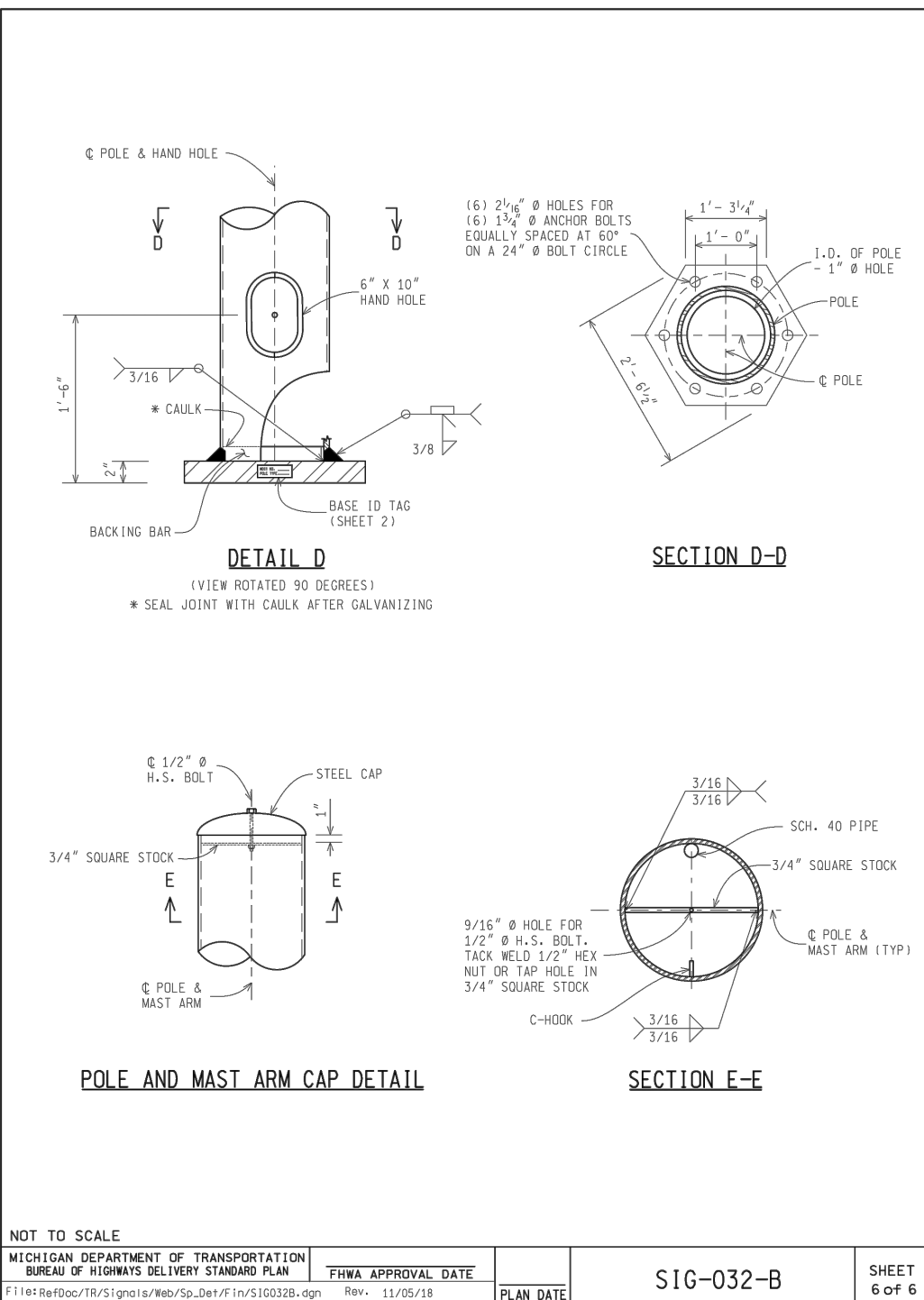
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PREPARED BY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE
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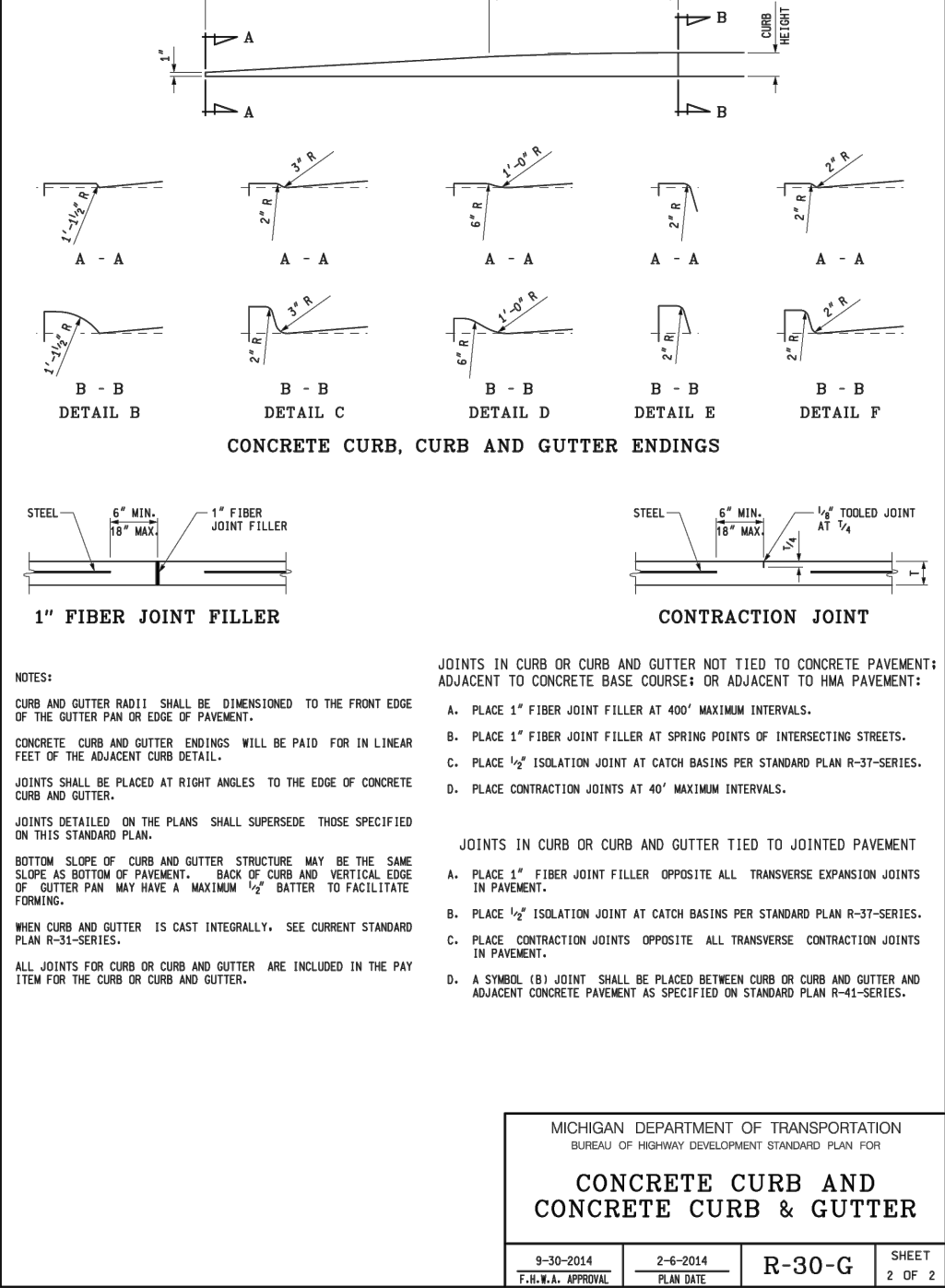
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PREPARED BY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE
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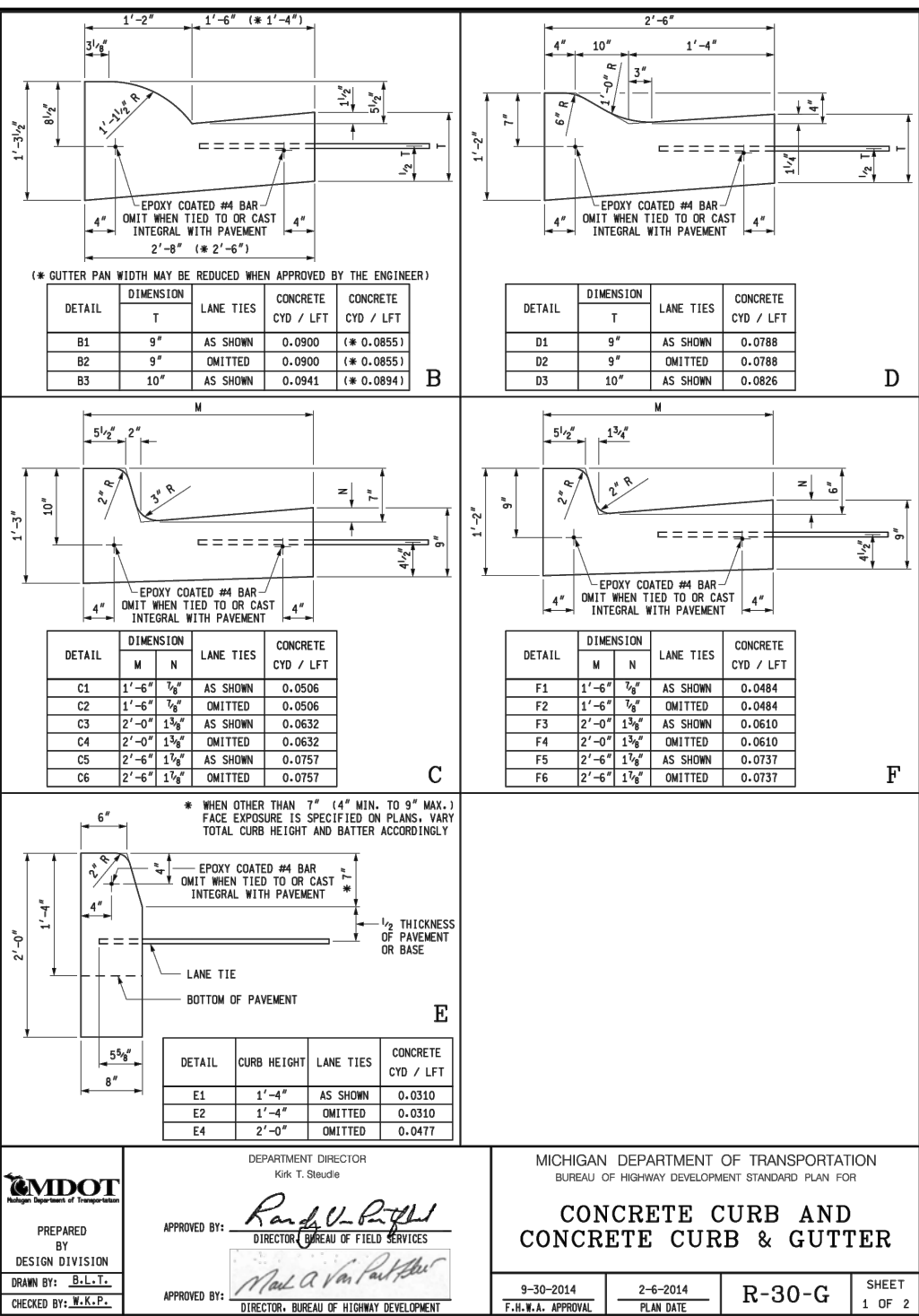
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PREPARED BY TRAFFIC AND SAFETY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT (SPECIAL DETAIL)	PLAN DATE
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN		SIG-032-B	SHEET 6 OF 6
PREPARED BY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN		R-30-G	SHEET 2 OF 2
PREPARED BY	ENGINEER OF DELIVERY	ENGINEER OF DEVELOPMENT	PLAN DATE
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN		R-30-G	SHEET 1 OF 2
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Notes

