

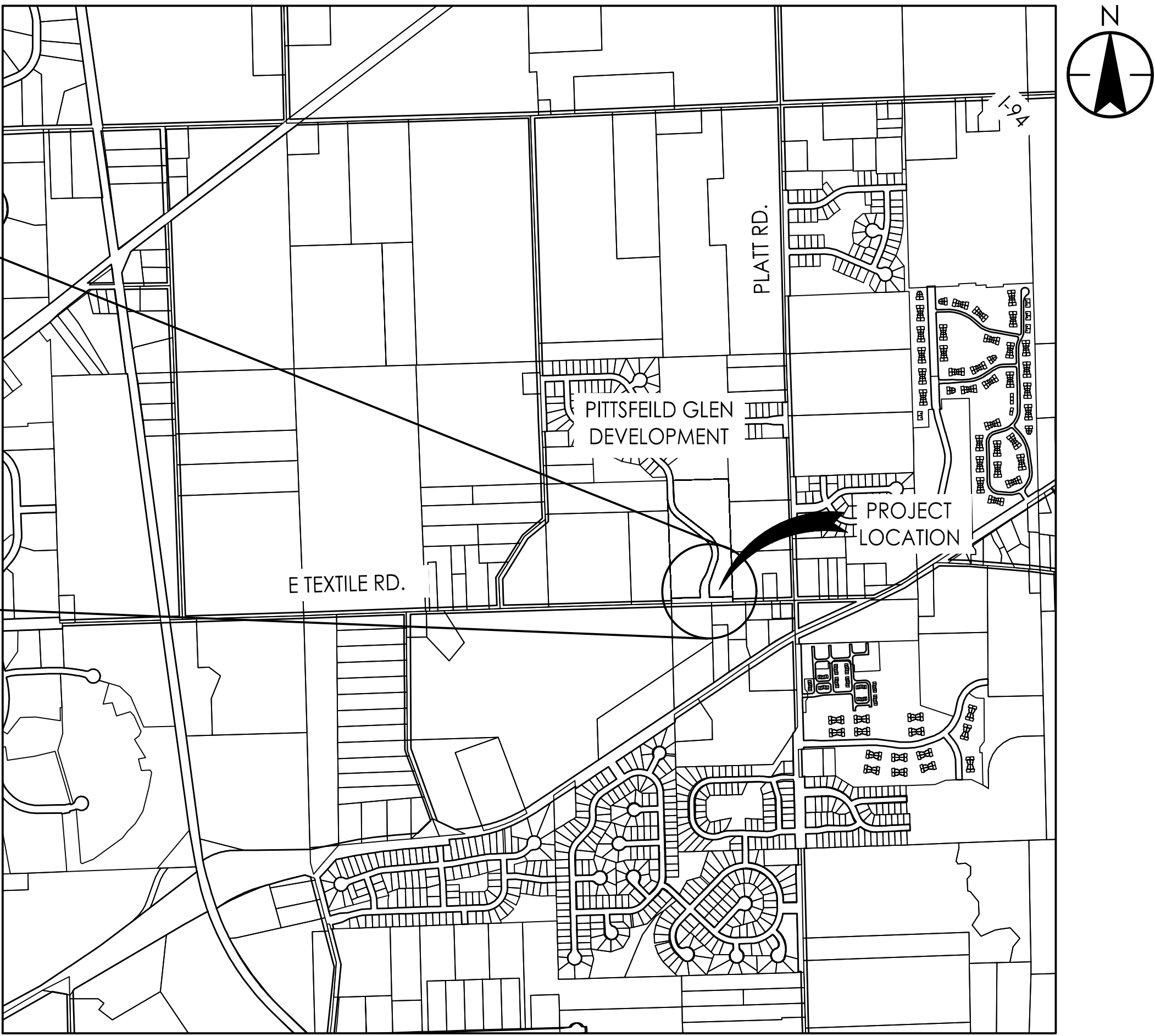


PITTSFIELD CHARTER TOWNSHIP



2022 PEDESTRIAN
IMPROVEMENTS
PITTSFIELD GLEN
MIDBLOCK CROSSING

BID SET
DECEMBER, 2022
PROJECT NUMBER: 2075001316



PROJECT LOCATION MAP
NOT TO SCALE

ROAD	YEAR	ADT	POSTED SPEED
TEXTILE	2019	5019	55 (UNPOSTED)

UTILITY CONTACTS	
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Name: PITTSFIELD TOWNSHIP PARKS AND RECREATION Addr: 701 ELLSWORTH RD ANN ARBOR, MI 48108 Phone: 734-622-2114 Email: wader@pittsfield-mi.gov Contact: RICH WADE	Name: DTE ENERGY GAS Addr: 17150 ALLEN RD MELVINDALE MI 48122 Phone: 313-389-7992 Email: basel.diazmati@dteenergy.com Contact: BASEL DIAZMATTI P.E., PMP Senior Capital Project Manager
Name: ATT Addr: 550 S MAPLE RD ANN ARBOR, MI 48103 Phone: 734-516-3173 Email: gc2798@att.com Contact: GARY CLINTON	Name: WASHTENAW COUNTY WATERRESOURCES COMMISSION Addr: 705 N. ZEEB RD ANN ARBOR, MI 48103 Phone: 734-222-6860 Email: millers@washtenaw.org Contact: SCOTT MILLER, PE

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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

- 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 WITHIN 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 MANUFACTURERS' 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 INCH OUTER DIAMETER AND A 1/16 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 WORKSMANSHIP 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 RFBF 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.

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 2020 STANDARD SPECIFICATION FOR CONSTRUCTION EARTHWORK AND PAVINGS AND ALSO CONSTRUCTION DETAILS AS SPECIFIED 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.
10. ALL DISTURBED AREAS ARE TO BE REPLACED WITH A MINIMUM OF 3" OF TOPSOIL AND SEEDED, GRASS SEED: 210LB/ACRE, FERTILIZER: 150LB/ACRE, STRAW MULCH: 3" IN DEPTH, 1.5:2 TON/ACRE. ALL MULCH MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC. HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%.
11. 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 TREE 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 FILE.
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 FILLERS 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 THEREON. CONTRACTOR SHALL BE RESPONSIBLE FOR TREE SURVEY, PERFORM A WALKTHROUGH 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 NAVD83 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 2020 STANDARD PLANS, UNLESS OTHERWISE INDICATED.
21. EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTRACTED THEREIN, ALL MATERIALS AND WORKMANSHIP FOR ALL IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 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 VERIFY EXISTING SIDEWALK GRADES ON NORTH AND SOUTH SIDE OF ROAD. CONTRACTOR SHALL NOTIFY ENGINEER IF GRADES DIFFER FROM PLAN GRADES.
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 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND WASHTENAW COUNTY ROAD COMMISSION SPECIFICATIONS. SHOP DRAWINGS AND/OR CATALOG CUTS SHALL BE REQUIRED FOR MAJOR MATERIALS.

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

#	DESCRIPTION	QNTY	UNIT
1027051	AUDIO VIDEO FILE, SPECIAL	1	LSUM
1100001	MOBILIZATION, MAX, 10%	1	LSUM
2057021	SUBGRADE UNDERCUTTING, MODIFIED	30	CYD
2090001	PROJECT CLEANUP	1	LSUM
8120012	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED LIGHTED, FURN	5	EA
8120013	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED LIGHTED, OPER	5	EA
8120026	PEDESTRIAN TYPE II BARRICADE, TEMP	3	EA
8120035	CHANNELIZING DEVICE, 42 INCH, FLOURESCENT, FURN	50	EA
8120036	CHANNELIZING DEVICE, 42 INCH, FLOURESCENT, OPER	50	EA
8120140	LIGHTED ARROW, TYPE C, FURN	1	EA
8120141	LIGHTED ARROW, TYPE C, OPER	1	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



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.

