

CITY OF PLYMOUTH

WAYNE COUNTY, MICHIGAN 48170

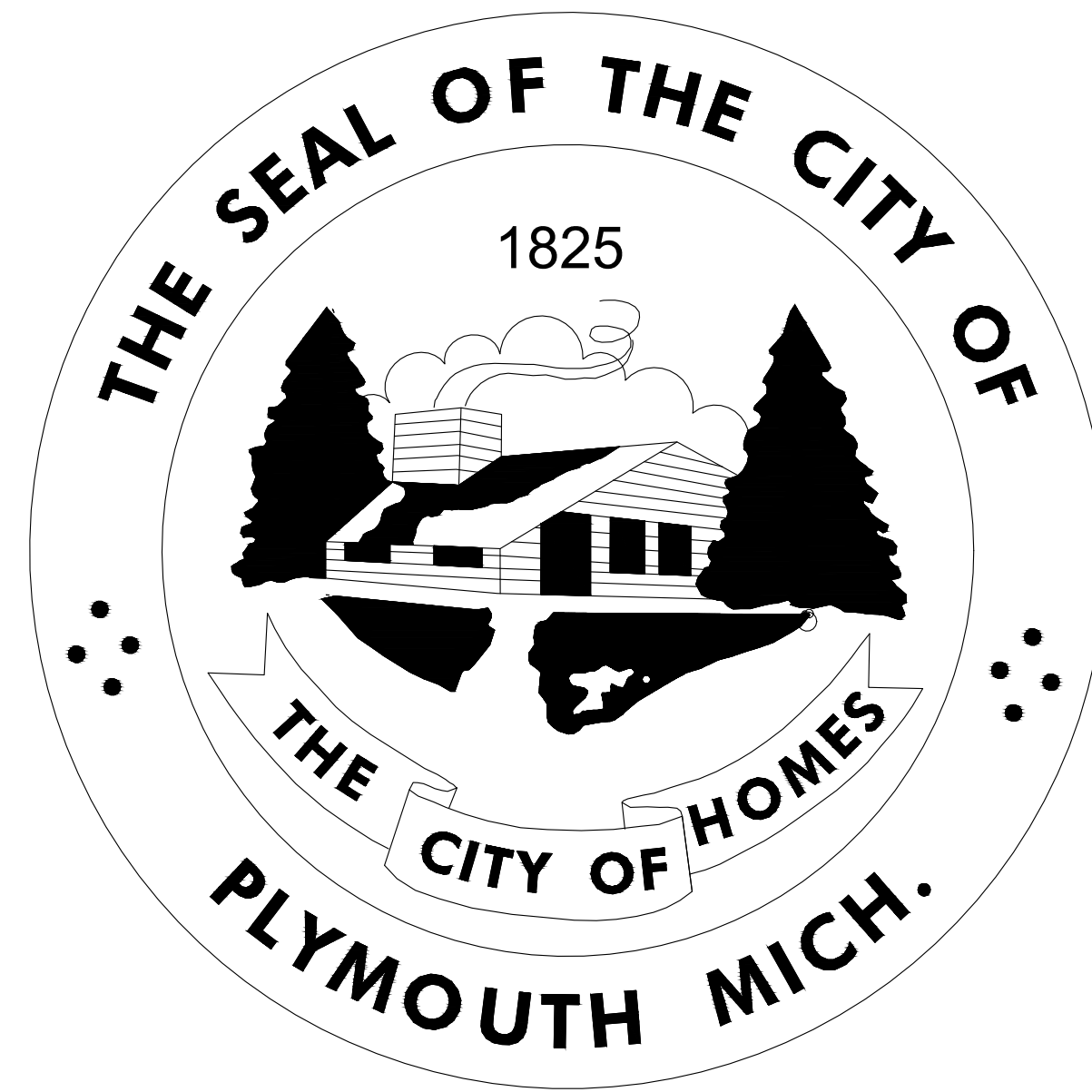
2024 INFRASTRUCTURE

IMPROVEMENT PROGRAM

CHURCH ST, LIBERTY ST, S MAIN ST, SPRING ST



COUNTY KEY
NOT TO SCALE



CITY HALL
201 S. MAIN ST.
PLYMOUTH, MI 48170
(734) 453-1234

DEPARTMENT OF MUNICIPAL SERVICES
1231 GOLDSMITH
PLYMOUTH, MI 48170
(734) 453-7737

SUZI DEAL
MAYOR

MAUREEN BRODIE
CITY CLERK

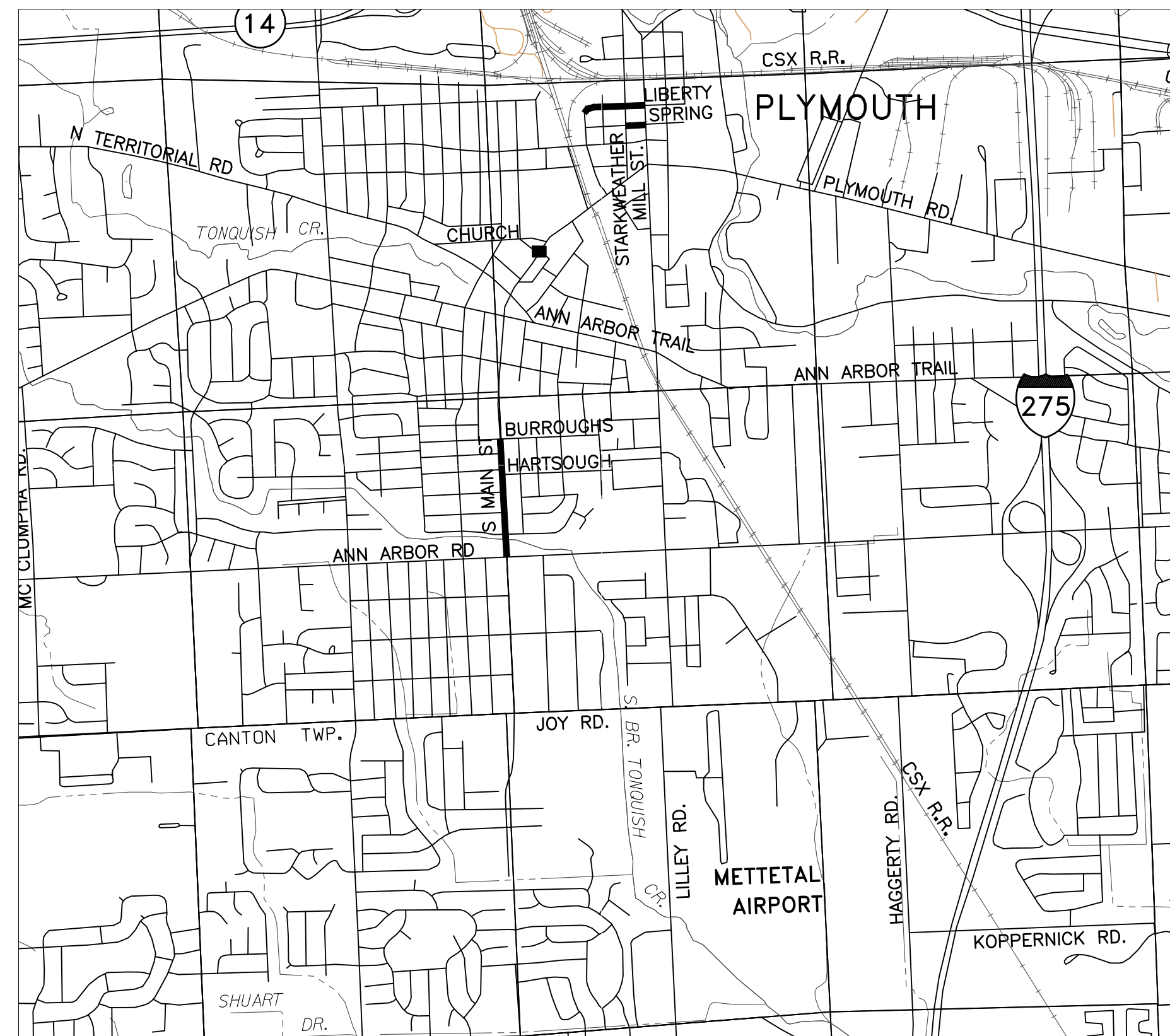
PAUL SINCOCK
CITY MANAGER

CITY COUNCIL

KELLY O'DONNELL, MAYOR PRO TEM
LINDA FILIPCZAK, COMMISSIONER
JENNIFER KEHOE, COMMISSIONER
ALANNA MAGUIRE, COMMISSIONER
BROCK MINTON, COMMISSIONER
NICK MOROZ, COMMISSIONER

CHRIS PORMAN
DIRECTOR, DEPARTMENT OF MUNICIPAL SERVICES
ADAM GERLACH
ASSISTANT DIRECTOR, PUBLIC UTILITIES

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LOCATION MAP

PROJECT LOCATIONS

BID SET 3/25/24

JOB NO. PLY2129-01T	SHEET 1
<div style="font-size: 8px; margin-top: 5px;"> 25251 Northline Rd. Taylor, MI 48180 734.947.9700 www.wadetrिम.com </div>	
PREPARED UNDER THE SUPERVISION OF:	
SHAWN W. KEOUGH, PE	# 42619 REGISTRATION NO.

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\W\2024\2024-03-25\PCS-PLS-COVER.DWG - LAYOUT1 - PLOTTED 3/29/2024 12:51 PM BY: FLANSGAN, MARTIN