- JOINTS IN CURB OR CURB AND GUTTER NOT TIED TO CONCRETE PAVEMENT:  
ADJACENT TO CONCRETE BASE COURSE OR ADJACENT TO PAVEMENT:
- PLACE 1" FIBER JOINT FILLER AT 40' MAXIMUM INTERVALS.
  - PLACE 1" FIBER JOINT FILLER AT SPRING POINTS OF INTERSECTING STREETS.
  - PLACE 1/2" ISOLATION JOINT AT CATCH BASINS PER STANDARD PLAN R-31-SERIES.
  - PLACE CONTRACTION JOINTS AT 40' MAXIMUM INTERVALS.
- JOINTS IN CURB OR CURB AND GUTTER TIED TO JOINTED PAVEMENT:
- PLACE 1" FIBER JOINT FILLER OPPOSITE ALL TRANSVERSE EXPANSION JOINTS IN PAVEMENT.
  - PLACE 1/2" ISOLATION JOINT AT CATCH BASINS PER STANDARD PLAN R-31-SERIES.
  - PLACE CONTRACTION JOINTS OPPOSITE ALL TRANSVERSE CONTRACTION JOINTS IN PAVEMENT.
  - A SYMBOL (S) JOINT SHALL BE PLACED BETWEEN CURB OR CURB AND GUTTER AND ADJACENT CONCRETE PAVEMENT AS SPECIFIED ON STANDARD PLAN R-41-SERIES.

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C PERMIT REV 1	CAM	MDP	2019.10.24
B PERMIT PLAN	CAM	MDP	2019.06.07
A PRELIMINARY PLAN	CAM	MDP	2018.10.12
Issued	By	Appd	YYYY.MM.DD
File Name: I49600C-10	BWA	BWA	CAM
	Dwn.	Dsgn.	Chkd.
			YYYY.MM.DD