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	835		EXIST. CURB AND GUTTER
	835		PROP. CURB AND GUTTER
	854.6		CENTERLINE OF DITCH
	854.6		EDGE OF WATER
	T/C		EDGE OF WETLAND
	T/P		EXISTING FENCE
	G		PROPOSED FENCE
	12\"/>		TREE PROTECTION FENCE
	12\"/>		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 GRADE ELEV.
	EXIST. WATER MAIN		FINISH FLOOR 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		
	EXIST. GAS RISER		
	EXIST. TELEPHONE RISER		
	COMPACTED SAND BACKFILL		
			MAST ARM
			PEDESTAL

NOTE:
WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD PLANS GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

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

TITLE (TRAFFIC SIGNAL)

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

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

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Notes

B	BID SET		SY	CAM	2022.12.07
A	PERMIT PLAN		SY	CAM	2022.12.01
Issued			By	Appd	YYYY.MM.DD
File Name: 001316C-02		B/WA	BWA	CAM	2022.11.18
		Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Sea

Client/Project Logo



Client/Project
PITTSFIELD CHARTER TOWNSHIP

2022 PEDESTRIAN IMPROVEMENTS PITTSFIELD GLEN MIDBLOCK CROSSING

Pittsfield Township, M

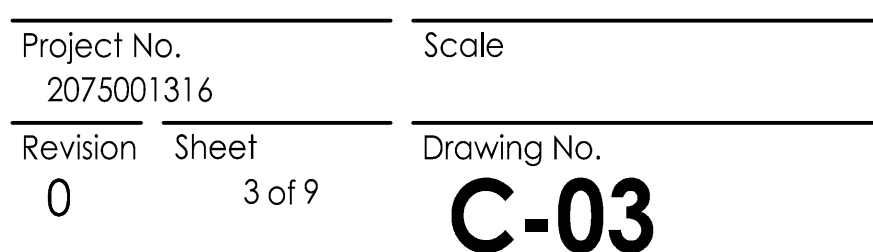
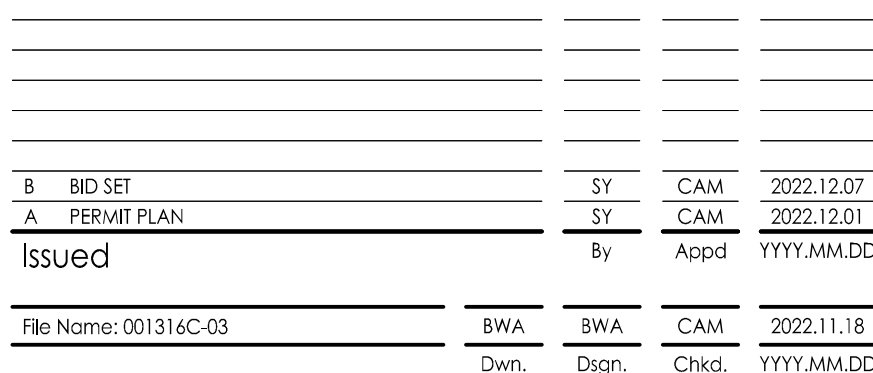
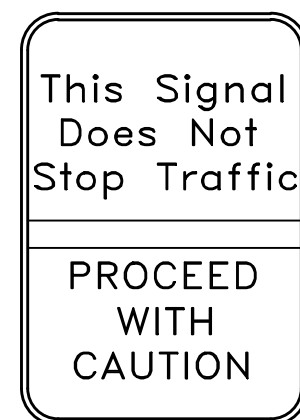
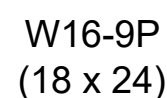
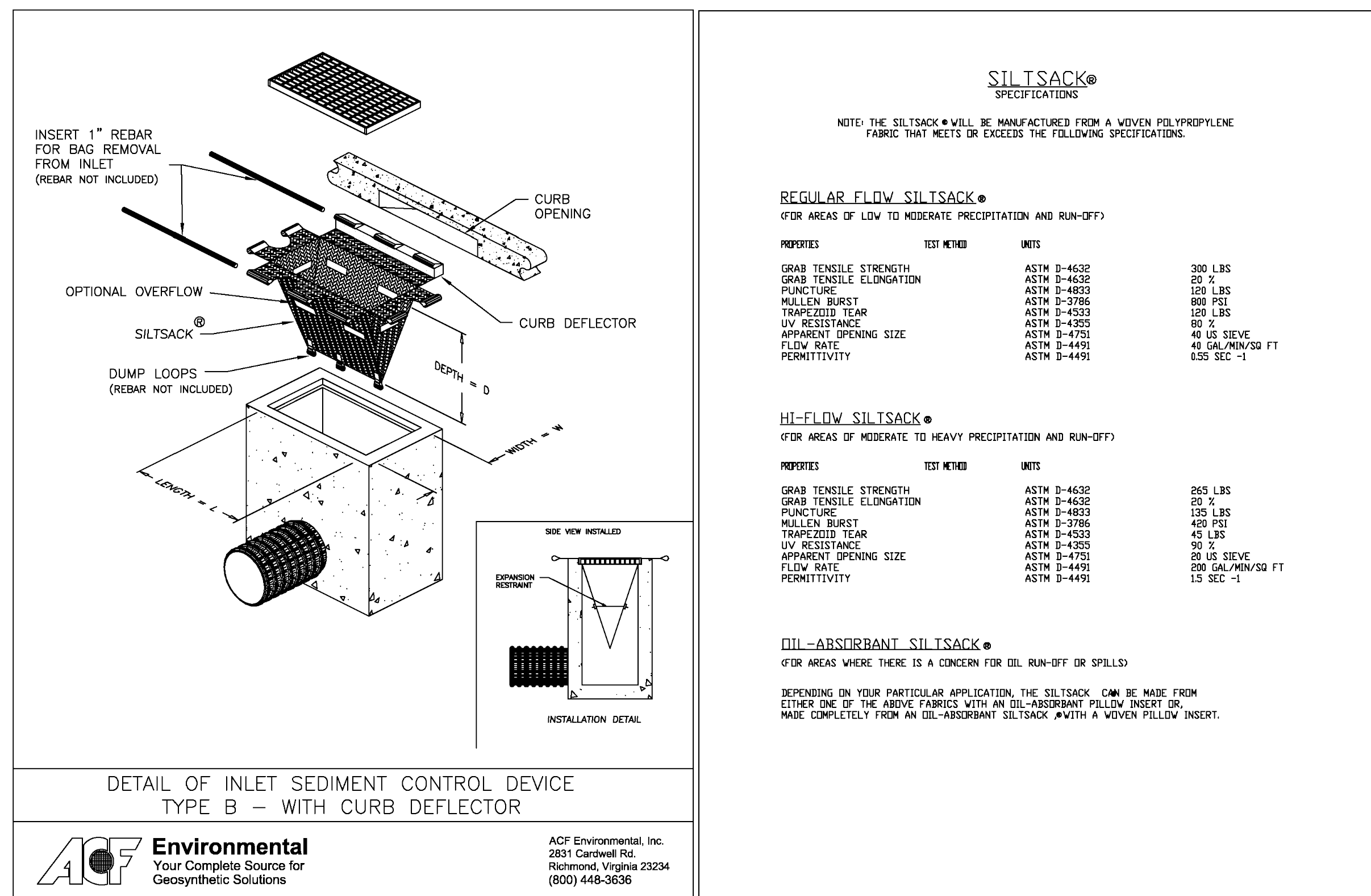
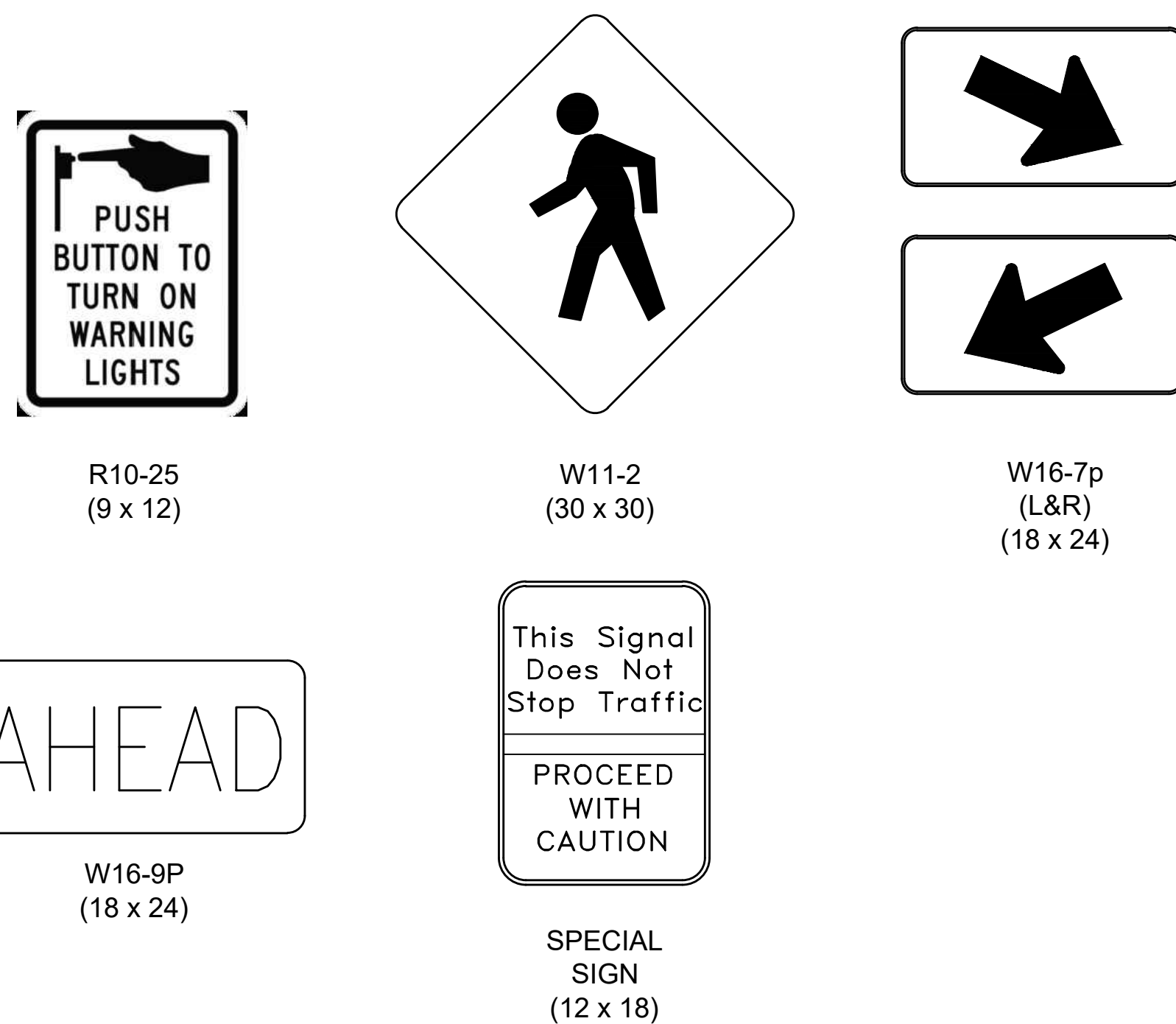
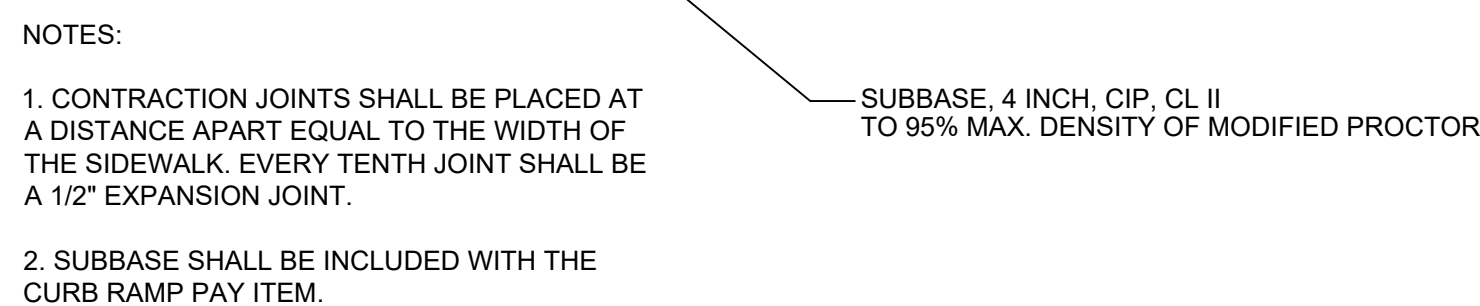
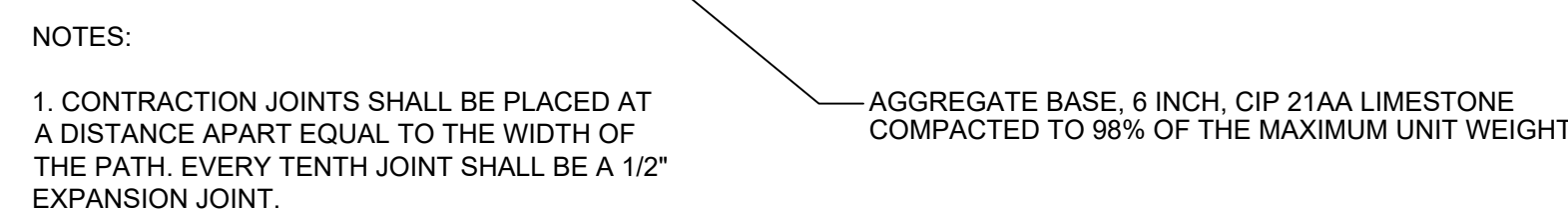
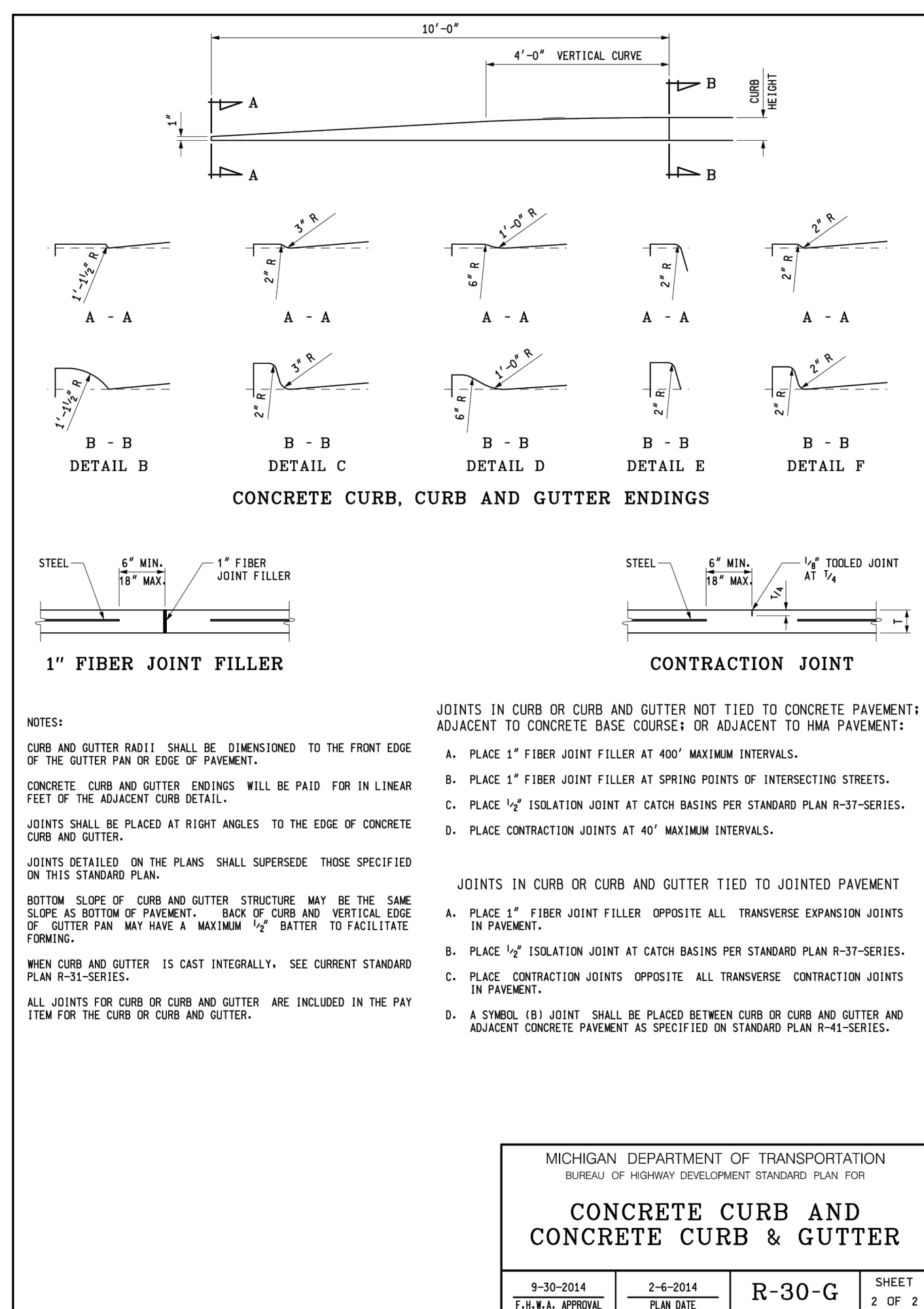
Title