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GENERAL NOTES

- ALL PROPERTY IRONS AND MONUMENTS, IF DISTURBED OR DESTROYED BY THE CONTRACTOR, SHALL BE REPLACED BY A MICHIGAN REGISTERED PROFESSIONAL SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- LOCATION OF UTILITIES OR OTHER STRUCTURES SHOWN ON THE PLANS ARE TAKEN FROM UTILITY COMPANY OR OTHER RECORDS BELIEVED TO BE RELIABLE. THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR ANY OMISSIONS OR VARIATIONS IN THE LOCATION OF THE UTILITIES ENCOUNTERED IN THE WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS DIG" (800) 482-7171, A MINIMUM OF THREE WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION IN THE AREA OF THE WORK.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER, WADE TRIM AND UTILITY COMPANIES 2 WORKING DAYS IN ADVANCE OF UNCOVERING ANY EXISTING UTILITY.
- PRIOR TO THE INSTALLATION OF ANY PROPOSED UTILITIES, THE EXISTING UTILITIES WHICH CROSS THE PROPOSED UTILITY SHALL BE EXPOSED BY THE CONTRACTOR TO DETERMINE ANY POSSIBLE CONFLICTS WITH THE PROPOSED WORK. MAINTAIN 18-INCHES MINIMUM CLEARANCE BETWEEN ALL UTILITY CROSSINGS. THIS WORK IS INCIDENTAL TO THE PROJECT
- ALL EXISTING TRAFFIC SIGNS IN THE WAY OF CONSTRUCTION SHALL BE REMOVED AND RESET IN A TEMPORARY LOCATION PER THE LATEST EDITION OF MICHIGAN MANUAL OF UNIFIED TRAFFIC CONTROL DEVICES. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- EXISTING LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING VEHICLE AND PEDESTRIAN ACCESS TO RESIDENCES AND BUSINESSES, EXCEPT WHEN OTHERWISE SHOWN ON THE PLANS OR SPECIFIED.
- ALL TRAFFIC CONTROL AND DEVICES SHALL BE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- THE CONTRACTOR SHALL LIMIT HIS CONSTRUCTION TRAFFIC AND EQUIPMENT TO THE AREA DIRECTLY UNDER CONSTRUCTION TO PREVENT DAMAGE TO ANY EXISTING IMPROVEMENTS, AND SHALL PREVENT THE SPREAD OF CONSTRUCTION DEBRIS OUTSIDE OF THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ANY EXISTING IRRIGATION SYSTEM COMPONENTS DISTURBED BY HIS CONSTRUCTION OPERATIONS. EXISTING MATERIAL MAY BE REUSED UNLESS DAMAGED. DAMAGED MATERIAL SHALL BE REPLACED WITH NEW MATERIAL OF THE SAME TYPE. REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ANY EXISTING DECORATIVE LIGHTING SYSTEM COMPONENTS DISTURBED BY HIS CONSTRUCTION OPERATIONS. EXISTING MATERIAL MAY BE REUSED UNLESS DAMAGED. DAMAGED MATERIAL SHALL BE REPLACED WITH NEW MATERIAL OF THE SAME TYPE. COST FOR DECORATIVE LIGHTING SYSTEM REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE PROJECT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE INTEGRITY OF EXISTING UTILITIES AT ALL TIMES. ALL UTILITIES INCLUDING UTILITY POLES, IN THE VICINITY OF CONSTRUCTION SHALL BE PROTECTED BY BRACING, SUPPORTING, BY THE USE OF TRENCH BOXES OR OTHER ACCEPTABLE MEANS AS DETERMINED BY THE OWNER OF THE UTILITY. ALL COSTS FOR PROTECTION OF UTILITIES SHALL BE INCIDENTAL TO THE PROJECT.
- ANY UTILITIES, MAINS, SERVICES, UNDERDRAINS, OIL LINES, OR OTHER SIMILAR ITEMS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE UTILITY OWNER IN A MANNER ACCEPTABLE TO THE UTILITY OWNER. ALL COSTS FOR REPAIR OR REPLACEMENT SHALL BE PAID BY THE CONTRACTOR, INCIDENTAL TO THE PROJECT.
- WORK STOPPAGE BY EMPLOYEES OF UTILITY COMPANIES WHICH RESULTS IN A DELAY OF UTILITY REVISIONS EFFECTING THE PROGRESS OF THIS PROJECT MAY BE THE BASIS FOR A CLAIM FOR AN EXTENSION OF TIME FOR COMPLETION, BUT WILL NOT BE CONSIDERED THE BASIS FOR A CLAIM FOR EXTRA COMPENSATION OR AN ADJUSTMENT IN CONTRACT UNIT PRICES.
- THE CONTRACTOR SHALL COORDINATE ANY UTILITY RELOCATION REQUIRED TO COMPLETE THE WORK WITH THE OWNER OF THE UTILITY. THIS COORDINATION SHALL BE ACCOMPLISHED IN SUFFICIENT TIME TO ALLOW THE RELOCATION WORK TO BE COMPLETED WITHOUT INTERFERENCE OR DELAY TO THE CONSTRUCTION WORK. ALL COSTS FOR RELOCATION OF UTILITIES SHALL BE INCIDENTAL TO THE PROJECT.
- ALL TREES, SHRUBS AND LANDSCAPING NOT DESIGNATED TO BE REMOVED SHALL BE PROTECTED DURING CONSTRUCTION. ANY TREES, SHRUBS OR LANDSCAPING DAMAGED IN ANY WAY BY THE CONTRACTOR (INCLUDING DAMAGING ROOTS), SHALL BE REPLACED WITH LIKE SPECIES AND SIZE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL HAVE AN OPERATING VACUUM SWEEPER ON THE JOB AT ALL TIMES. THE PAVEMENT SHALL BE SWEEPED A MINIMUM OF ONCE A DAY OR AS DIRECTED BY THE FIELD ENGINEER. THE CONTRACTOR SHALL ALSO COMPLY WITH LOCAL AGENCY DUST ORDINANCE.
- THE CONTRACTOR SHALL MAINTAIN EXISTING STORM WATER DRAINAGE AT ALL TIMES DURING THE WORK. EXISTING STORM SYSTEM DRAINAGE SHALL BE MAINTAINED BY PUMPING AND BY-PASSING, REPAIR, REMOVAL AND REPLACEMENT OR OTHER MEANS WHEN APPROVED BY THE ENGINEER. ALL COSTS FOR MAINTAINING DRAINAGE SHALL BE INCLUDED IN THE PROJECT PAY ITEMS EXCEPT AS MAY BE OTHERWISE PROVIDED FOR IN THE PROPOSAL.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- ALL SOIL EROSION AND SEDIMENTATION CONTROL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF WAYNE COUNTY DEPARTMENT OF ENVIRONMENT. THE CITY HAS PAID ALL FEES REQUIRED TO OBTAIN A PERMIT FROM WAYNE COUNTY.
- CLEAN ALL ACCUMULATED SEDIMENT FROM CATCH BASINS, SEWERS AND PAVEMENT AREAS AS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION.
- ALL SOIL EROSION MEASURES SHALL BE CHECKED A MINIMUM OF ONCE A DAY.
- INLET PROTECTION FOR STORM SEWER CATCH BASINS SHALL BE REPLACED IMMEDIATELY IF THE FOLLOWING HAS OCCURRED: ANY TEARS OR HOLES IN THE FILTER FABRIC, AND/OR DRAIN SILT HAS COLLECTED ON FABRIC CAUSING SAGGING OF FILTER IN THE CATCH BASIN.
- ALL TRUCKS SHALL CLEAN TIRES OF DIRT BEFORE EXITING CONSTRUCTION SITE.
- ANY AND ALL ACCUMULATED SEDIMENT ON STREETS AND ROADS IN THE PROJECT VICINITY SHALL BE SWEEPED CLEAN AT LEAST ONCE PER DAY OR AS DIRECTED BY THE ENGINEER.

SEQUENCE OF CONSTRUCTION – SESC

- INSTALL ALL TEMPORARY SOIL EROSION CONTROL MEASURES ON EXISTING STORM STRUCTURES PRIOR TO DISTURBING ANY EARTH ON THE SITE.
- INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT DRIVE PRIOR TO DISTURBING ANY EARTH ON SITE. ALL TRUCKS LEAVING THE CONSTRUCTION SITE SHALL PASS THROUGH A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT DRIVE TO REMOVE DIRT AND SEDIMENT. ANY DIRT AND ACCUMULATED SEDIMENT ON ROADS AND STREETS IN THE VICINITY OF THE PROJECT SHALL BE SWEEPED CLEAN AT LEAST DAILY WITH A VACUUM TYPE PICKUP BROOM.
- INSTALL INLET FILTERS ON ALL STORM CATCH BASINS UPON COMPLETING CONSTRUCTION OF EACH ONE.
- REMOVE EXISTING PAVEMENT.
- CONSTRUCT PROPOSED UTILITIES.
- PREPARE SUBGRADE, CONSTRUCT CONCRETE CURB, PLACE PROPOSED ASPHALT PAVEMENT.
- INSTALL TOPSOIL AND NURSERY SOD ON DISTURBED RIGHT-OF-WAY WITHIN 5 DAYS OF COMPLETING PAVEMENT INSTALLATION.
- CLEAN ALL ACCUMULATED SEDIMENT FROM CATCH BASINS, SEWERS AND PAVEMENT AREAS AS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION.
- THE EXACT SCHEDULE OF SOIL EROSION AND SEDIMENTATION CONTROL EVENTS (WITH DAYS AND/OR DATES OF THE VARIOUS ACTIVITIES) SHALL BE SUBMITTED TO WAYNE COUNTY BY THE CONTRACTOR, FOR REVIEW AND APPROVAL, PRIOR TO OBTAINING A PERMIT.

WATER MAIN NOTES

- ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, PC350 WITH PUSH-ON JOINTS; FITTINGS SHALL BE MECHANICAL JOINT, DUCTILE IRON, COMPACT FITTINGS; AS SPECIFIED IN SECTION 33 1100, WATER UTILITY DISTRIBUTION PIPING. WATER MAIN BEDDING SHALL BE CLASS F-III.
- WATER MAIN TRENCH BACKFILL UNDER ROAD SURFACES, PAVEMENTS, CURB, DRIVEWAY, SIDEWALK AND WHERE THE TRENCH IS WITHIN 3-FEET OF THE PAVEMENT SHALL BE TRENCH B, (SAND) PER SPECIFICATION SECTION 31 2333, TRENCHING AND BACKFILLING.
- WHENEVER THE CONTRACTOR NEEDS TO SHUT OFF A WATER MAIN, THE CONTRACTOR SHALL NOTIFY THE CITY OF PLYMOUTH. ALL VALVES SHALL BE OPENED AND CLOSED ONLY BY THE CITY OF PLYMOUTH WATER DEPARTMENT PERSONNEL. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED WATER CONSUMERS IN WRITING A MINIMUM OF 48 HOURS BEFORE SHUTTING OFF ANY WATER MAIN.
- THE EXISTING WATER MAIN SHALL NOT BE ABANDONED UNTIL AFTER THE PROPOSED WATER MAIN HAS BEEN TESTED AND ACCEPTED FOR USE, AND ALL FIRE HYDRANTS AND SERVICES ARE CONNECTED TO THE NEW WATER MAIN.
- ALL EXISTING WATER SERVICES SHALL BE REPLACED FROM THE NEW WATER MAIN TO THE PROPERTY LINE WITH 1-INCH K COPPER AND A NEW CURB STOP AND BOX (UNLESS OTHERWISE NOTED).
- WHILE BOTH EXISTING AND NEW FIRE HYDRANTS ARE IN PLACE ON THE PROJECT, THE FIRE HYDRANTS WHICH ARE NOT LIVE AND AVAILABLE FOR USE SHALL BE CONSPICUOUSLY COVERED OR BAGGED TO PREVENT BEING MISTAKEN FOR A LIVE HYDRANT.
- RIM ELEVATIONS FOR NEW WATER MAIN STRUCTURES THAT ARE WITHIN PAVEMENT MAY REQUIRE ADJUSTMENT DURING CONSTRUCTION OF PAVEMENT. RIM ELEVATIONS OF NEW WATER MAIN STRUCTURES OUTSIDE OF THE PAVEMENT WILL BE SET TO GRADE AFTER FINAL GRADING HAS BEEN COMPLETED IN THE AREA. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- REMOVE AND SALVAGE EXISTING GATE WELL FRAMES AND COVERS, FIRE HYDRANTS, GATE VALVES, AND VALVE BOXES AND DELIVER TO THE CITY OF PLYMOUTH. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO PROJECT.
- SEE SPECIFICATIONS FOR THE WORK REQUIRED FOR ABANDONMENT OF GATE WELLS, FIRE HYDRANTS, STOP BOXES AND WATER MAINS.

PROJECT MANAGER: SHAWN KEOUGH
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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

NOTES

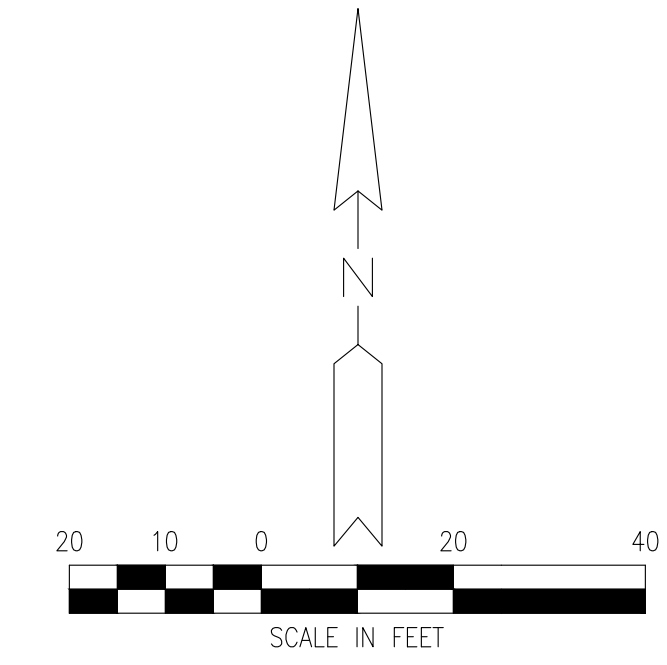
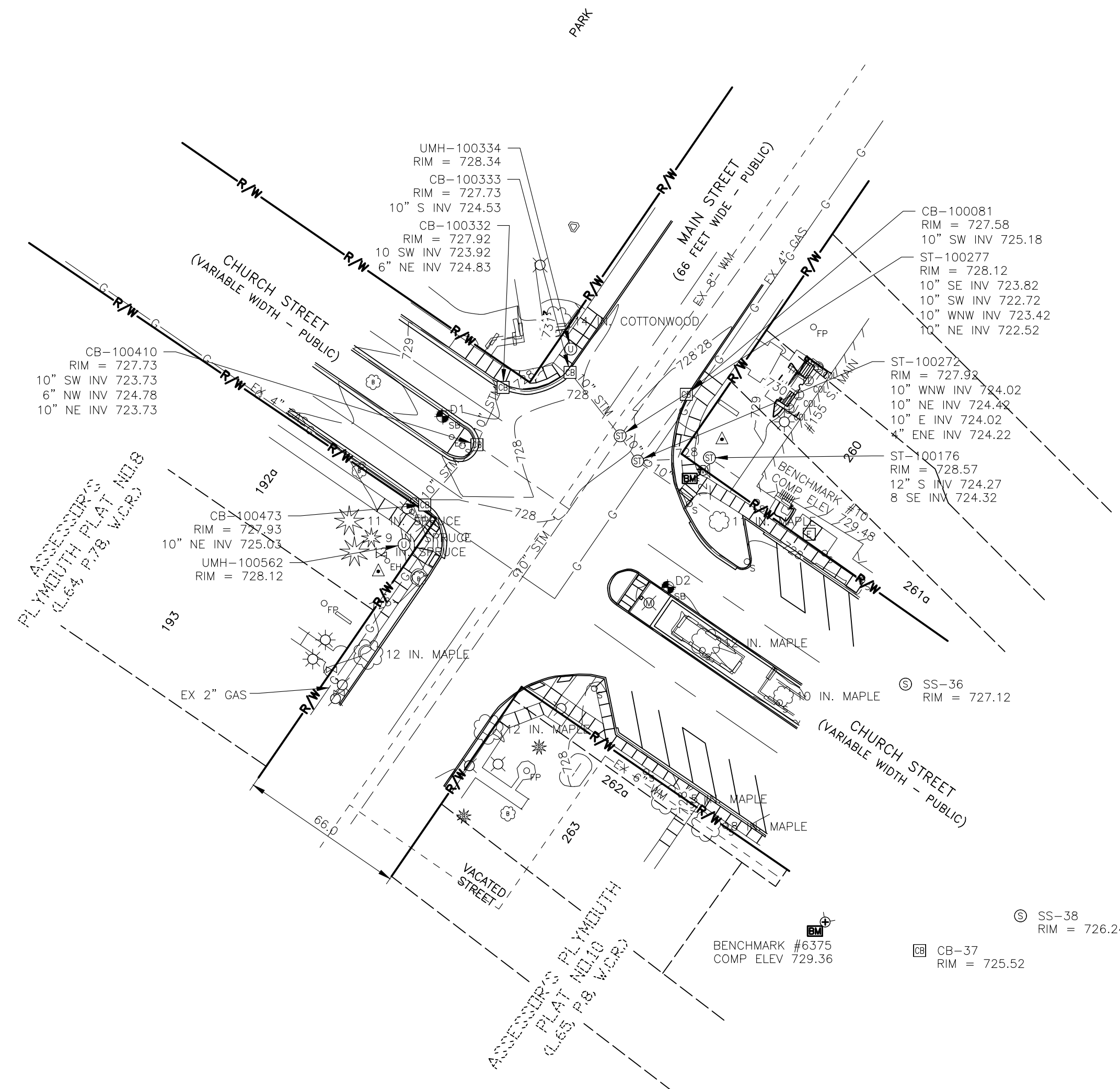
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BID	3-25-24	SWK
JOB NO.	PLY2129-01T	
SHEET	2	

BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION



PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELAGRA\LD\42689\SP-PLIS-EX.CON.MAIN-CHURCH.DWG FIELD BOOK INFORMATION - PLOTTED 3/25/2024 12:51 PM BY: FLANAGAN, MARTIN



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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
EXISTING CONDITIONS

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JOB NO.
PLY2129-01T

SHEET
4

BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

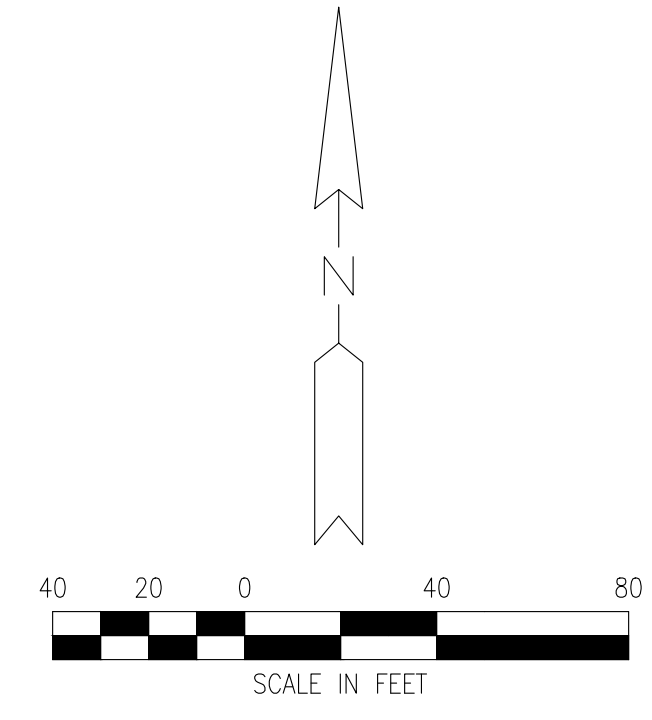
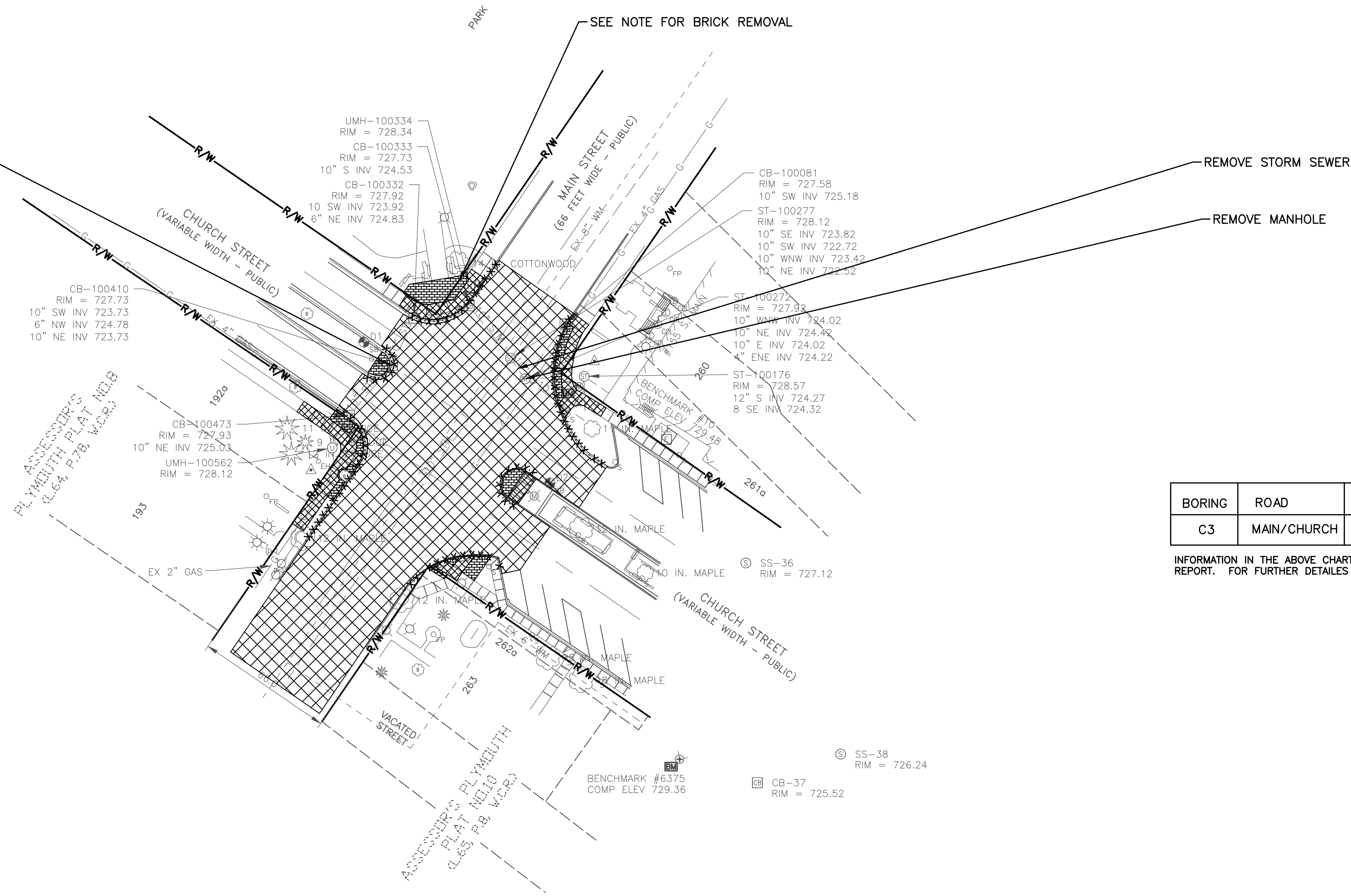
BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION

NOTE:

THE CITY OF PLYMOUTH IS RESPONSIBLE TO REMOVE, SALVAGE, AND REINSTALL ALL BRICK AREAS. CONTRACTOR SHALL COORDINATE WITH FIELD ENGINEER AND CITY STAFF WHEN THIS WORK IS TO BE COMPLETED. ESTIMATED QUANTITY OF BRICK REMOVAL IS 1000 SFT.

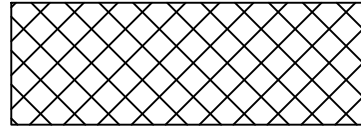
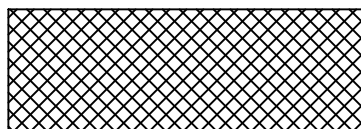
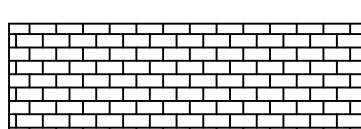
REMOVE CATCH BASIN FRAME AND COVER AND PLACE MANHOLE FRAME AND COVER



BORING	ROAD	ASPHALT	CONCRETE	BASE	BASE MATERIAL
C3	MAIN/CHURCH	5.25"	NOT ENCOUNTERED	8.75"	STEEL FURNACE SLAG

INFORMATION IN THE ABOVE CHART IS TAKEN FROM THE SME GEOTECHNICAL REPORT. FOR FURTHER DETAILS PLEASE SEE REPORT FOUND IN THE PROPOSAL

LEGEND

-  PAVEMENT EXCAVATION
-  CONCRETE DRIVE AND SIDEWALK
-  BRICK REMOVE AND SALVAGE
- XXXXXXXXXXXXXXXXXXXX- REMOVE UTILITY
- XXXXXXXXXXXXXXXXXXXX- CONCRETE CURB AND GUTTER REMOVE

SUMMARY OF QUANTITIES THIS SHEET

600	CY	PAVEMENT EXCAVATION
1500	SF	CONCRETE DRIVES AND SIDEWALK, REMOVE
12	LF	STORM SEWER REMOVE
425	LF	CURB AND GUTTER, REMOVE
1	EA	REMOVE CB COVER AND REPLACE WITH MANHOLE COVER
1	EA	DRAINAGE STRUCTURE, REMOVE

PROJECT MANAGER: SHAWN KEOUGH
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CITY OF PLYMOUTH
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WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
REMOVAL PLAN