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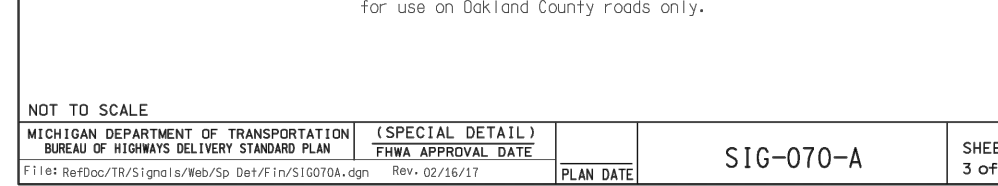
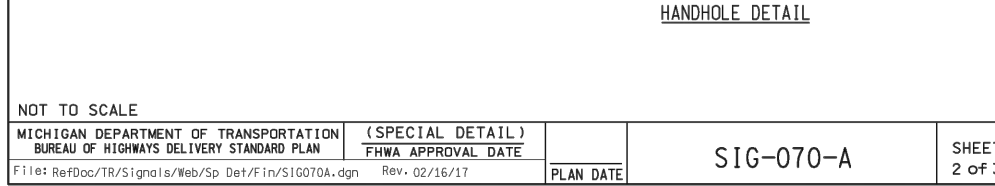
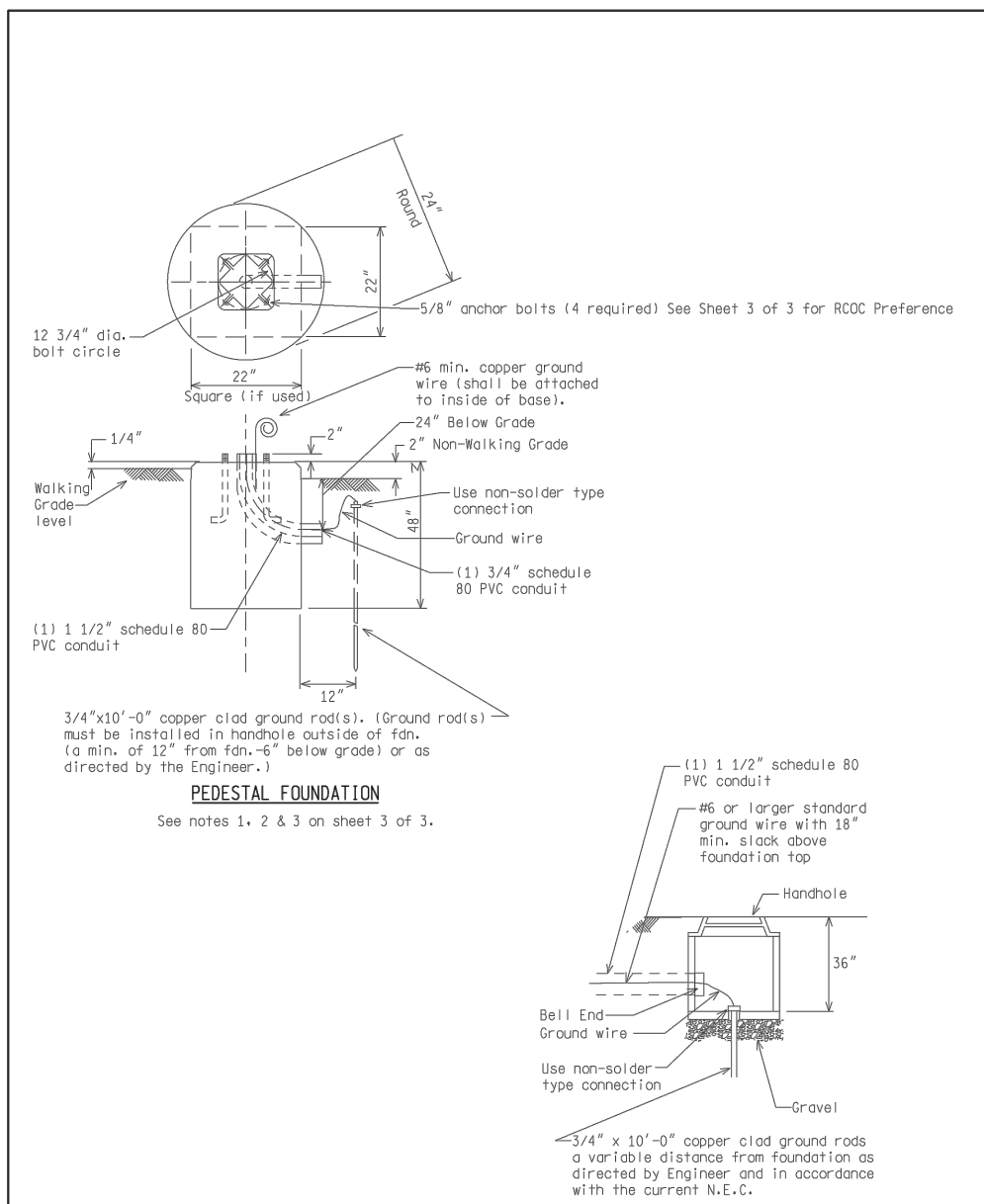
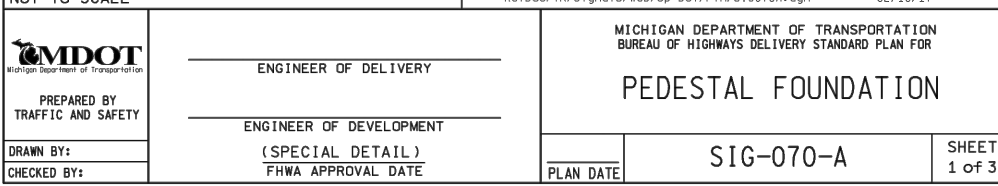
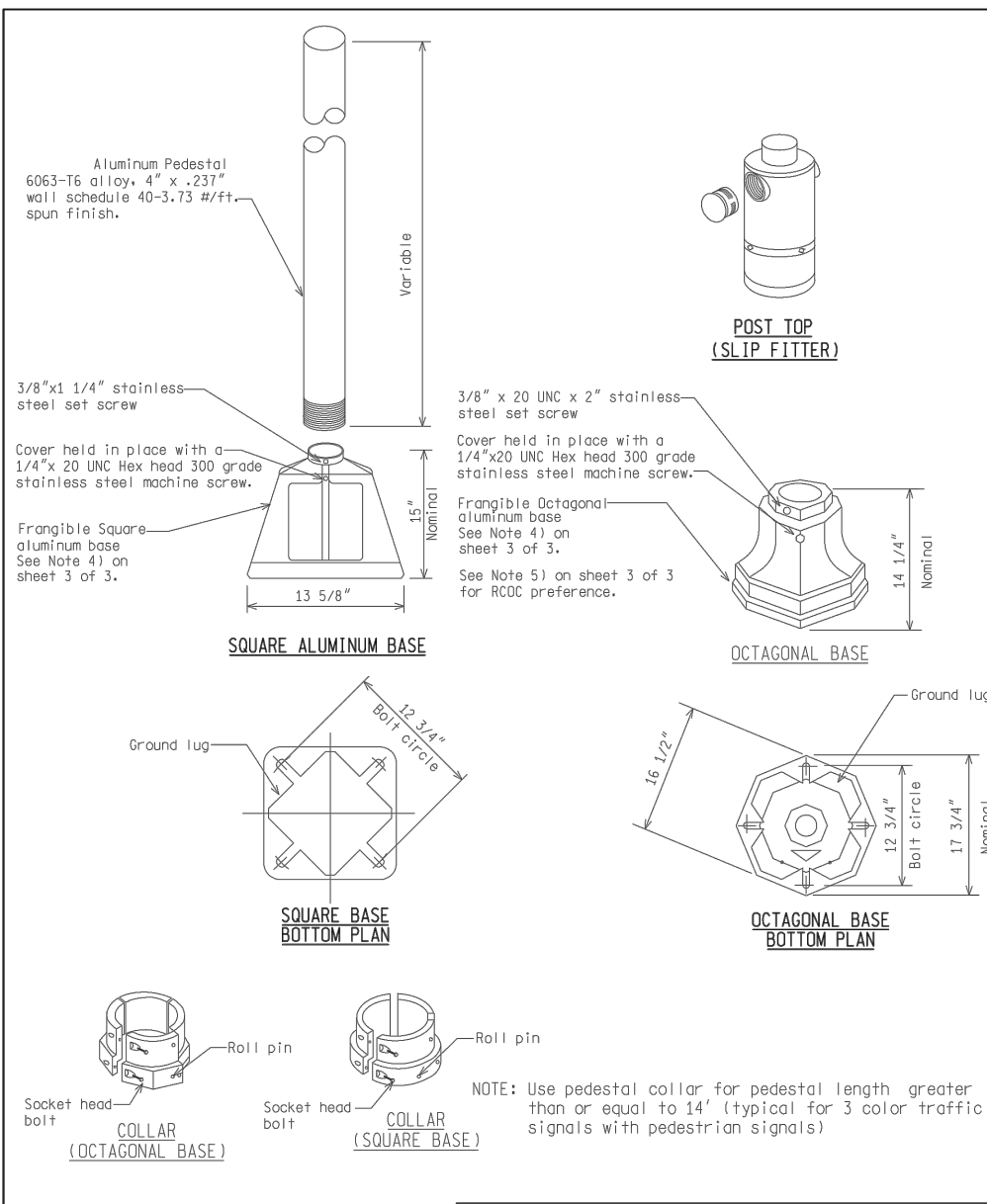
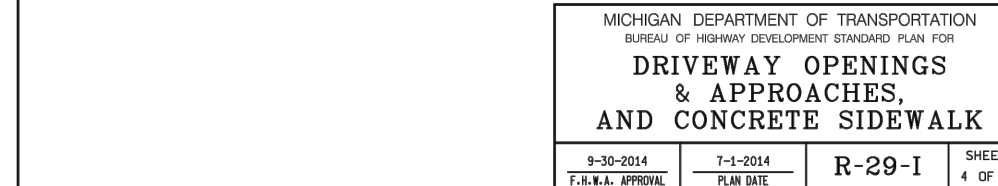
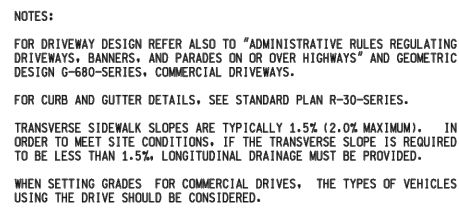
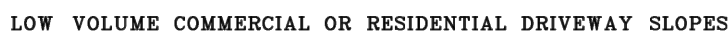
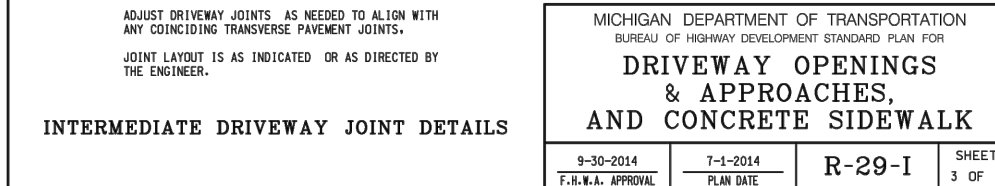
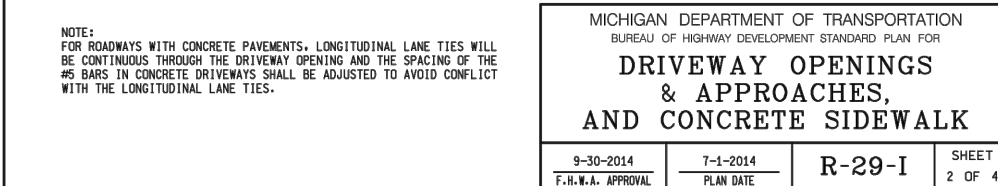
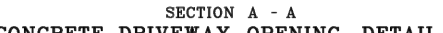
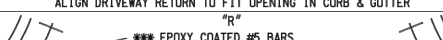
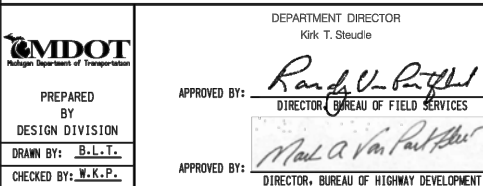
PITTSFIELD PEDESTRIAN SAFETY IMPROVEMENT PROJECTS - LOHR ROAD  
Pittsfield Township, MI

Title

MDOT STANDARD DETAILS

Project No. 2075149600	Scale NONE
Revision 0	Sheet 10 of 13
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Revision	Sh
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Drawing No.