GENERAL NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS

Project No. 2075001316	Scale
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Revision	Sheet	Drawing No.
0	2 of 9	C-02

C-02

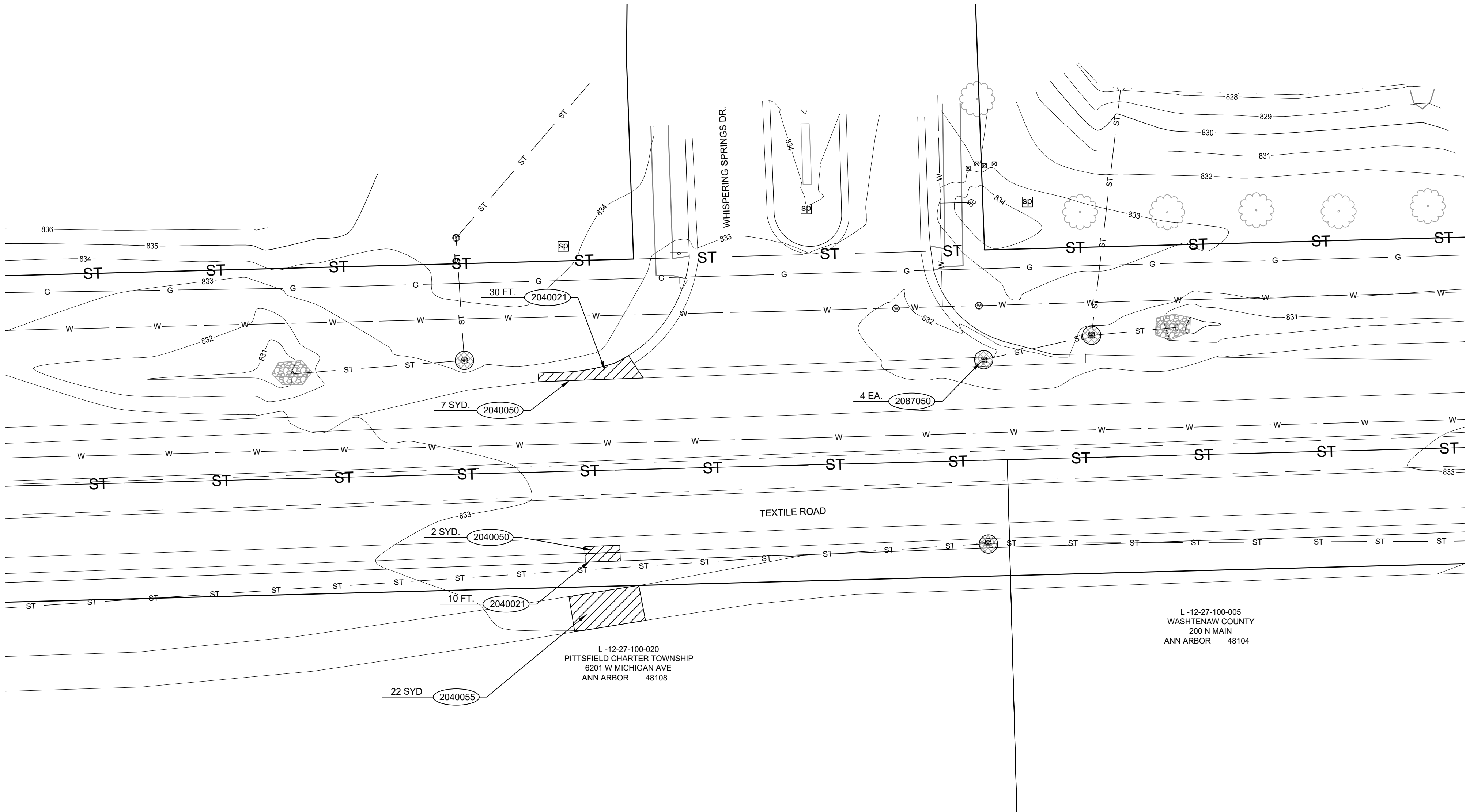
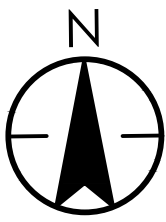


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Notes

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



L-12-27-100-005
WASHTENAW COUNTY
200 N MAIN
ANN ARBOR 48104

L-12-27-100-020
PITTSFIELD CHARTER TOWNSHIP
6201 W MICHIGAN AVE
ANN ARBOR 48108

#	DESCRIPTION	QNTY	UNIT
2040021	CURB, REM	40	FT
2040050	PAVT, REM	9	SYD
2040055	SIDEWALK, REM	22	SYD
2080036	EROSION CONTROL, SILT FENCE	50	FT
2087050	EROSION CONTROL, INLET PROTECTION, FABRIC DROP, MODIFIED	4	EA

3. BID SET	SY	CAM	2022.12.07
4. PERMIT PLAN	SY	CAM	2022.12.01
Issued	By	Appd	YYYY.MM.DD

File Name: 001316C-04	BWA	BWA	CAM	2022.11.18
	Own.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

Client/Project Logo



Client/Project
PITTSFIELD CHARTER TOWNSHIP

2022 PEDESTRIAN IMPROVEMENTS
PITTSFIELD GLEN MIDBLOCK CROSSING
Pittsfield Township, MI

Title

EXISTING CONDITIONS, DEMOLITION
AND SESC PLAN

Project No. 2075001316	Scale 0 20' 40'
Revision Sheet 0 4 of 9	Drawing No. C-04



NOTE:

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UNDERGROUND UTILITIES AS SHOWN ON THIS
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2022-12-13 04:25 AM



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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 x 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

SHOULDER TAPER

TWO-WAY TRAFFIC TAPER

DOWNSTREAM TAPERS

(USE IS OPTIONAL)

TAPER LENGTH

L - MINIMUM

1/2 L - MINIMUM

100' - MAXIMUM

100' - MINIMUM

(PER LANE)

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

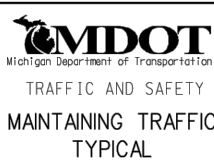
1. BASED UPON AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) BRAKING DISTANCE PORTION OF STOPPING SIGHT DISTANCE FOR WET AND LEVEL PAVEMENTS (A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS). AASHTO. THIS AASHTO DOCUMENT ALSO RECOMMENDS ADJUSTMENTS FOR THE EFFECT OF GRADE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

DISTANCE BETWEEN TRAFFIC CONTROL DEVICES "D" AND LENGTH OF LONGITUDINAL BUFFER SPACE ON "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



TABLES FOR "L", "D" AND "B" VALUES

DRAWN BY: CONAE:DJF
CHECKED BY: BMW
JUNE 2006
PLAN DATE:
M0020a
REV.
08/21/2006
SHEET 1 OF 2



TABLES FOR "L", "D" AND "B" VALUES

DRAWN BY: CONAE:DJF
CHECKED BY: BMW
JUNE 2006
PLAN DATE:
M0020a
REV.
08/21/2006
SHEET 2 OF 2

KEY

- CHANNELIZING DEVICES
 - LIGHTED ARROW PANEL (CAUTION MODE)
 - TRAFFIC FLOW
 - REFLECTS EXISTING SPEED LIMIT
- SIGN = 184-F2 - TYPE B PLUS ADDITIONAL R2-1'S THROUGHOUT WORK AREA