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO:
PLY2129-01T

SHEET
5

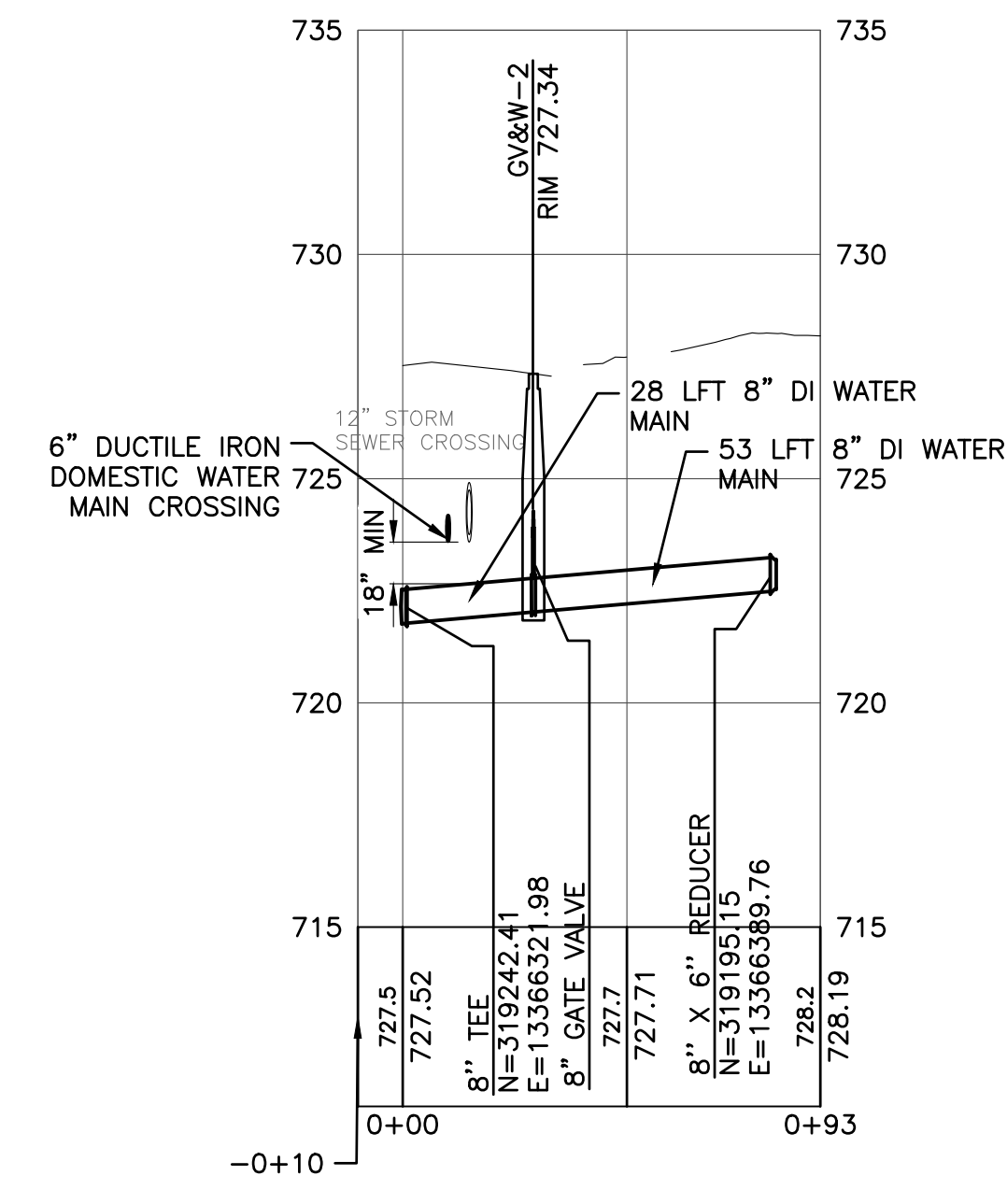
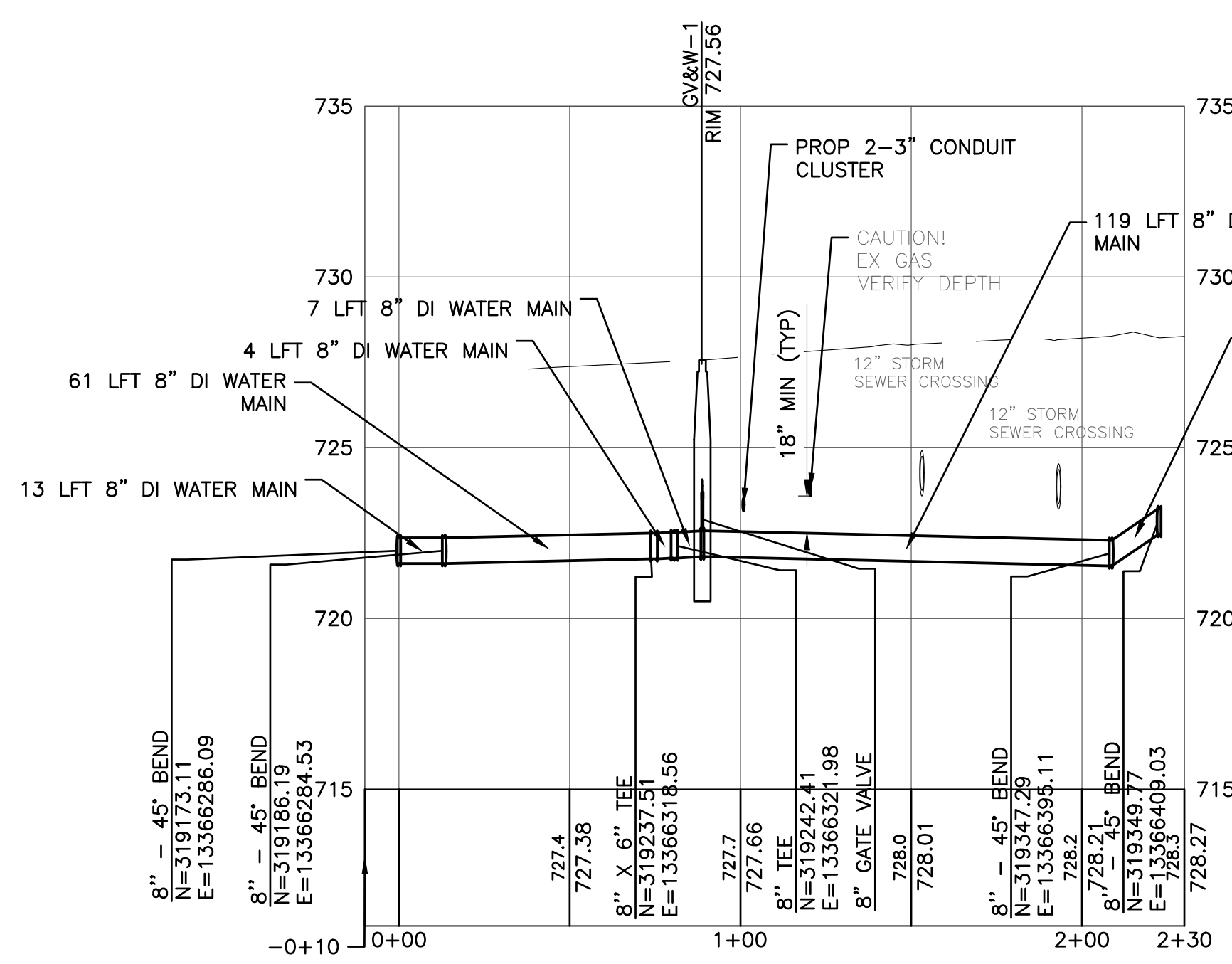
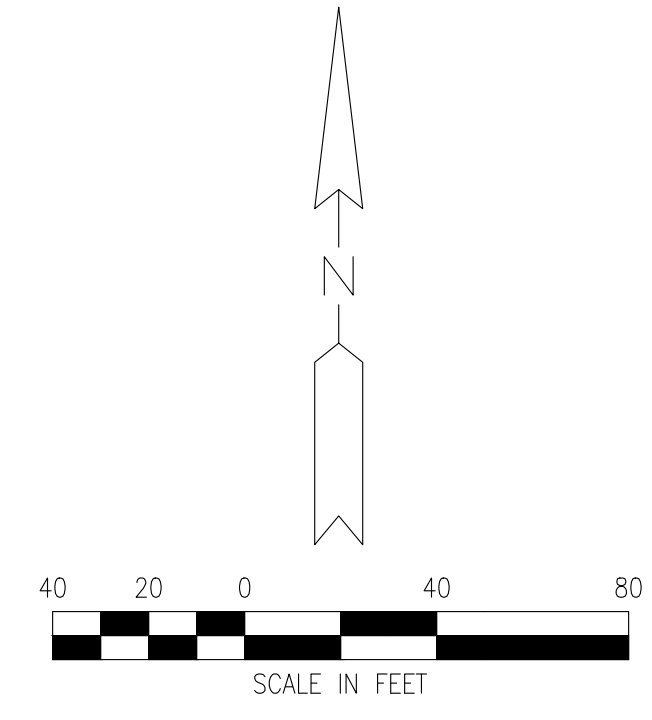
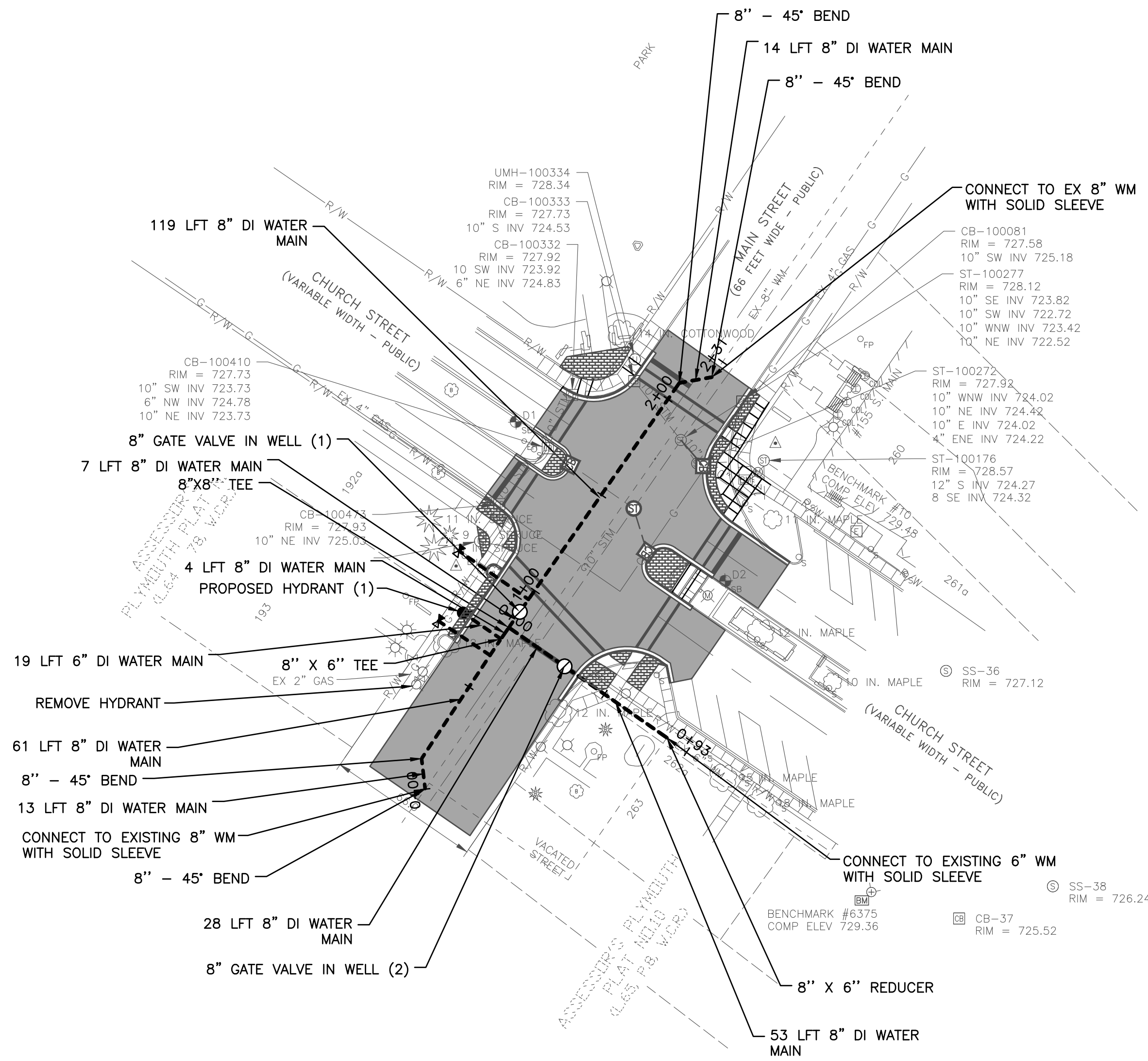
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BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION



QUANTITIES THIS SHEET

- 266 LF WATER MAIN, 8-INCH, DI PC 350, TRENCH "B"
- 1 EA REMOVE FIRE HYDRANT ASSEMBLY
- 5 CY WATER MAIN, ABANDON WITH FLOWABLE FILL
- 1 EA FIRE HYDRANT ASSEMBLY
- 3 EA CONNECT TO EXISTING WATER MAIN WITH MJ SOLID SLEEVE
- 2 EA GATE VALVE IN WELL, 8-INCH

CONNECTION NOTE:
 CONNECT TO EXISTING WATER MAIN AFTER HYDROSTATIC AND BACTERIOLOGICAL TESTS HAVE BEEN SUCCESSFULLY COMPLETED AND REVIEWED BY THE ENGINEER.

CONTRACTOR SHALL SEND COPY OF ALL BACTERIOLOGICAL TESTS TO THE CITY OF PLYMOUTH FAX# 734.455.1666



PROJECT MANAGER: SHAWN KEOUGH, C.P. PLUMBER (MICHIGAN LICENSE #142288) \CD+PLS+CHURCH RECONSTRUCTION-WM PLUMBING - LAYOUT1 - PLOTTED 3/25/2024 12:51 PM BY ELANAGAN, MARTIN

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 CHURCH STREET
 PROPOSED WATER MAIN PLAN AND PROFILE

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T
SHEET 6

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GENERAL SIGNAL NOTES

SIGNALS

PREVIOUS GENERAL NOTES
SOME NOTES PREVIOUSLY INCLUDED IN "GENERAL NOTES" ARE NOW LOCATED WITHIN THE FREQUENTLY USED SPECIAL PROVISION TITLED "TRAFFIC SIGNAL WORK - CONSTRUCTION METHODS".

MAINTAINING AGENCY CONTACT INFORMATION
- CITY OF PLYMOUTH: (734) 453-7737

NOTIFICATIONS TO MAINTAINING AGENCIES
CONTACT CITY OF PLYMOUTH SEVEN WORKING DAYS PRIOR TO START OF CONSTRUCTION AND SEVEN WORKING DAYS PRIOR TO SIGNAL ACTIVATION.

CABINET SET UP AND CONTROLLER TIMING
CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE CONTROLLER AND WIRING THE CABINET. THIS WILL BE INCLUDED IN THE PAY ITEM FOR "CONTROLLER AND CABINET, DIGITAL TYPE" AND WILL NOT BE PAID FOR SEPARATELY.

TREE TRIMMING
ALL TREE TRIMMING REQUIRED TO CLEAR NEW TRAFFIC SIGNAL POLES & TRAFFIC SIGNAL UNITS SHALL BE INCLUDED IN THE PAY ITEM & NO EXTRA PAYMENT SHALL BE MADE.

FACILITIES NOT ON PLANS
EXISTING O.H. & T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.

EXISTING STREET SIGNS
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.

CONTINUOUS TRAFFIC SIGNAL OPERATION
PROPOSED T.S. SHALL BE PUT INTO OPERATION AT TIME OF REMOVAL OF EXISTING T.S. FACILITIES, CONTRACTOR SHALL NOTIFY THE CITY OF PLYMOUTH IF UNABLE TO MAINTAIN T.S. IN AN OPERABLE CONDITION AT ALL TIMES.

UNDERGROUND UTILITY SEPARATION
A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL & 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED FACILITIES & EXISTING U.G. WATER FACILITIES.