11 of 13

**C-11**



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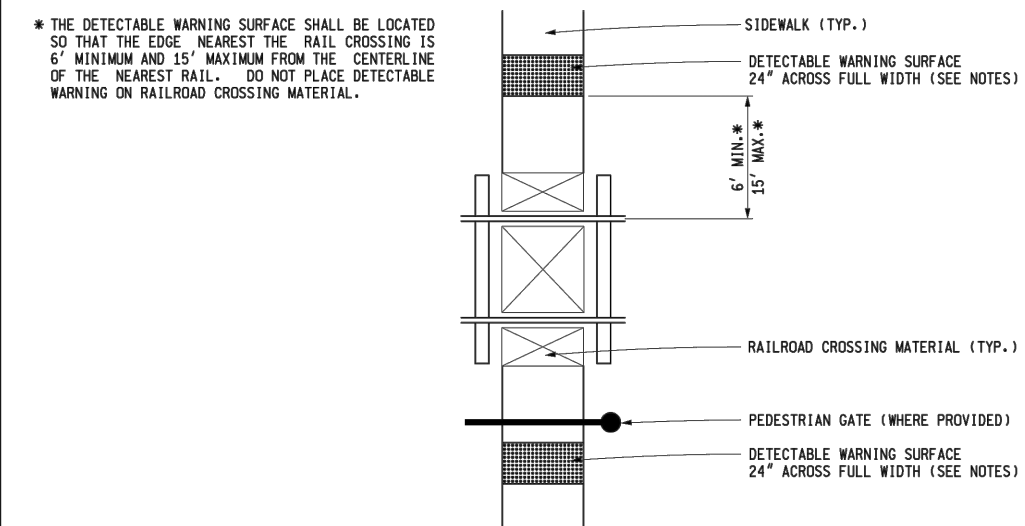


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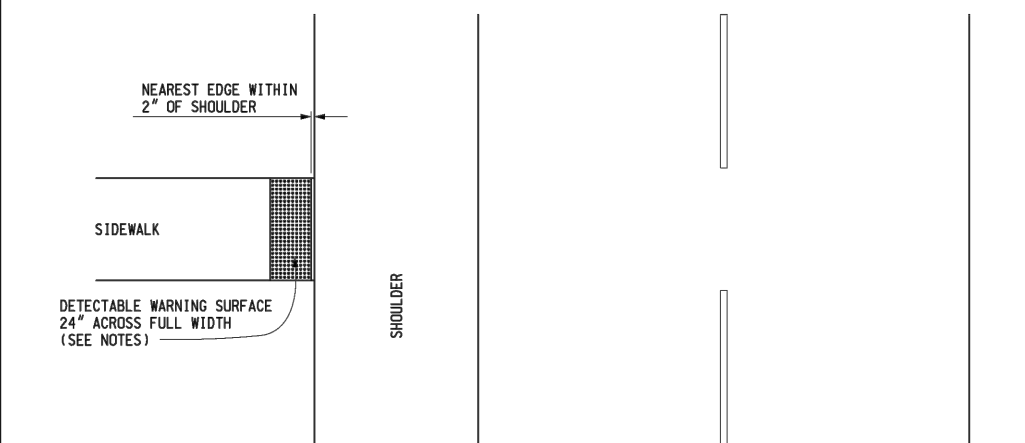
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DETECTABLE WARNING AT RAILROAD CROSSING



DETECTABLE WARNING AT FLUSH SHOULDER OR ROADWAY

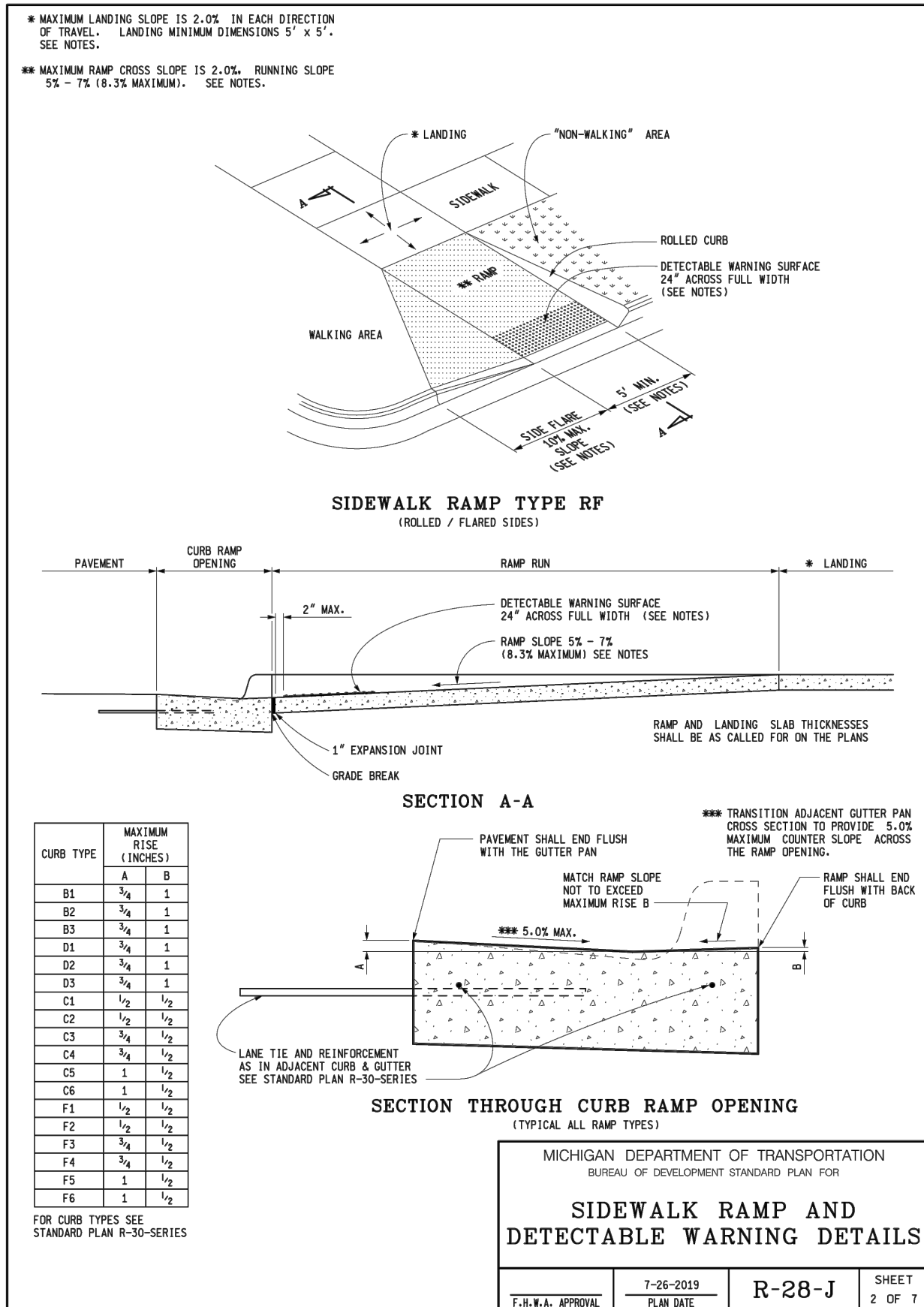
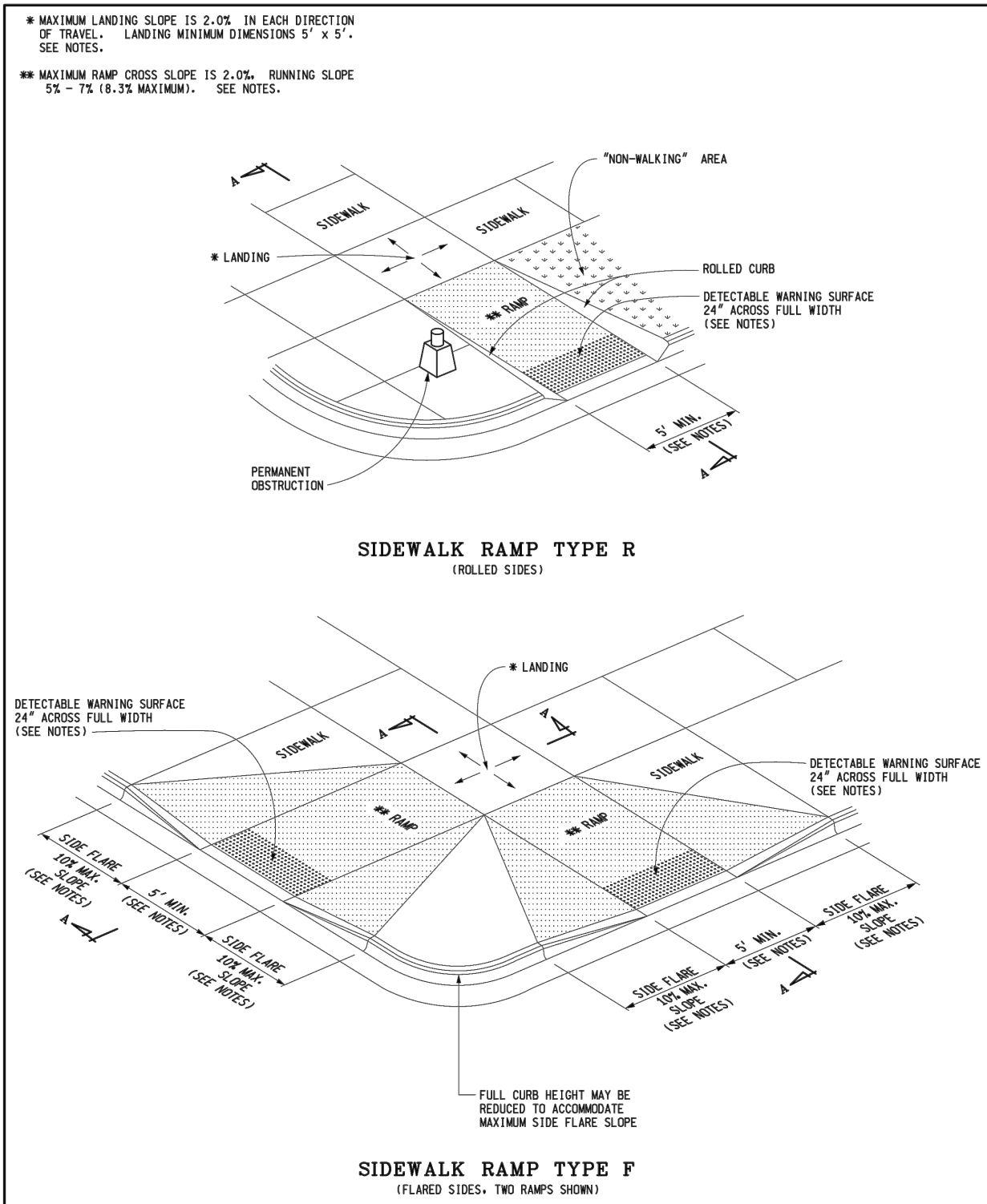


MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
T.S.R.A. APPROVAL	7-26-2019 PLAN DATE	R-28-J	SHEET 5 OF 7

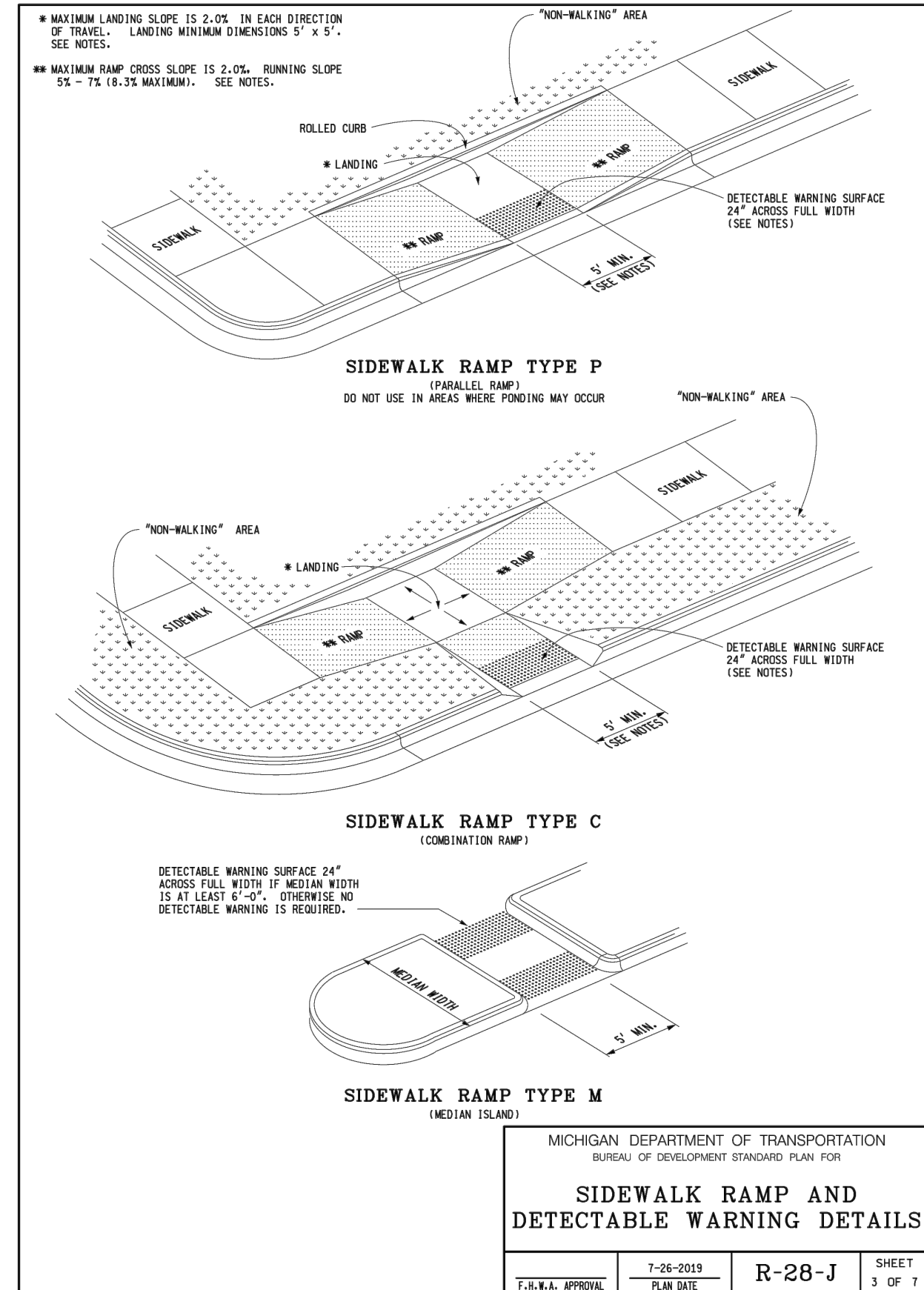
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR	
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS		SIDEWALK RAMP AND DETECTABLE WARNING DETAILS	
PREPARED BY DESIGN DIVISION DRAWN BY: B.L.L. CHECKED BY: B.L.L.	APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES	PREPARED BY DESIGN DIVISION DRAWN BY: B.L.L. CHECKED BY: B.L.L.	APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT
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R-28-J		R-28-J	
SHEET 1 OF 7		SHEET 1 OF 7	