NOT TO SCALE



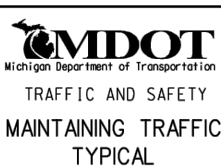
TYPICAL TEMPORARY TRAFFIC CONTROL FOR CLOSING ONE LANE OF A THREE LANE ROADWAY WITH CLFLTO AND SHIFTING ONE THROUGH LANE INTO THE CLFLTO NO SPEED REDUCTION

DRAWN BY: CONAE:DJF
CHECKED BY: BMH:CRB
OCTOBER 2011
PLAN DATE:
M0231a
REV.
10/18/2011
SHEET 1 OF 2

SIGN SIZES

DIAMOND WARNING - 48" x 48"
W1-6 WARNING - 48" x 24"
R2-1 REGULATORY - 48" x 60"
R5-18c REGULATORY - 48" x 48"

NOT TO SCALE



TYPICAL TEMPORARY TRAFFIC CONTROL FOR CLOSING ONE LANE OF A THREE LANE ROADWAY WITH CLFLTO AND SHIFTING ONE THROUGH LANE INTO THE CLFLTO NO SPEED REDUCTION

DRAWN BY: CONAE:DJF
CHECKED BY: BMH:CRB
OCTOBER 2011
PLAN DATE:
M0231a
REV.
10/18/2011
SHEET 2 OF 2

NOTES

- D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
1/2 L AND 1/3 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" (R5-18c) 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 AREAS(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.



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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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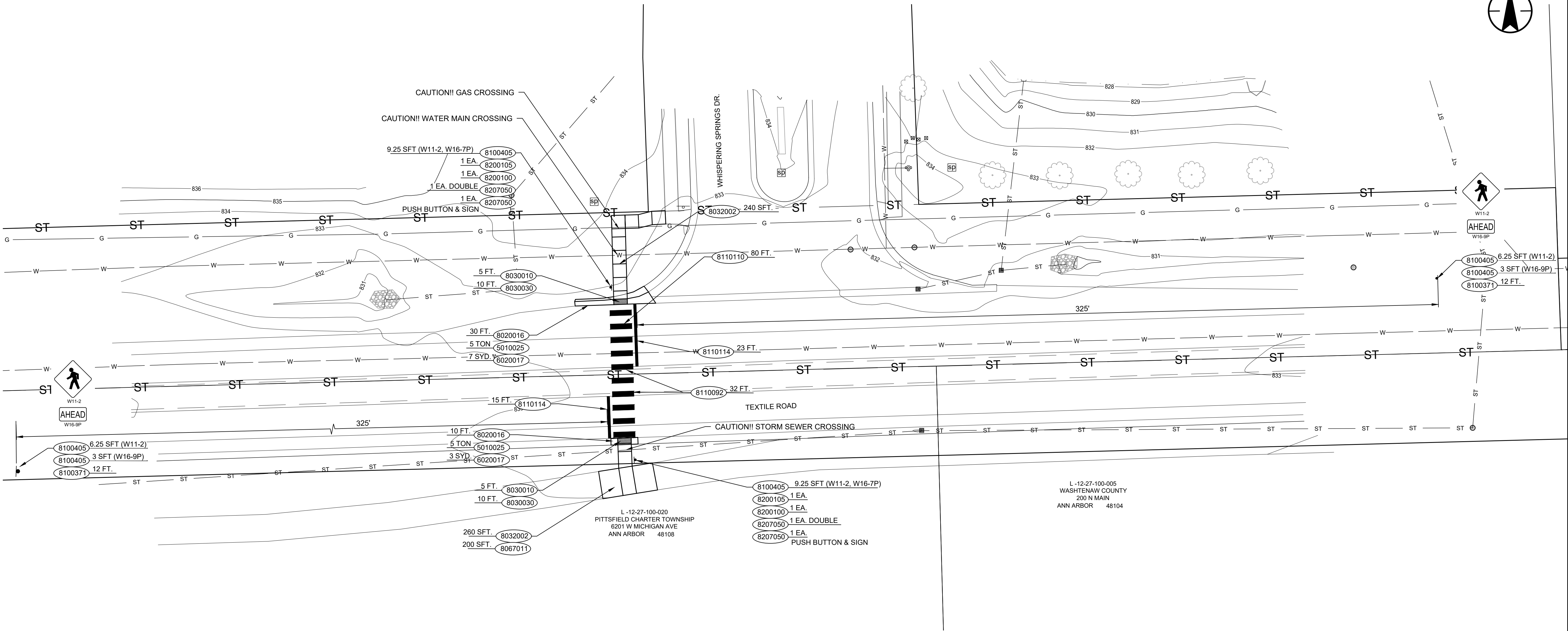
Notes

D

C

B

A



#	DESCRIPTION	QNTY	UNIT
8010025	HAND PATCHING	10	TON
8020017	CONC BASE CSE, NONREINF 7 INCH	10	SYD
8020016	CURB AND GUTTER, CONC, DET B2	40	FT
8030010	DETECTABLE WARNING SURFACE	10	FT
8030030	CURB RAMP OPENING, CONC	20	FT
8032002	CURB RAMP, CONC, 6 INCH	500	SFT
8067011	SHARED USE PATH, AGGREGATE, 6 INCH, MODIFIED	200	SFT
8100371	POST, STEEL, 3 LB	24	FT
8100405	SIGN, TYPE IIIB	37	SFT
8110095	PAVT MRKG, POLYUREA, 4 INCH, YELLOW	32	FT
8110110	PAVT MRKG, POLYUREA, 12 INCH, CROSSWALK	80	FT
8110114	PAVT MRKG, POLYUREA, 24 INCH, STOP BAR	38	FT
8200100	PEDESTAL, ALUM	2	EA
8200105	PEDESTAL, FDN	2	EA
8207050	FLSH BEACON, RECTANGULAR RAPID, SOLAR POWERED, DOUBLE SIDED	2	EA
8207050	PUSHBUTTON AND SIGN, MODIFIED	2	EA

3. BID SET	SY	CAM	2022.12.07
4. PERMIT PLAN	SY	CAM	2022.12.01
Issued	By	Appd	YYYY.MM.DD

File Name: 001316C-06	BWA	BWA	CAM	2022.11.18
	Dwn.	Dsgr.	Chkd.	YYYY.MM.DD

Permit/Seal

Client/Project Logo



Client/Project

PITTSFIELD CHARTER TOWNSHIP

2022 PEDESTRIAN IMPROVEMENTS
PITTSFIELD GLEN MIDBLOCK CROSSING

Pittsfield Township, MI

Title

CROSSING CONSTRUCTION PLAN

Project No.
2075001316

Revision Sheet
0 6 of 9

Scale
0 20' 40'

Drawing No.

C-06



Know what's below.
Call before you dig.

NOTE:

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Notes

1. CONTOURS SHOW EXISTING GRADES



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PITTSFIELD CHARTER TOWNSHIP

2022 PEDESTRIAN IMPROVEMENTS
PITTSFIELD GLEN MIDBLOCK CROSSING

Pittsfield Township, MI

Title

DETAILED GRADING PLAN

Project No.
2075001316

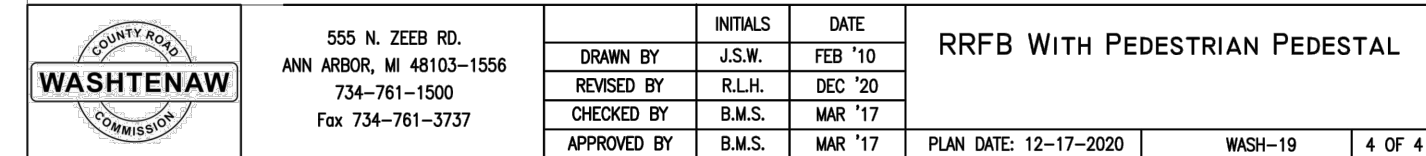
Revision	Sheet
0	7 of 9

Scale
0 10' 20'

Drawing No.