PLAN DEVIATIONS DURING CONSTRUCTION
NO CHANGES FROM PLANS IN LOCATION OF SUPPORTING STRUCTURES SIGNAL HEAD PLACEMENT OR TRAFFIC SIGNAL EQUIPMENT WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE CITY OF PLYMOUTH AND THE ENGINEER.

INNERDUCT
CONTRACTOR MUST INSTALL A CONTINUOUS FLEXIBLE NON-METALLIC TUBING (INNERDUCT) FOR LOW VOLTAGE COMMUNICATION TYPE CABLE FROM THE DEVICE TO THE CONTROLLER CABINET. INNERDUCT IS NOT REQUIRED IF COMMUNICATION CABLE IS 600V RATED.

SIGNAL HEAD LANDING POINT
ENSURE EACH TRAFFIC SIGNAL HEAD ASSEMBLY HAS ITS OWN LANDING POINT WITH ALL NEUTRALS CONNECTED TOGETHER WITH A METAL TYPE JUMPER.

SIGNAL EQUIPMENT DISPOSAL
DISPOSAL OF ALL TRAFFIC SIGNAL EQUIPMENT IS INCLUDED IN THE REMOVAL PAY ITEMS AND SHALL ALSO INCLUDE THE FOLLOWING:



























- NOTIFICATION TO CITY OF PLYMOUTH THAT TRAFFIC SIGNAL EQUIPMENT IS BEING REMOVED.
- TEMPORARY STORAGE OF EQUIPMENT IN A DUMPSTER ON SITE (OR AS DIRECTED BY THE ENGINEER) ALLOWING CITY OF PLYMOUTH 48 HOURS TO SALVAGE ANY EQUIPMENT.
- PROPER DISPOSAL OF ANY EQUIPMENT CONTAINING ENVIRONMENTALLY SENSITIVE MATERIALS (MERCURY RELAY SWITCHES FOR EXAMPLE)
- DISABLING OR DESTRUCTION OF ALL REMAINING EQUIPMENT TO THE SATISFACTION OF THE ENGINEER SUCH THAT IT CANNOT BE REUSED OR RESOLD.
- PROPER DISPOSAL OF ALL REMAINING EQUIPMENT.

PROJECT SPECIFIC NOTES

ELECTRICAL SERVICE INSPECTION FEES SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND WILL NOT BE PAID FOR SEPARATELY.

ALL CONDUIT CROSSINGS MUST BE COORDINATED WITH ROAD AND SIDEWALK CONSTRUCTION.

TRAFFIC SIGNAL EQUIPMENT SYMBOLS

-  12" L.E.D. VEHICLE TRAFFIC SIGNAL (ONE WAY)
-  12" L.E.D. VEHICLE TRAFFIC SIGNAL (TWO WAY: BACK TO BACK)
-  12" L.E.D. VEHICLE TRAFFIC SIGNAL (THREE WAY)
-  12" L.E.D. VEHICLE TRAFFIC SIGNAL (FOUR WAY)
-  12" L.E.D. PEDESTRIAN TRAFFIC SIGNAL (ONE WAY)
-  12" L.E.D. PEDESTRIAN TRAFFIC SIGNAL (TWO WAY: AT ANGLE TO EACH OTHER)
-  PEDESTRIAN PUSHBUTTON
-  30 INCH ROUND PRECAST TRAFFIC SIGNAL HANDHOLE
-  36 INCH ROUND PRECAST TRAFFIC SIGNAL HANDHOLE
-  ALUMINUM PEDESTRIAN PEDESTAL
-  ANCHOR BASE STEEL STRAIN POLE (POLE LENGTH & FOUNDATION SIZE AS CALLED OUT)
-  MAST ARM STANDARD AND FOUNDATION (POLE LENGTH & FOUNDATION SIZE AS CALLED OUT)
-  BASE MOUNTED TRAFFIC CONTROLLER
-  POLE MOUNTED TRAFFIC CONTROLLER
-  CASE SIGN (1 WAY OR 2 WAY)
-  CASE SIGN (3 WAY OR 4 WAY)
-  COILED UP WIRE (FOR CONNECTION BY OTHERS)
-  STAINLESS STEEL SERVICE DISCONNECT
-  METERED ELECTRIC SERVICE
-  ELECTRIC GROUND
- TS#  SIGNAL HEAD
- CS#  ILLUMINATED CASE SIGN
-  PROPOSED/SALVAGED WIRELESS VEHICLE SENSOR NODE
-  EXISTING/REMOVED WIRELESS VEHICLE SENSOR NODE
-  SPP RADIO
-  RECTANGULAR RAPID FLASHING BEACON

MDOT SIGNAL STANDARD PLANS

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

- *WC-026-A COLOR CODE WIRING/EQUIPMENT GROUNDING
- *WC-026-B COLOR CODE FOR WIRING CONNECTING SIGNAL LAMPS
- *WC-028-B PEDESTAL FOUNDATION AND SIGNAL MOUNTING DETAILS
- *SIG-032-B TRAFFIC SIGNAL MAST ARM POLE AND MAST ARM DETAILS - CATEGORY III
- *SIG-040-A TRAFFIC SIGNAL MAST ARM STANDARD FOUNDATIONS
- *WC-045-A BASE MOUNTED T.S. CONTROLLER CABINET/FOUNDATIONS
- *SIG-140-A TRAFFIC SIGNAL UNINTERRUPTIBLE POWER SYSTEM
- *SIG-200-A SECONDARY SERVICE/DISCONNECT FOR WOOD POLES
- *SIG-210-B UNDERGROUND SERVICE METERED AND UNMETERED
- *SIG-240-A HANDHOLE- PRECAST, POLYMER CONCRETE CONDUIT (DIRECT BURIAL/ENCASED)
- *SIG-250-A MAST ARM MOUNTED T.S. BRACKET ASSEMBLY
- *SIG-301-A PEDESTAL MOUNTED SIGNAL DISPLAYS
- *SIG-330-A PEDESTRIAN PUSH BUTTON DETAILS
- *SIG-400-A

*MDOT SPECIAL DETAILS - LOCATED IN PROPOSAL

FOR REFERENCE ONLY

REV#	DATE	DESCRIPTION	BY

20251 Northline Rd.
Taylor, MI 48180
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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
TRAFFIC SIGNAL LEGEND AND NOTES

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
7

PROJECT MANAGER: SHAWN KEOUGH
C:\P\L\WORK\WELAGRA\1402869\CTS-PLTS-SIGNAL\MAIN-CHURCH.DWG - PLOTTED 3/25/2024 12:51 PM BY: FLAUGAN, MARTIN



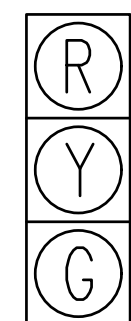
**Know what's below.
Call before you dig.**

THE CITY OF PLYMOUTH HAS RETAINED "RAUHORN ELECTRIC TO INSTALL THE NEW MAST ARMS AND PEDESTRIAN CROSSING SIGNALS

THE CONTRACTOR SELECTED BY THE CITY OF PLYMOUTH FOR THE 2024 INFRASTRUCTURE PROGRAM SHALL COORDINATE THEIR WORK IN COOPERATION WITH RAUHORN ELECTRIC

PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\W\CAROL\1426289\CTS-PLS-SIGNAL MAIN-CHURCHDING - TS-REM - PLOTTED 3/25/2024 12:51 PM BY: FLANAGAN, MARTIN

FIELD BOOK INFORMATION:
 TS-REM - PLOTTED 3/25/2024 12:51 PM BY: FLANAGAN, MARTIN



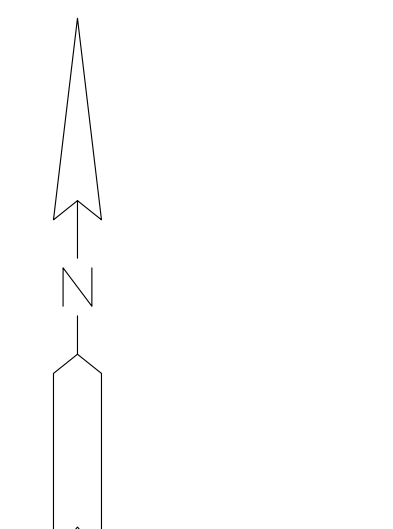
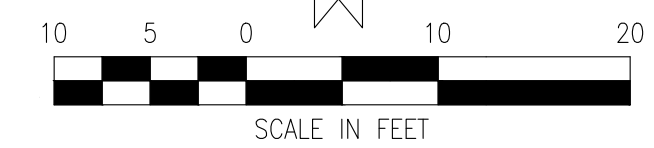
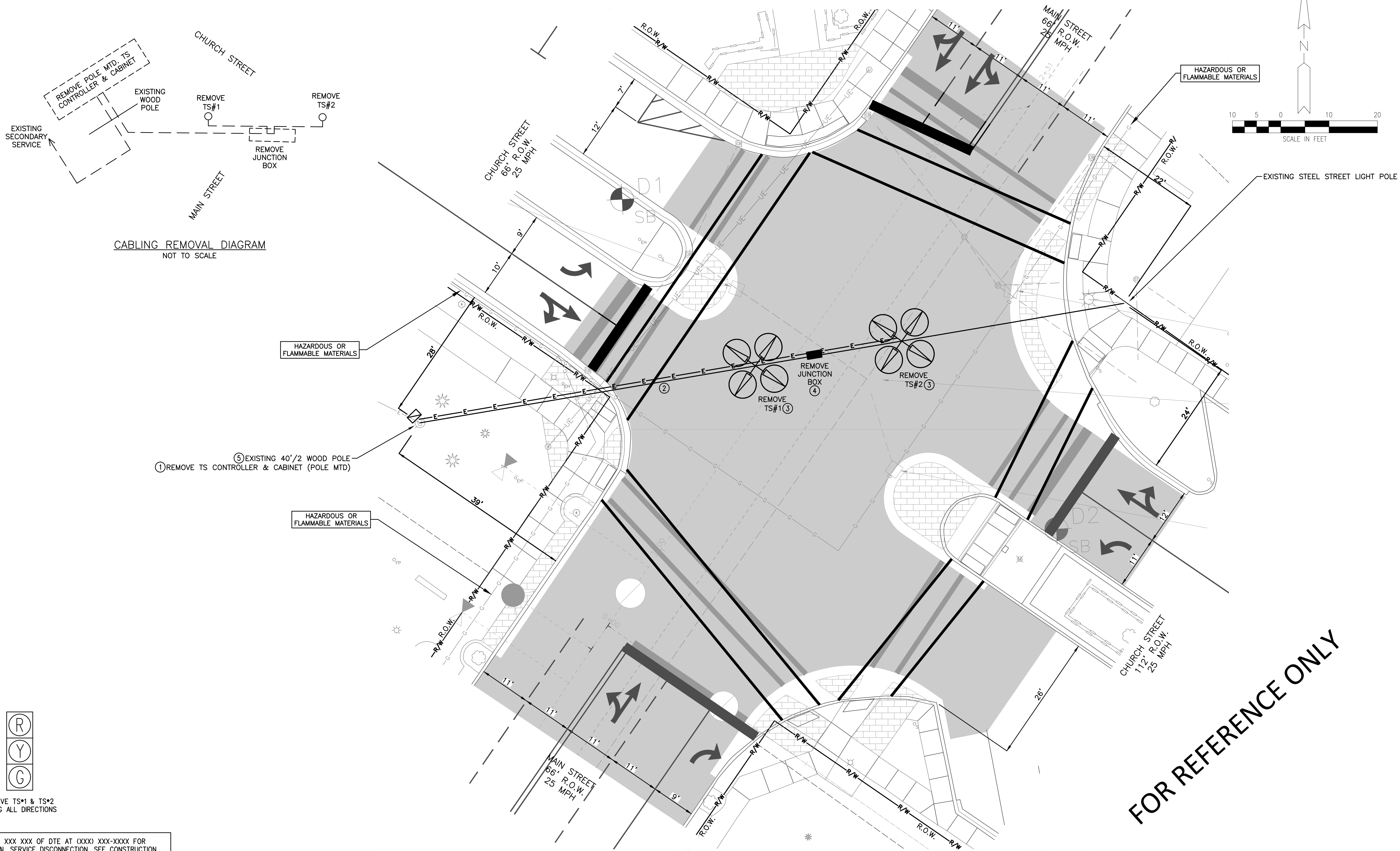
REMOVE TS#1 & TS#2
 FACING ALL DIRECTIONS

CONTACT: XXX XXX OF DTE AT (XXX) XXX-XXXX FOR
 ELECTRICAL SERVICE DISCONNECTION. SEE CONSTRUCTION
 SHEET FOR ESTIMATED COST TO CONTRACTOR.

NOTE: SEE PAVEMENT MARKING PLAN SHEETS FOR SIGNING
 AND PAVEMENT MARKING REMOVALS AND QUANTITIES.