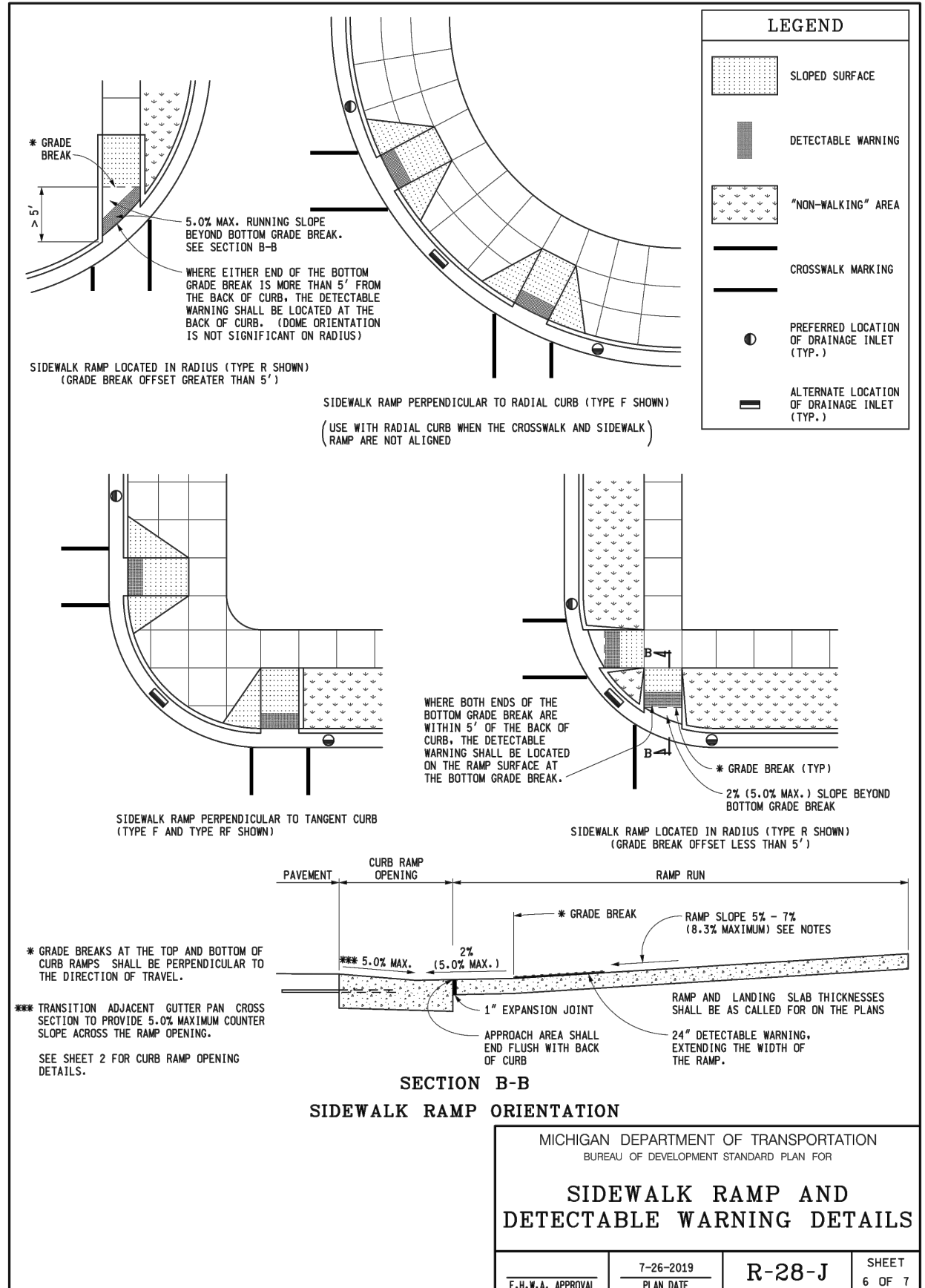
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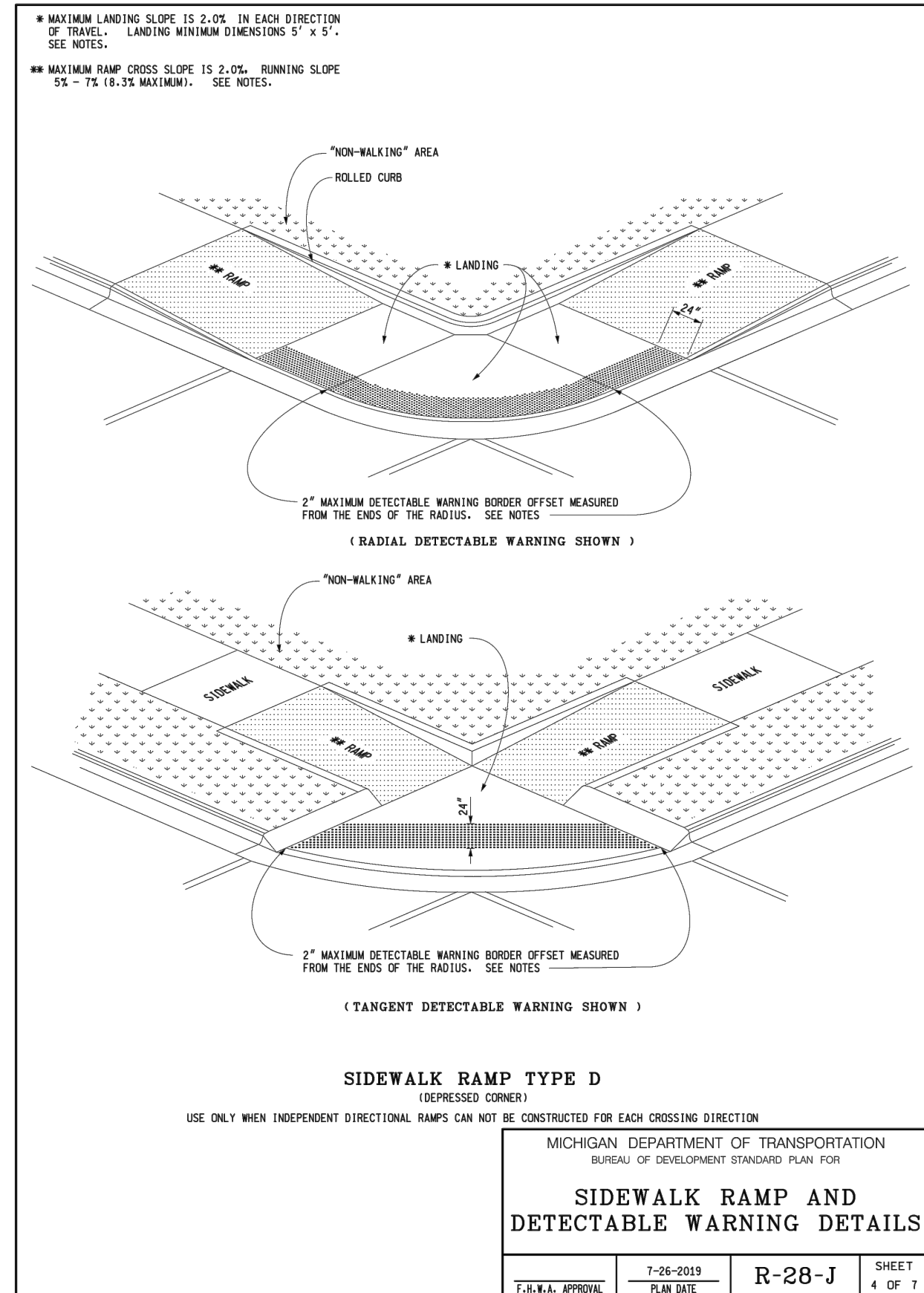
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T.S.R.A. APPROVAL	7-26-2019 PLAN DATE	R-28-J	SHEET 2 OF 7



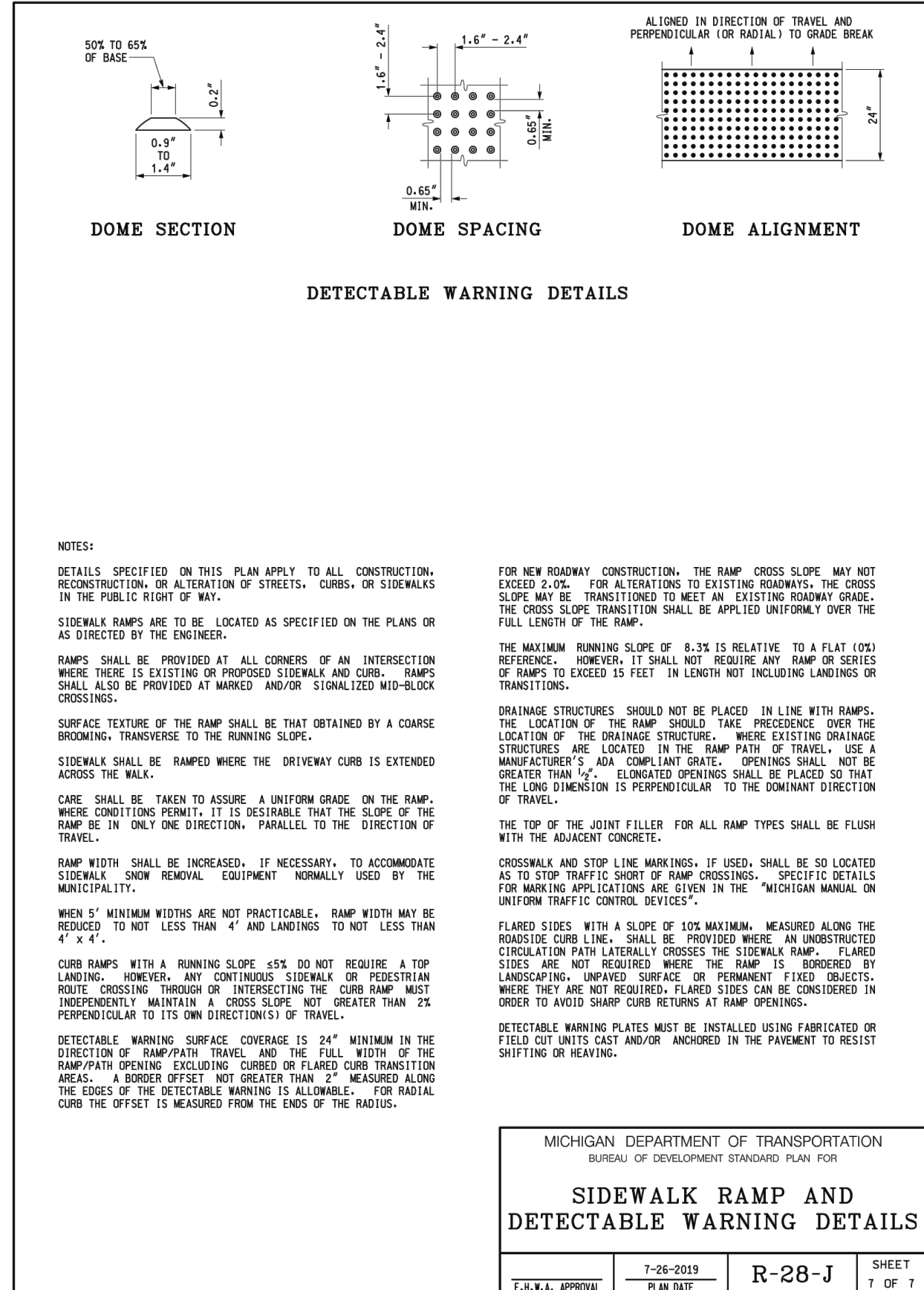
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
T.S.R.A. APPROVAL	7-26-2019 PLAN DATE	R-28-J	SHEET 4 OF 7



MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
T.S.R.A. APPROVAL	7-26-2019 PLAN DATE	R-28-J	SHEET 4 OF 7