C-07

10. *Journal of the American Medical Association*, 2000; 283: 2686-2692.



B	BID SET	SY	CAM	2022.12.07
A	PERMIT PLAN	SY	CAM	2022.12.01
Issued		By	Appd	YYYY.MM.DD
File Name: 001316C-08		BWA	BWA	CAM
		Dwn.	Dsgn.	Chkd.
				YYYY.MM.DD

Permit/Seal

Client/Project Logo



2022 PEDESTRIAN IMPROVEMENTS
PITTSFIELD GLEN MIDBLOCK CROSSING
Pittsfield Township, MI

Title

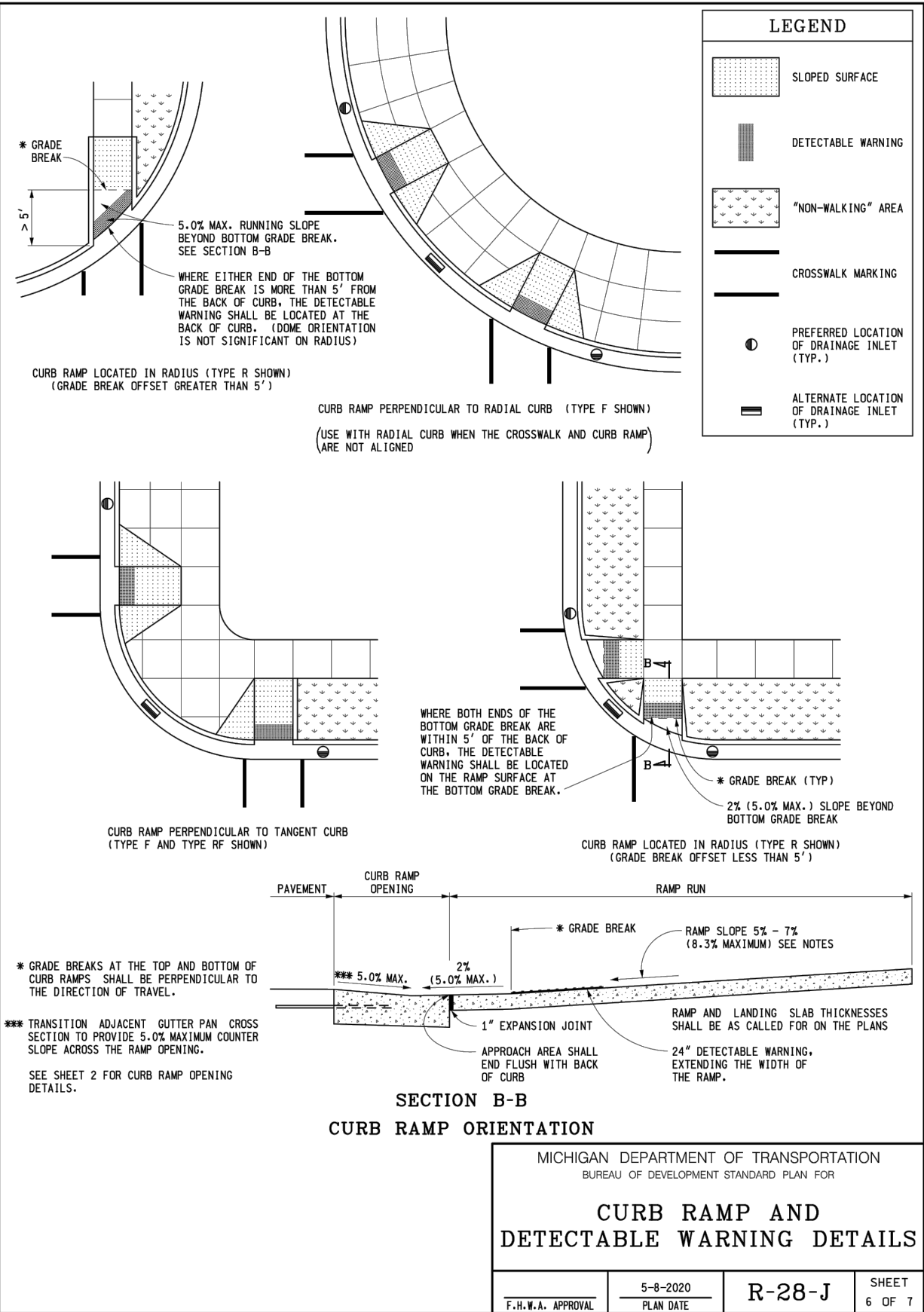