LIST OF MATERIAL

NO.	ITEM	QUANTITIES	ITEM CODE
①	Controller and Cabinet, Rem	1 Ea	8200030
②	Span Wire, Rem	1 Ea	8200141
③	TS, Span Wire Mtd, Rem	2 Ea	8200182
④	Junction Box, Rem	1 Ea	8200457
⑤	Cable Pole, TS and Sec, Dismant	1 Ea	8182209



THE CITY OF PLYMOUTH HAS RETAINED "RAUHORN ELECTRIC TO INSTALL THE NEW MAST ARMS AND PEDESTRIAN CROSSING SIGNALS

THE CONTRACTOR SELECTED BY THE CITY OF PLYMOUTH FOR THE 2024 INFRASTRUCTURE PROGRAM SHALL COORDINATE THEIR WORK IN COOPERATION WITH RAUHORN ELECTRIC



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OPENINGS	24
CYCLIC WATTS	3600
STEADY WATTS	0

REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
 201 S MAIN ST
 WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 CHURCH STREET
 TRAFFIC SIGNAL REMOVAL PLAN

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T
SHEET 8

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NOTES:

CONTACT: XXX XXX OF DTE AT (XXX) XXX-XXXX FOR ELECTRICAL SERVICE RECONNECTION. ESTIMATED COST TO CONTRACTOR: \$1000. (FINAL ESTIMATE TO BE PROVIDED BY DTE)

CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING UP THE CONTROLLER AND WIRING THE CABINET. THIS WILL BE INCLUDED IN THE PAY ITEM "CONTROLLER AND CABINET, DIGITAL TYPE" AND WILL NOT BE PAID FOR SEPARATELY.

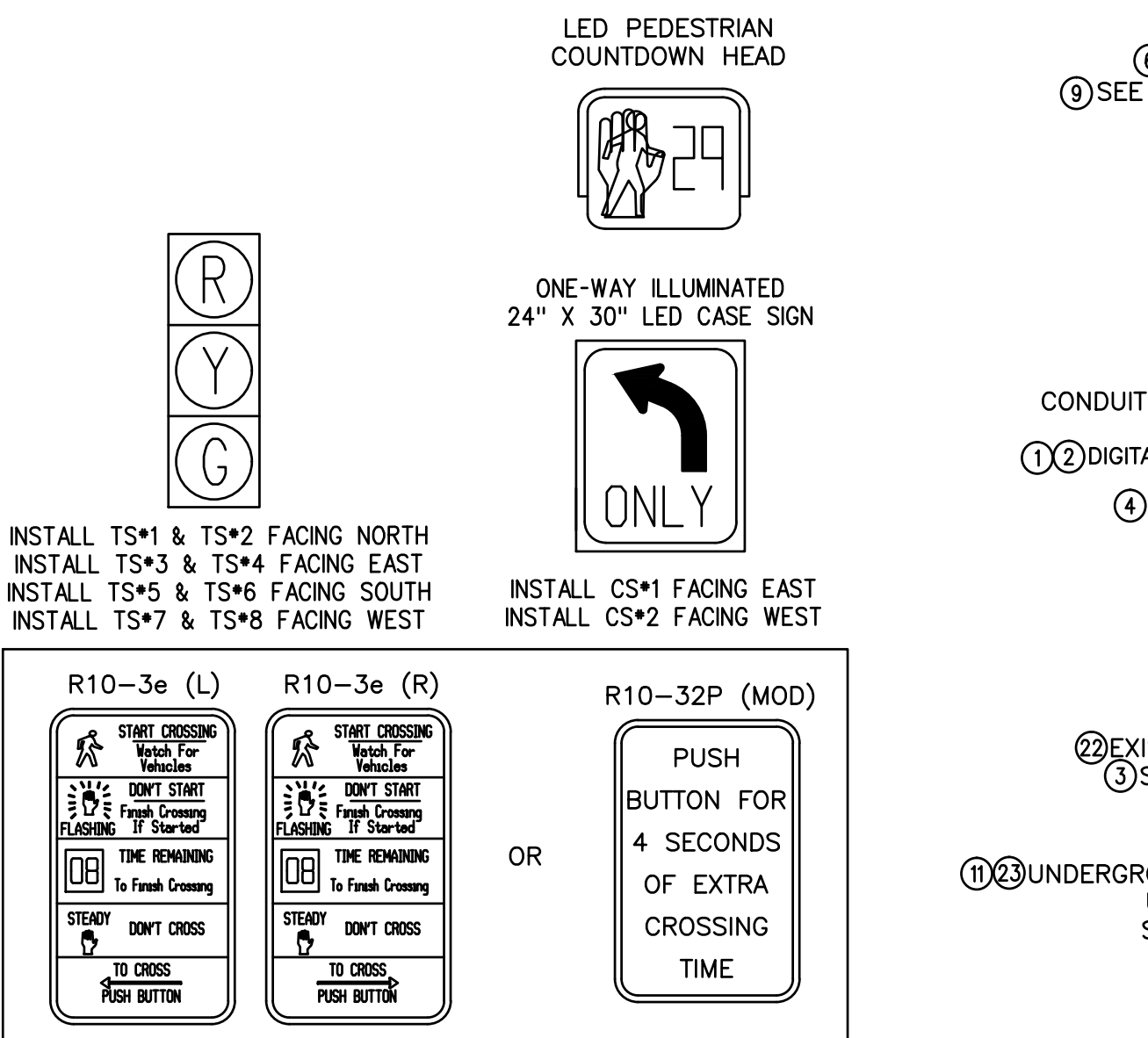
MAST ARMS AND STANDARDS SHALL BE DECORATIVE WITH AN ORNAMENTAL BASE AND CAP, AND DESIGNED TO MEET CATEGORY III STANDARDS OF THE AASHTO 2015 LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

DECORATIVE BASES FOR MAST ARM STANDARDS SHALL BE CATALOG #BCHUN3643 FROM SUNCOAST LIGHTING. DECORATIVE BASE ARE INCLUDED IN THE PAY ITEM FOR "MAST ARM POLE, CAT III" AND WILL NOT BE PAID FOR SEPARATELY.

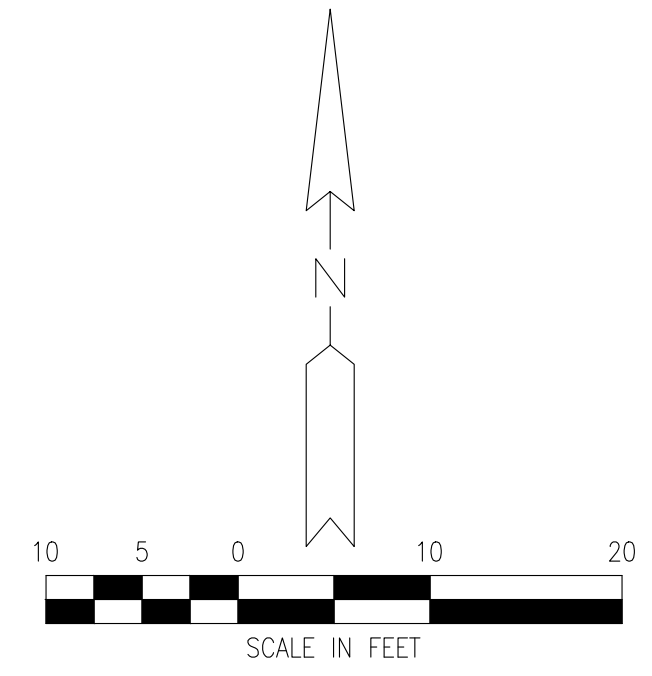
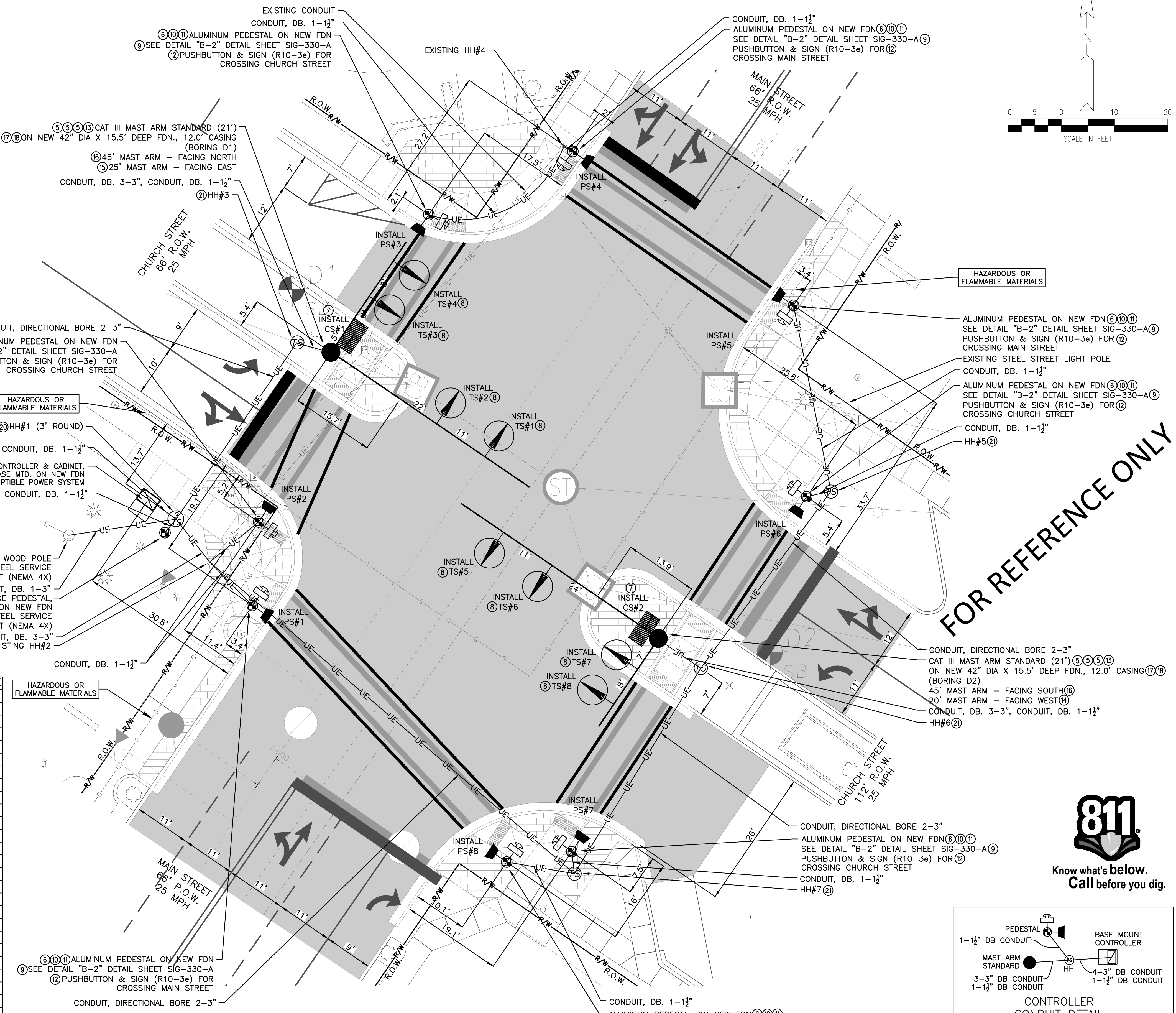
INSTALLATION OF POLES/PEDESTALS WITH PUSHBUTTONS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE NEW SIDEWALK RAMPS AND CROSSWALK PAVEMENT MARKINGS. LOCATIONS SHALL MEET CURRENT ADA REQUIREMENTS.

ALL MAST ARM STANDARDS, MAST ARMS, CONTROLLER CABINET, AND MOUNTING BRACKETS SHALL BE PAINTED SHERWIN WILLIAMS CEDAR GREEN (#4072). THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "COATING GALVANIZED SUPPORT STRUCTURES". ALL PEDESTALS AND PEDESTAL BASES SHALL BE PAINTED SHERWIN WILLIAMS CEDAR GREEN (#4072). THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "PEDESTAL PAINTING". ANY DAMAGE TO THESE FACTORY APPLIED FINISHES SHALL BE REPAIRED AT CONTRACTOR COST.

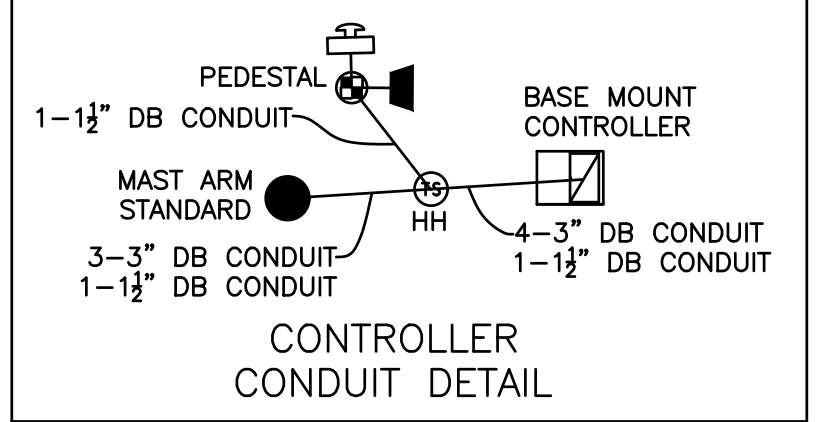
SIGNAL WORK SHALL BE COORDINATED WITH PROPOSED ROAD & SIDEWALK WORK. SEE PROPOSED PAVEMENT MARKING PLANS FOR PROPOSED SIGNING AND MARKINGS.