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PROJECTS - LOHR ROAD

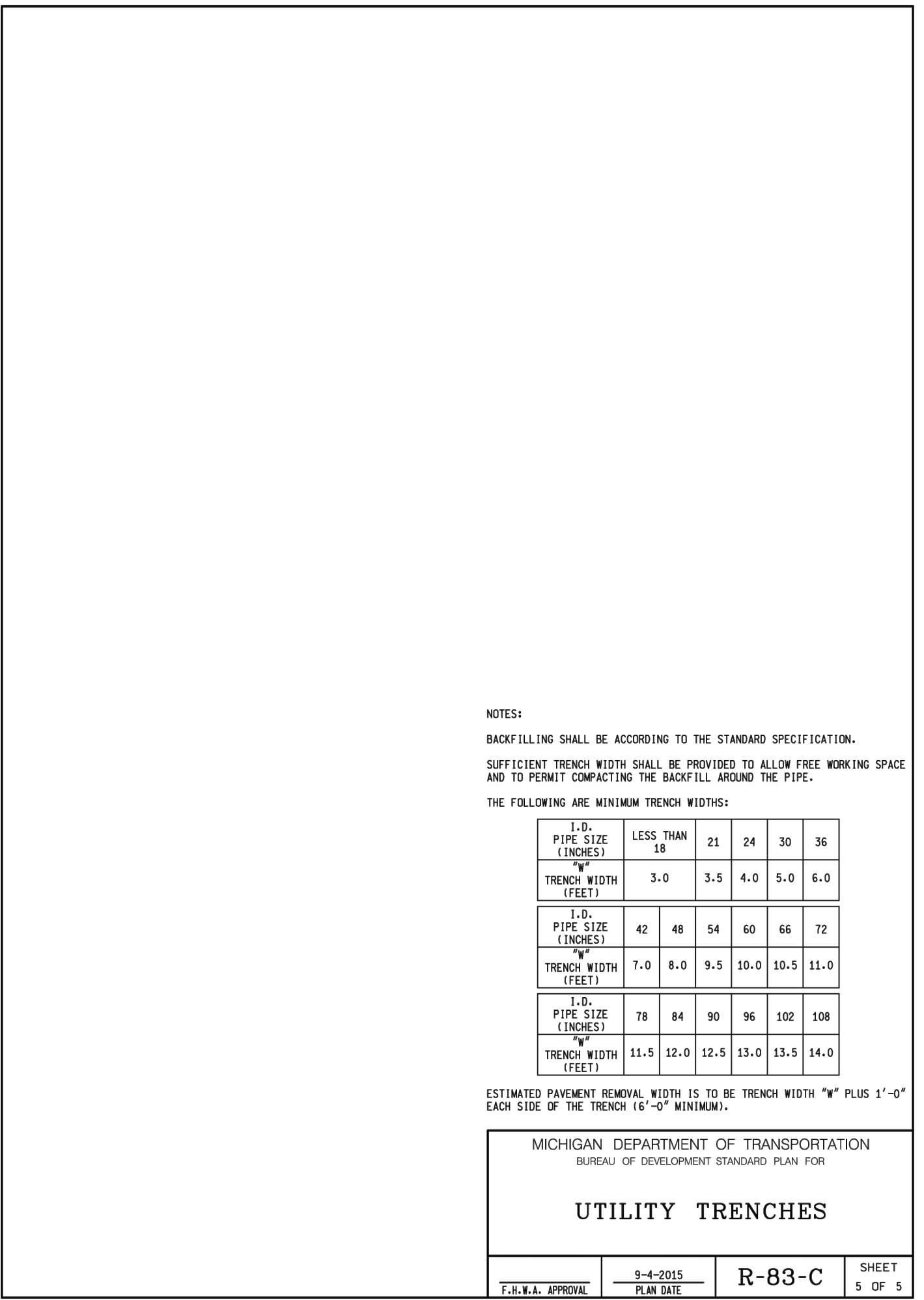
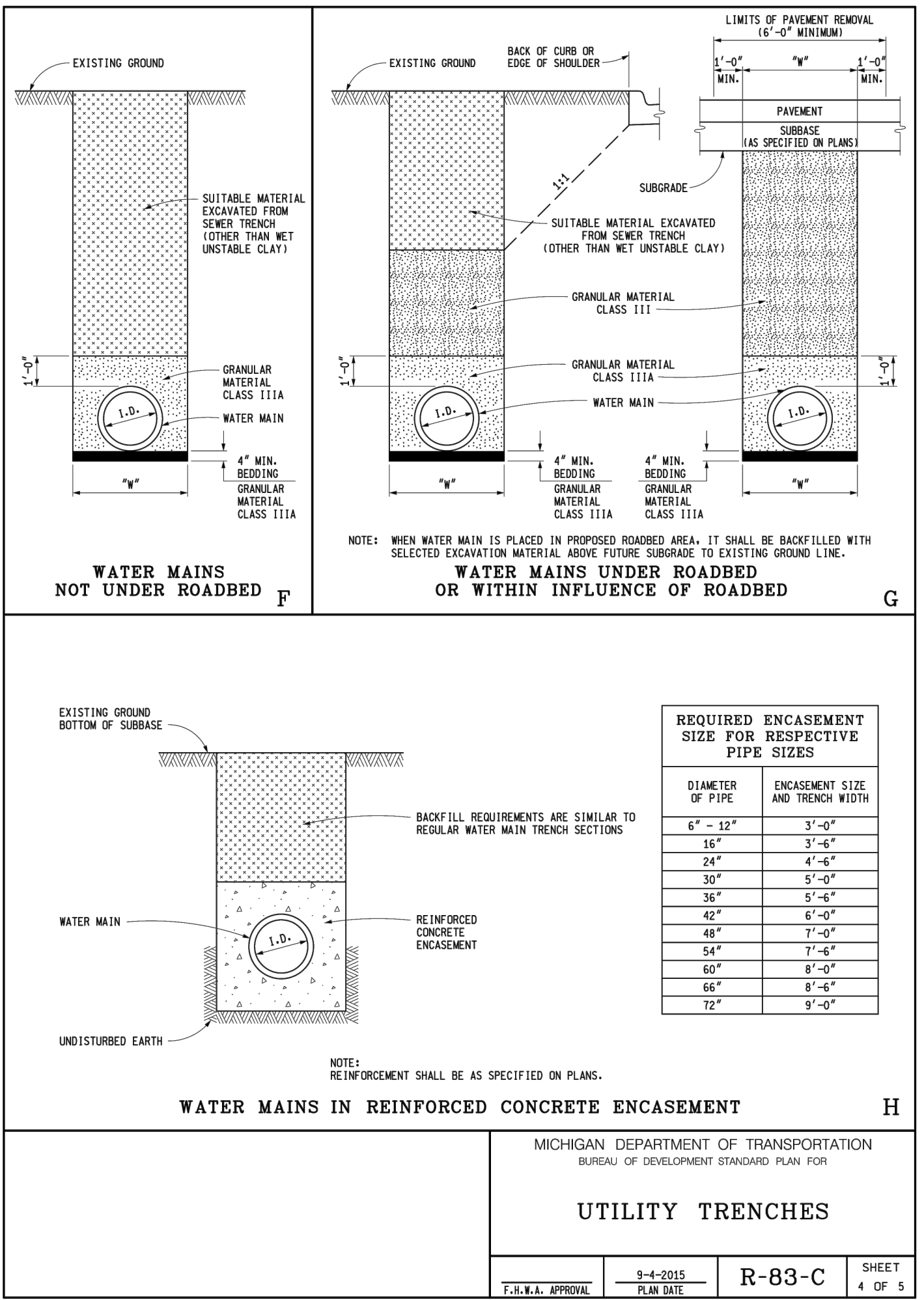
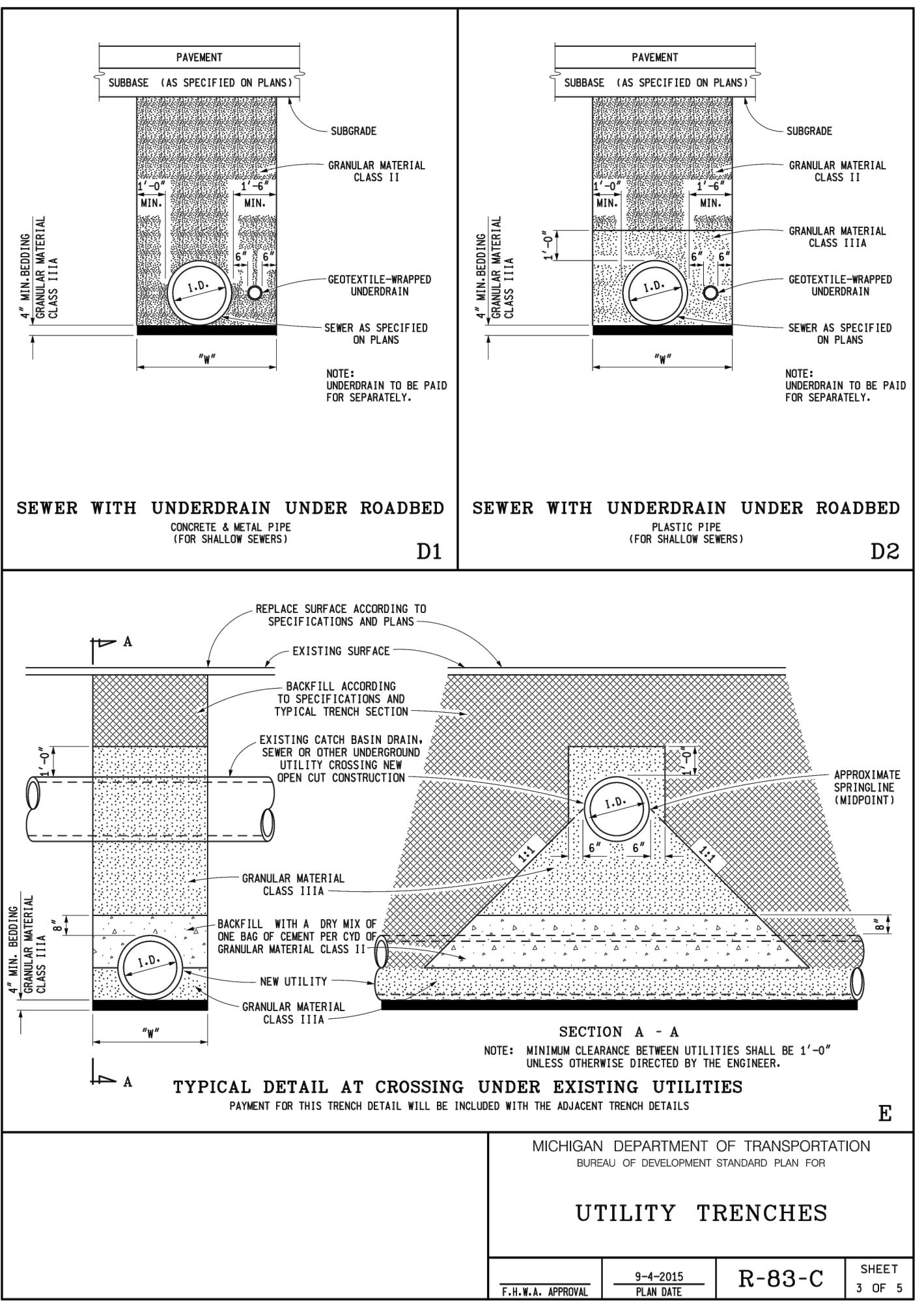
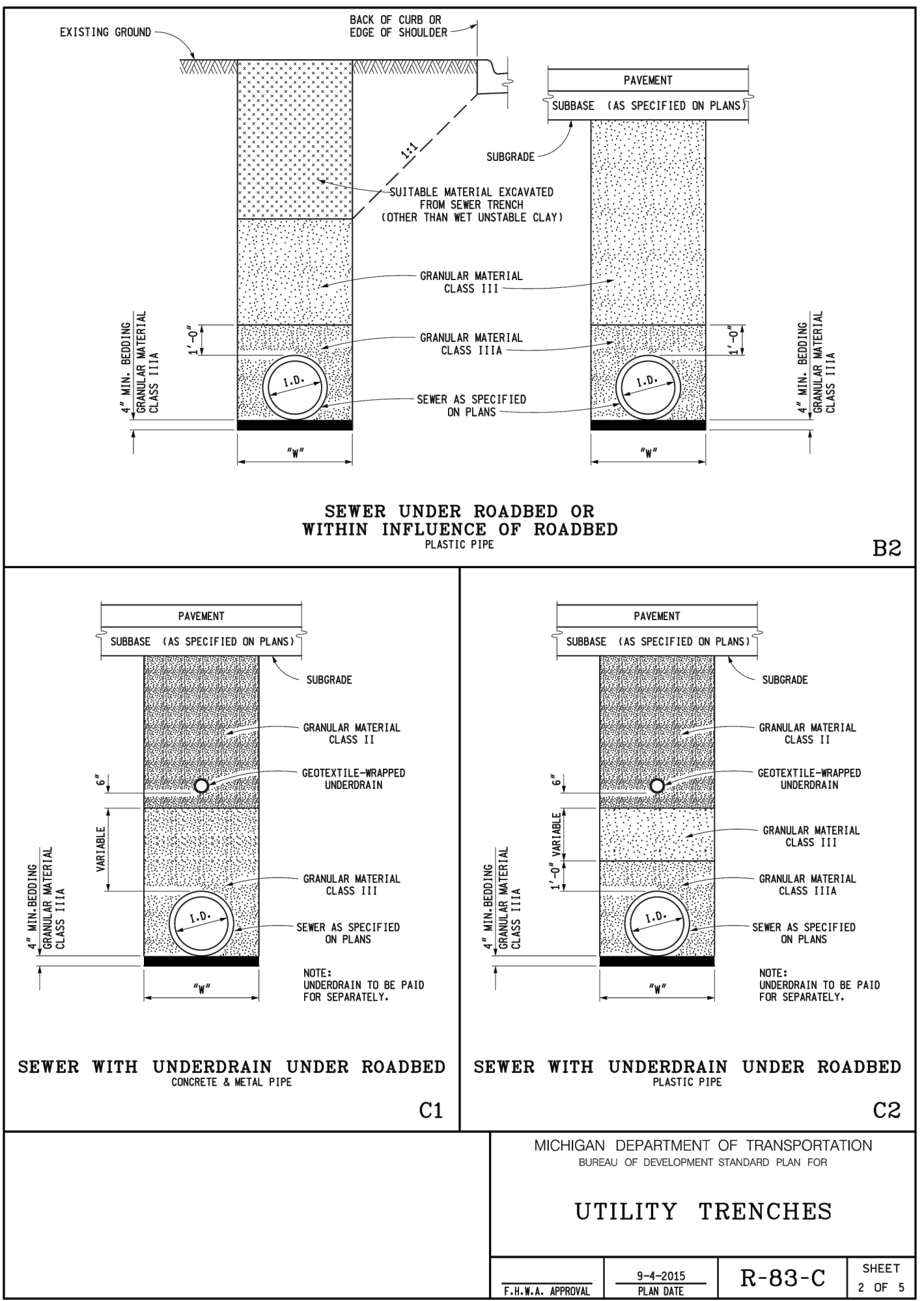
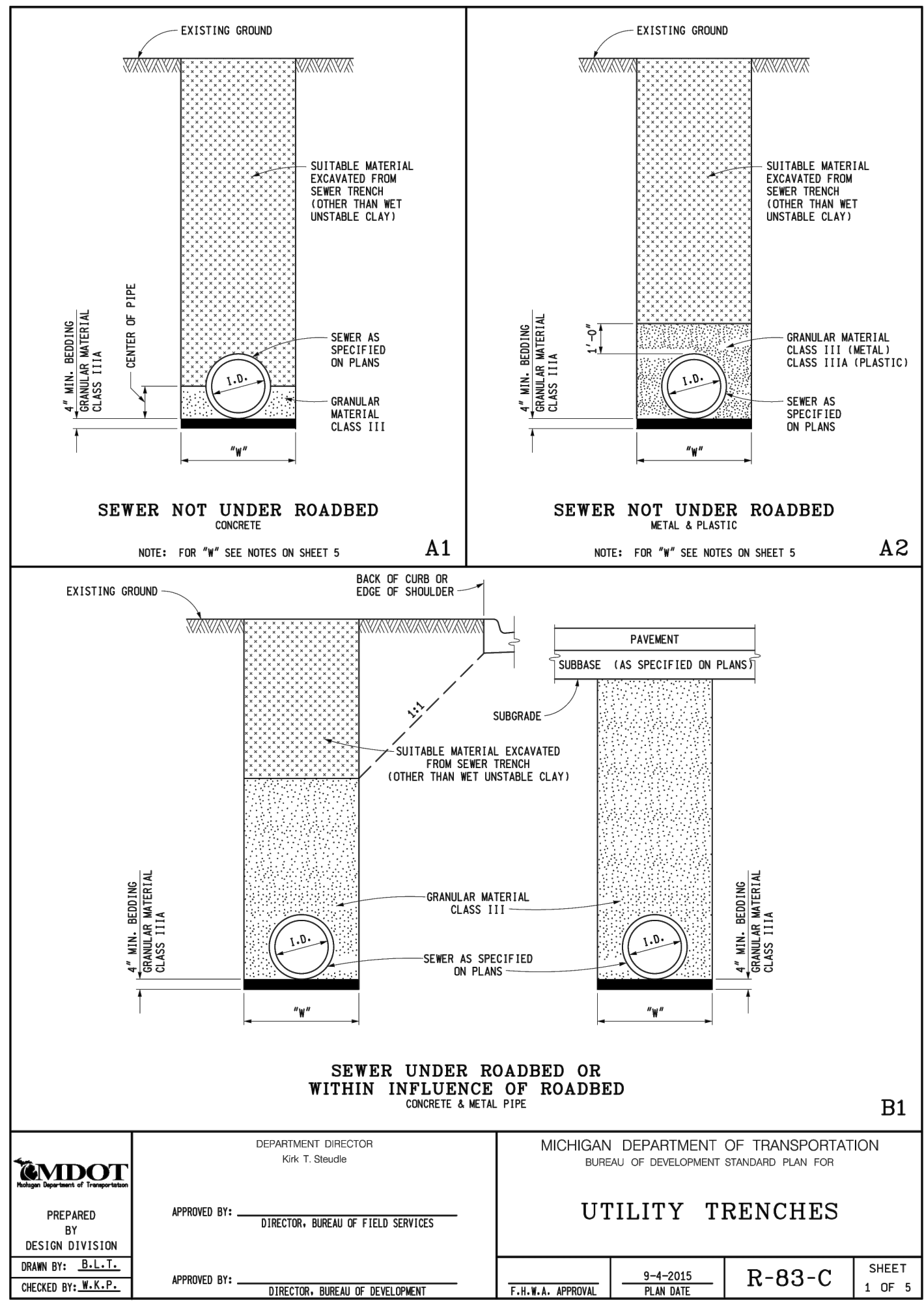
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MDOT STANDARD DETAILS

Project No. 2075149600	Scale NONE
Revision Sheet 0 12 of 13	Drawing No. C-12





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Project No.	2075149600	Scale	NONE
Revision	Sheet	Drawing No.	
0	13 of 13	<b>C-13</b>	



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