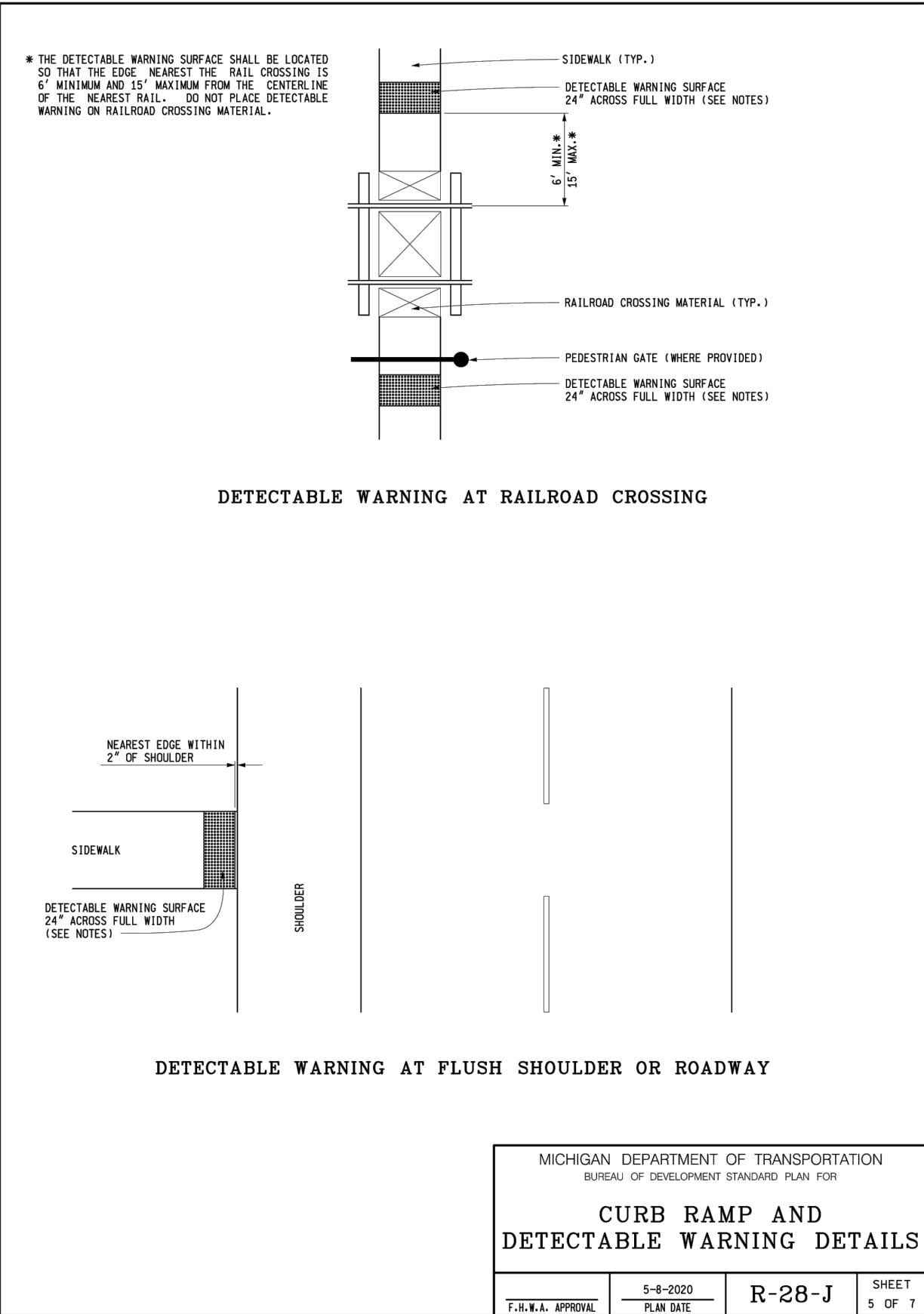
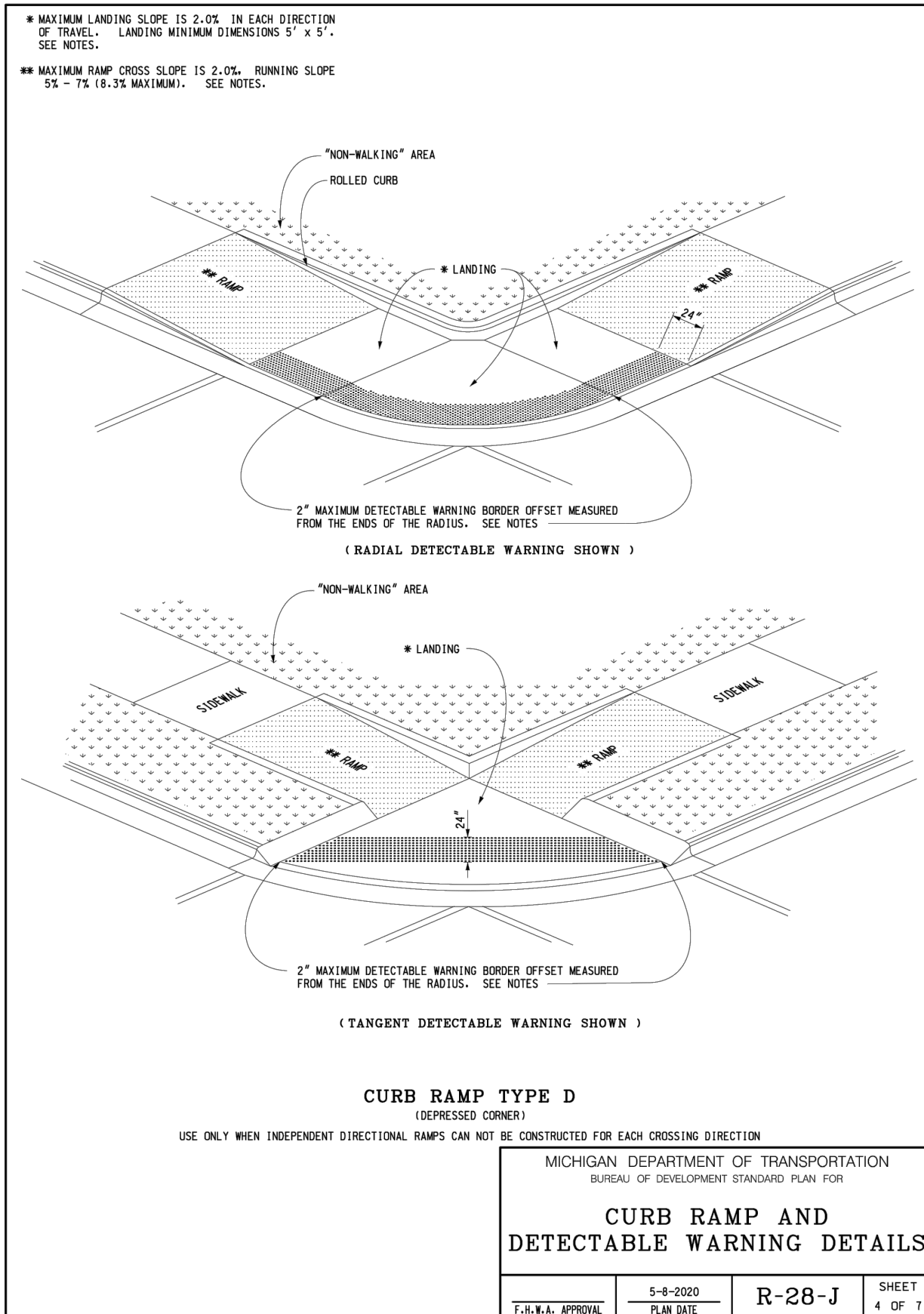
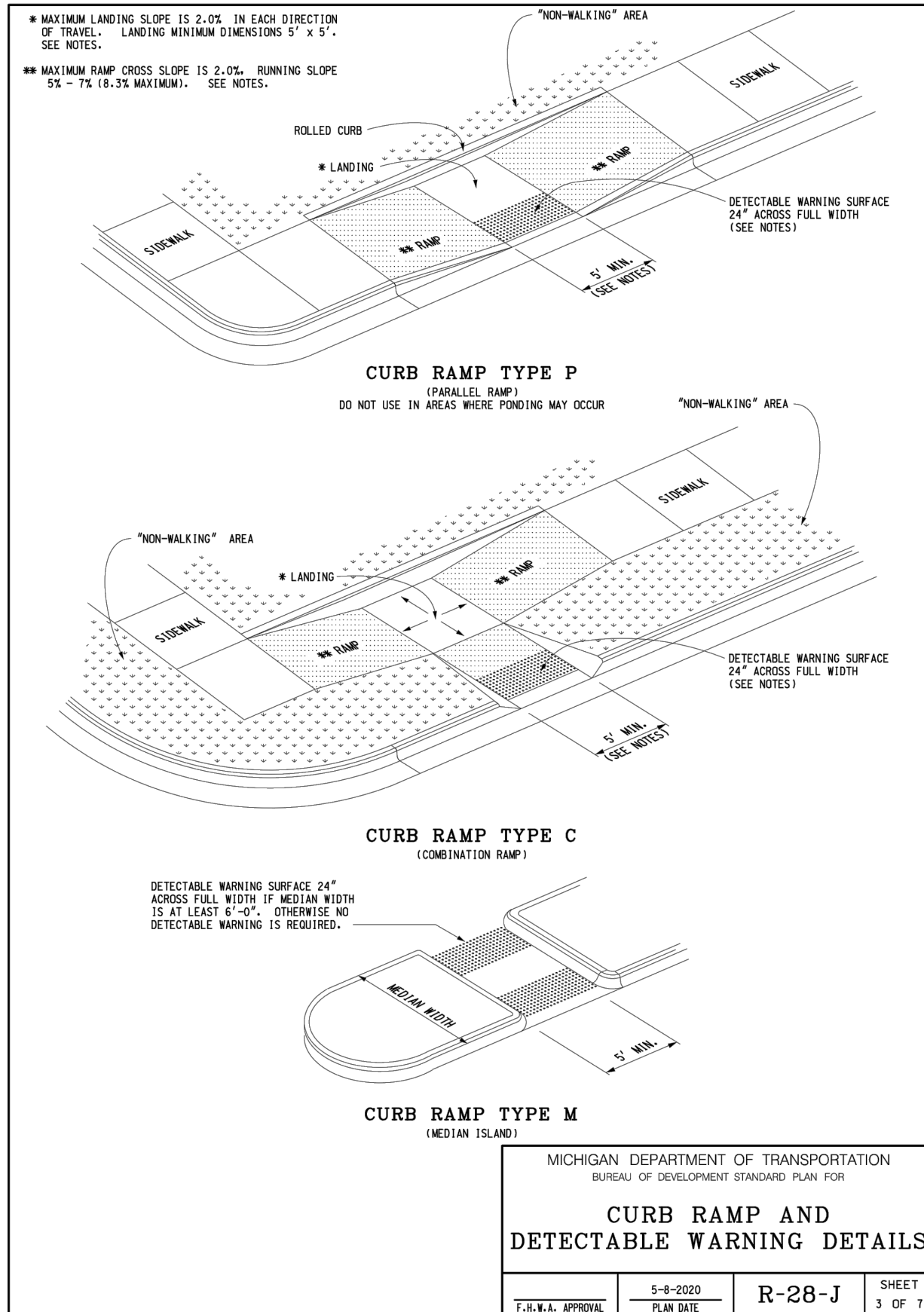
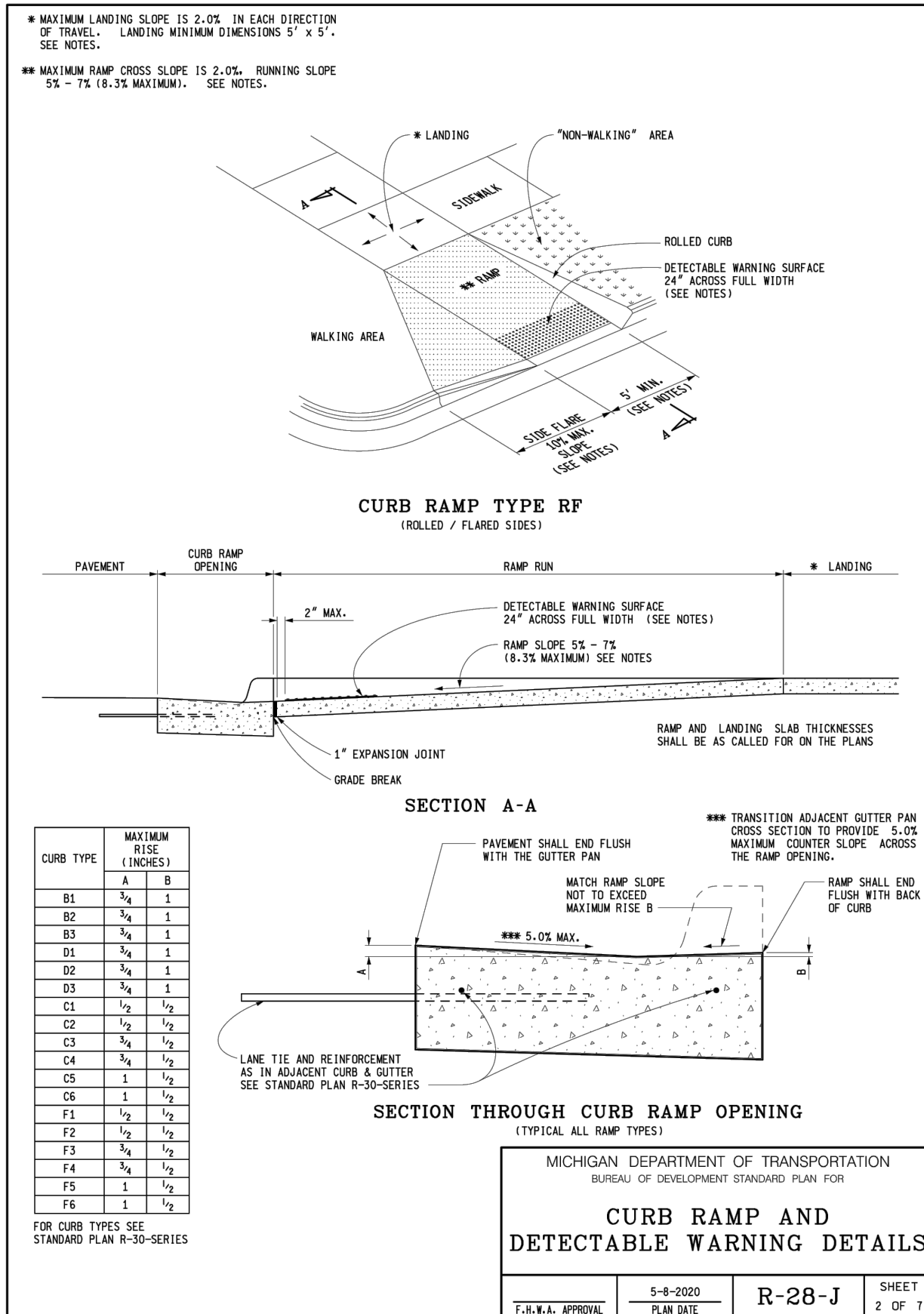
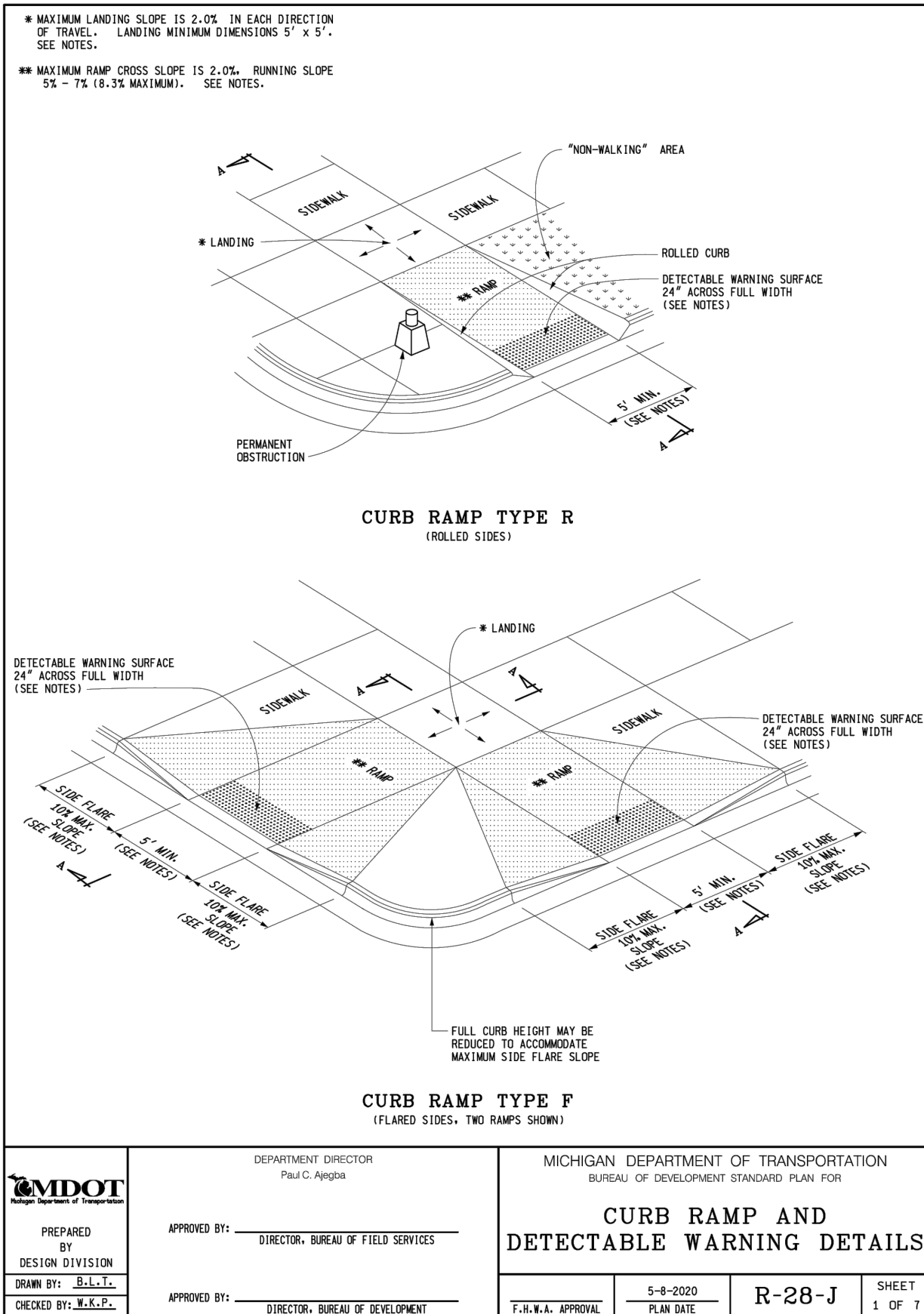
WCRC STANDARD DETAILS

Project No. 2075001316		Scale NONE
Revision 0	Sheet 8 of 9	Drawing No. C 08

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Notes



B	BID SET	SY	CMA	2022.12.07
A	PERMIT PLAN	SY	CMA	2022.12.01
Issued		By	Appd	YYYY.MM.DD
File Name: 001316C-09		BWA	BWA	CMA
		Dwn	Dgn	Chkd
				YYYY.MM.DD

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PITTSFIELD CHARTER TOWNSHIP

2022 PEDESTRIAN IMPROVEMENTS
PITTSFIELD GLEN MIDBLOCK CROSSING

Pittsfield Township, MI

Title

MDOT STANDARD DETAILS

Project No.	2075001316	Scale	NONE
Revision	Sheet	Drawing No.	
0	9 of 9		

C-09



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