NO.	ITEM	QUANTITIES	ITEM CODE
1	Controller Fdn, Base Mtd	1 Ea	8200045
2	Controller and Cabinet, Digital Type	1 Ea	8207050
3	Serv, Disconnect	1 Ea	8182366
4	TS Uninterruptible Power System	1 Ea	8200500
5	Coating Galvanized Support Structures	6 Ea	7160010
6	Pedestal Painting	8 Ea	8207050
7	Case Sign (LED), One Way, 24 inch by 30 inch	2 Ea	8200029
8	TS, One Way Mast Arm Mtd (LED)	8 Ea	8200359
9	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	8 Ea	8200345
10	Pedestal, Alum	8 Ea	8200100
11	Pedestal, Fdn	9 Ea	8200105
12	Pushbutton and Sign	8 Ea	8200120
13	Mast Arm Pole, Cat III	2 Ea	8202012
14	Mast Arm, 20 foot, Cat III	1 Ea	8202027
15	Mast Arm, 25 foot, Cat III	1 Ea	8202028
16	Mast Arm, 45 foot, Cat III	2 Ea	8202032
17	Mast Arm Pole Fdn, 6 Bolt	31 Ft	8202034
18	Casing	24 Ft	8200480
19	Cable, Sec, 600V, 1, 3/C*6	75 Ft	8182238
20	Hh, Round, 3 foot Dia	1 Ea	8187050
21	Hh, Round	4 Ea	8182310
22	Wood Pole, Fit Up, Sec Cable Pole	1 Ea	8182381
23	Pedestal, Underground Serv, Unmetered	1 Ea	8200112
24	Conduit, DB, 1, 1 1/2 inch	150 Ft	8182048
25	Conduit, DB, 1, 3 inch	20 Ft	8182050
26	Conduit, DB, 3, 3 inch	20 Ft	8182056
27	Conduit, DB, 4, 3 inch	10 Ft	8182059
28	Conduit, Directional Bore, 2, 3 inch	220 Ft	8182037
29	Power Co (Est Cost to Contractor)	1000 Dir	8200116
30	Exploratory Investigation, Vertical	10 Ft	2040080



FOR REFERENCE ONLY



OPENINGS	34
CYCLIC WATTS	432
STEADY WATTS	90

PROJECT MANAGER: SPAWN, KEOUGH; CITY OF PLYMOUTH, MICHIGAN; 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM; TRAFFIC SIGNAL CONSTRUCTION PLAN; SHEET 9

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
TRAFFIC SIGNAL CONSTRUCTION PLAN

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO: PLY2129-01T

SHEET: 9

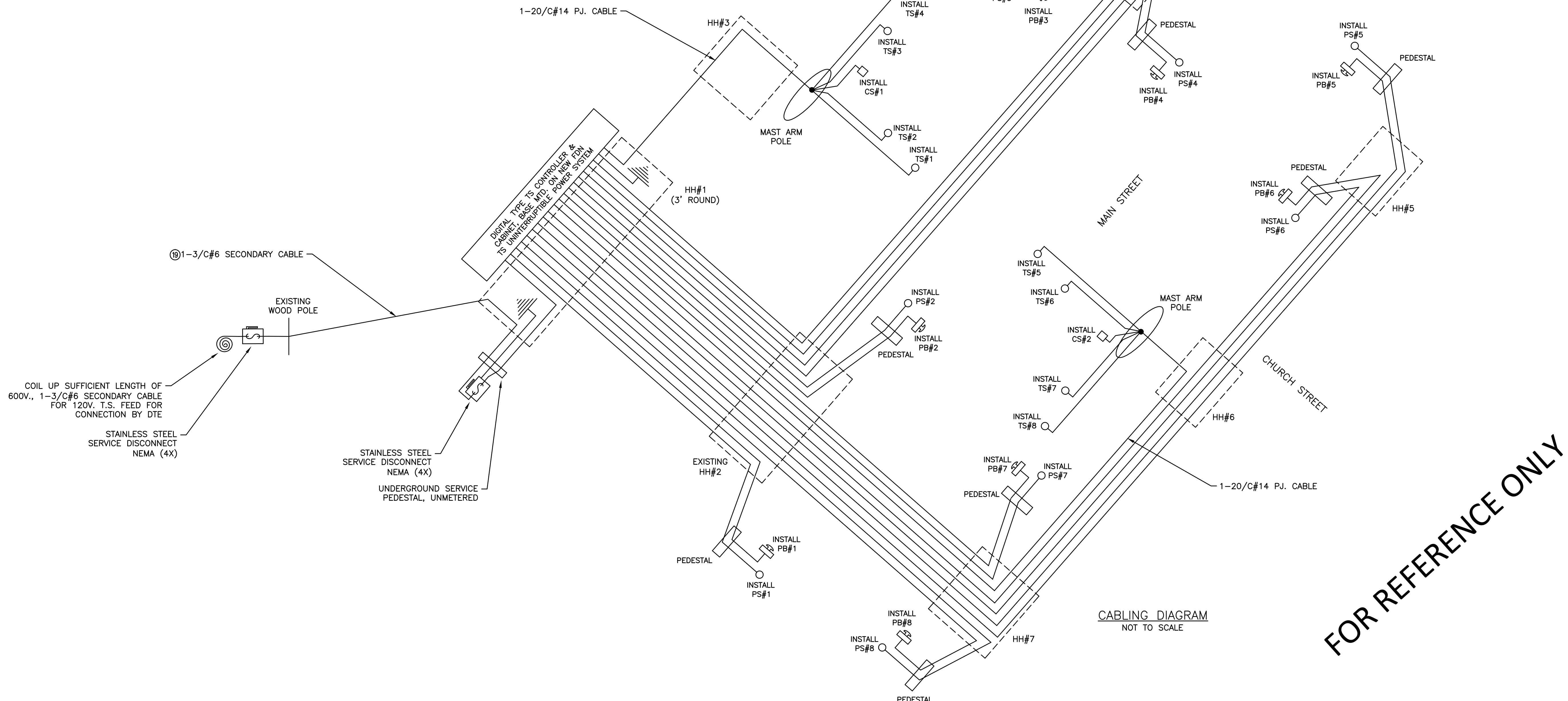
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

WADE TRIM

20251 Northline Rd.
Taylor, MI 48180
www.wadetrims.com

**CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE**

- 1W-3C TRAFFIC SIGNAL CABLES ARE 7/C#14 P.J.
- CASE SIGN CABLES ARE 4/C#16 P.J.
- PEDESTRIAN SIGNAL CABLES ARE 7/C#14 P.J.
- PUSHBUTTON CABLES ARE 2/C#16 SHIELDED P.J.



COIL UP SUFFICIENT LENGTH OF 600V., 1-3/C#6 SECONDARY CABLE FOR 120V. T.S. FEED FOR CONNECTION BY DTE

STAINLESS STEEL SERVICE DISCONNECT NEMA (4X)

STAINLESS STEEL SERVICE DISCONNECT NEMA (4X)

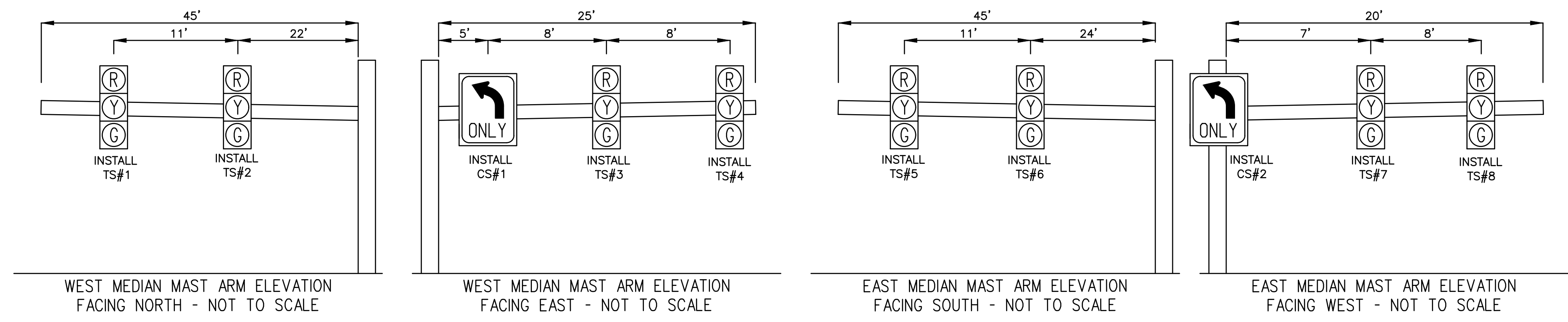
UNDERGROUND SERVICE PEDESTAL, UNMETERED

CABLING DIAGRAM
NOT TO SCALE

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THE CITY OF PLYMOUTH HAS RETAINED "RAUHORN ELECTRIC TO INSTALL THE NEW MAST ARMS AND PEDESTRIAN CROSSING SIGNALS

THE CONTRACTOR SELECTED BY THE CITY OF PLYMOUTH FOR THE 2024 INFRASTRUCTURE PROGRAM SHALL COORDINATE THEIR WORK IN COOPERATION WITH RAUHORN ELECTRIC



PROJECT MANAGER: SHAWN KEOUGH
CITY OF PLYMOUTH: WILSON/CLARKE/ID: 1422883/CTS-PJL-SIGNAL MAIN-CHURCH.DWG - TS - CON-02Z - PLOTTED: 3/25/2024 12:51 PM BY: FLAVIAN, MARTIN

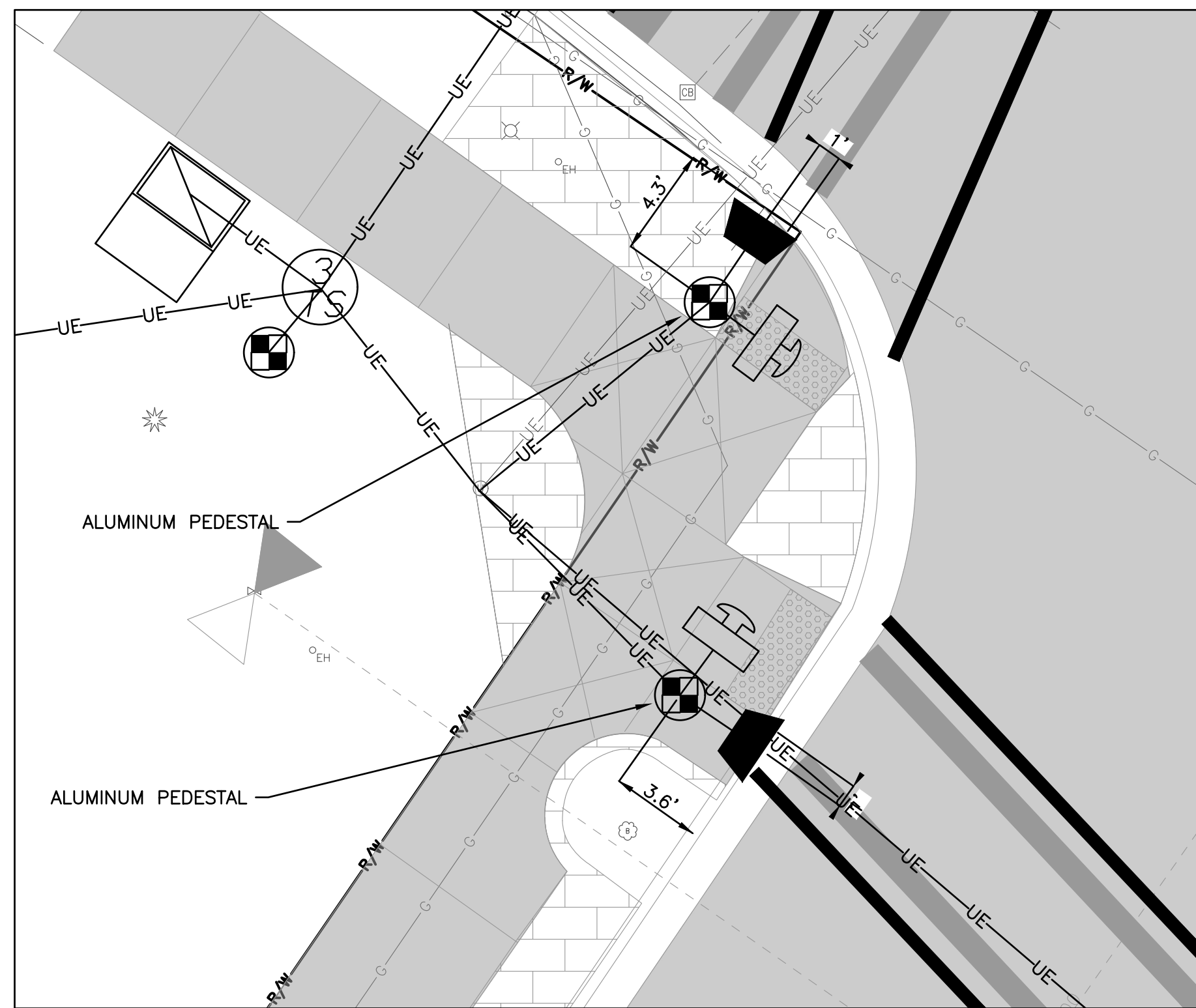


 20251 Northline Rd. Taylor, MI 48180 www.wadetrims.com	CITY OF PLYMOUTH 201 S MAIN ST WAYNE COUNTY, MICHIGAN 48170 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM CHURCH STREET TRAFFIC SIGNAL CONSTRUCTION PLAN
ISSUED FOR: BID DATE: 3-25-24 BY: SWK	JOB NO. PLY2129-01T SHEET <b style="font-size: 2em;">10
© Wade Trim Group, Inc. 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM	REVISIONS TABLE: NO. DATE DESCRIPTION BY

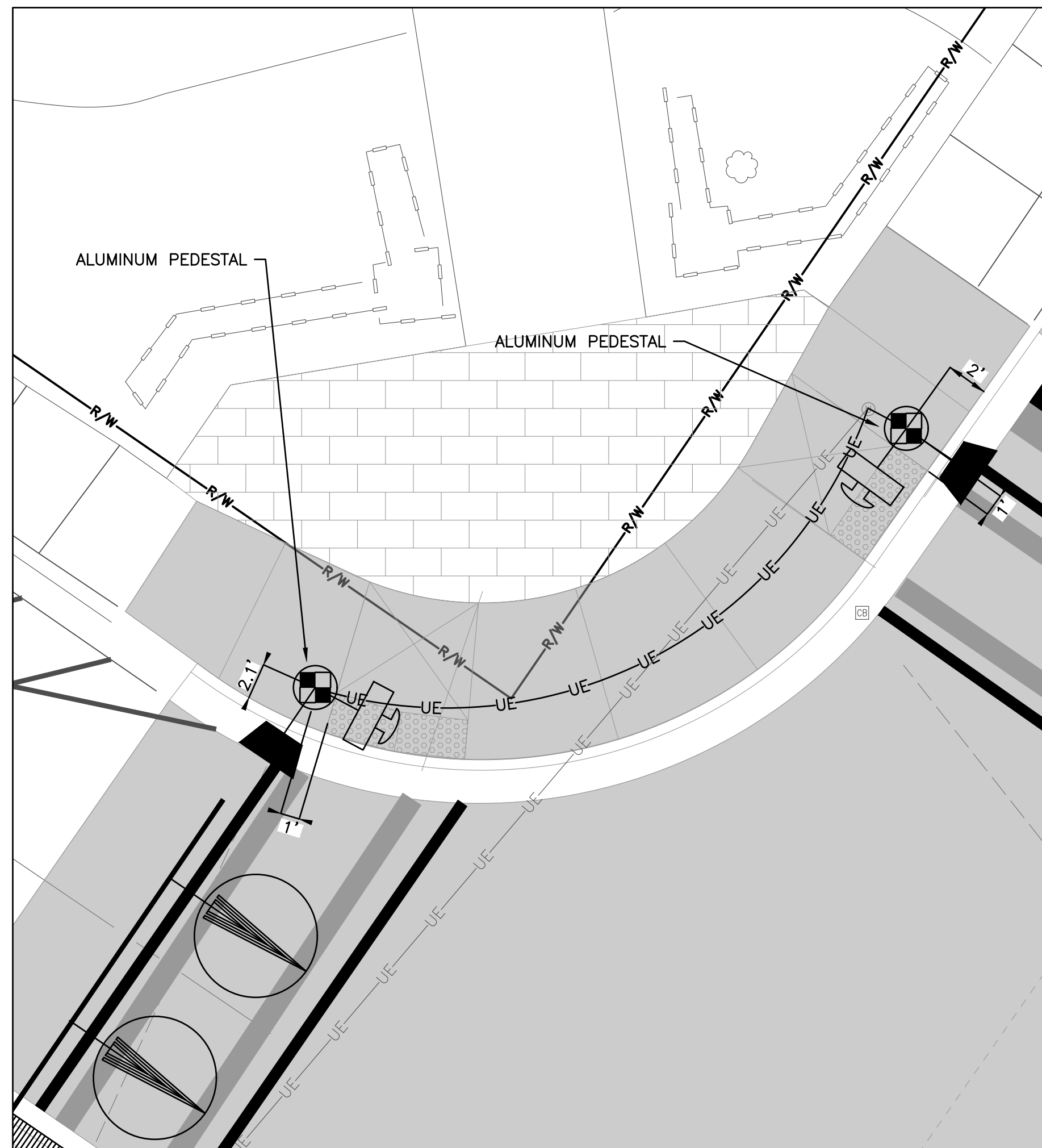
PROJECT MANAGER: SHAWN KEOUGH
 C:\P_L\WORK\PLANS\442889\CTS-PLUS-SIGNAL\MAN-CHURCH.DWG - IS - CON-CBS - PLOTTED: 3/25/2024 12:52 PM BY: FLAVGAN, MARTIN



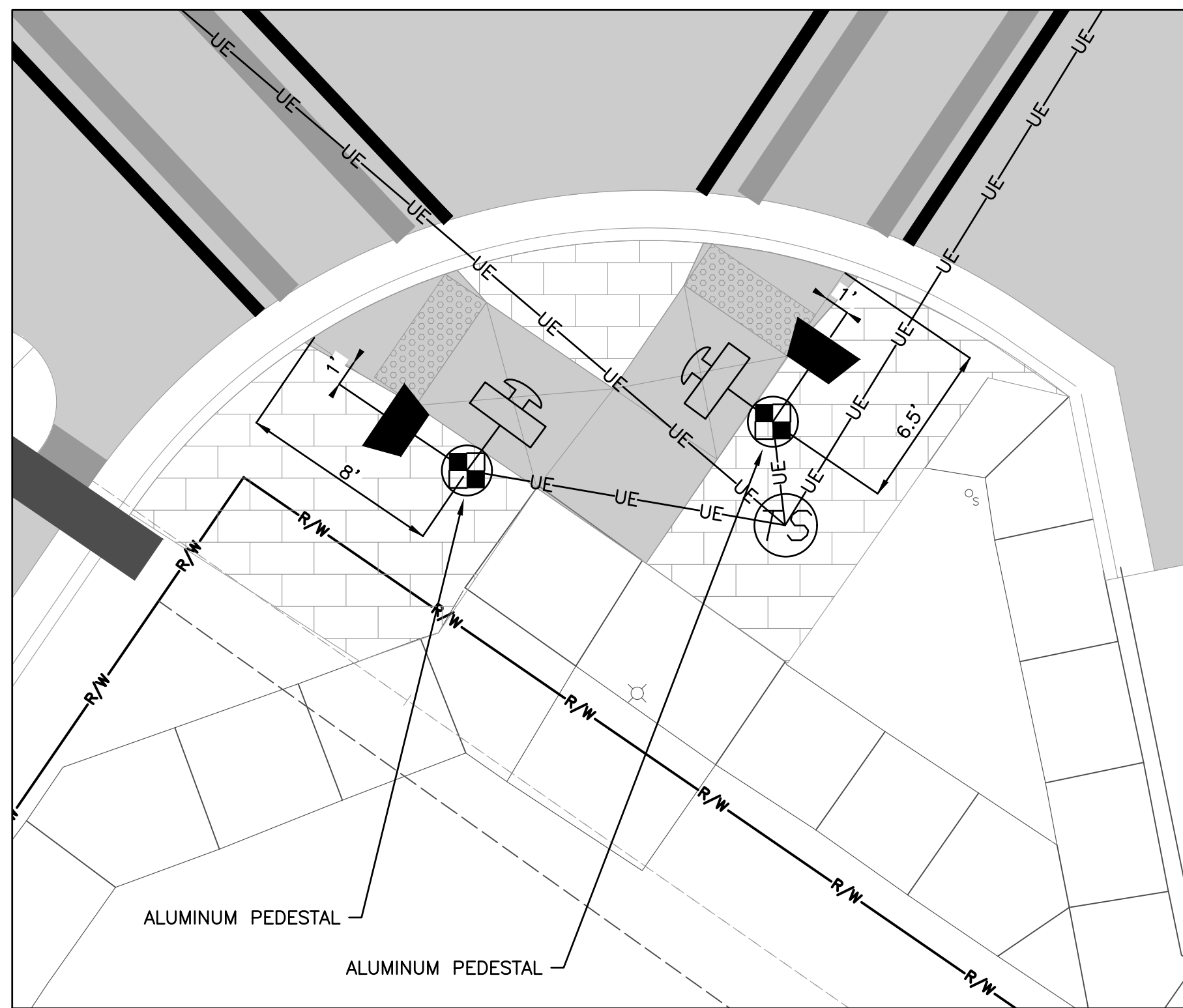
Know what's below.
 Call before you dig.



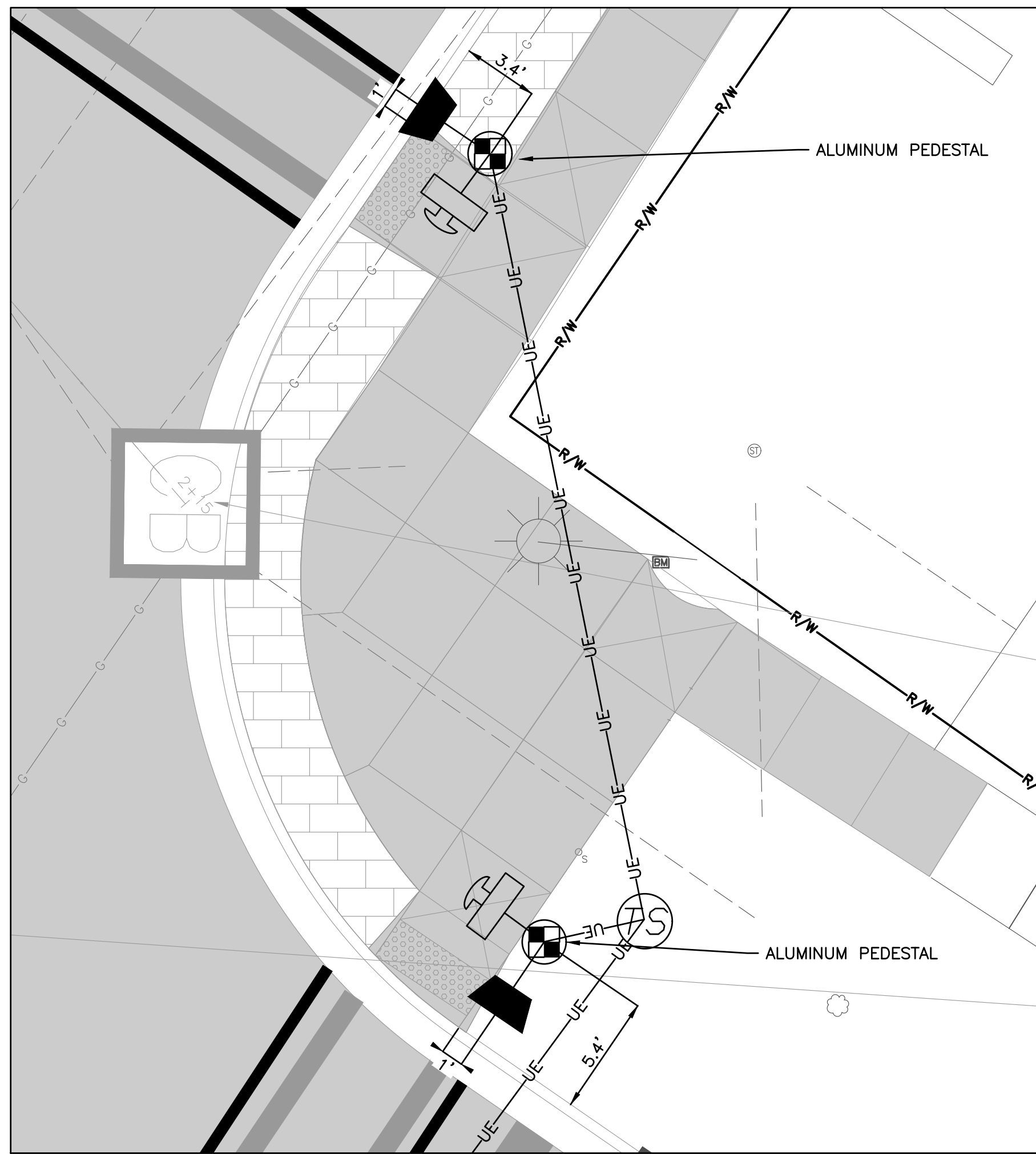
SW QUADRANT
 NOT TO SCALE



NW QUADRANT
 NOT TO SCALE



SE QUADRANT
 NOT TO SCALE



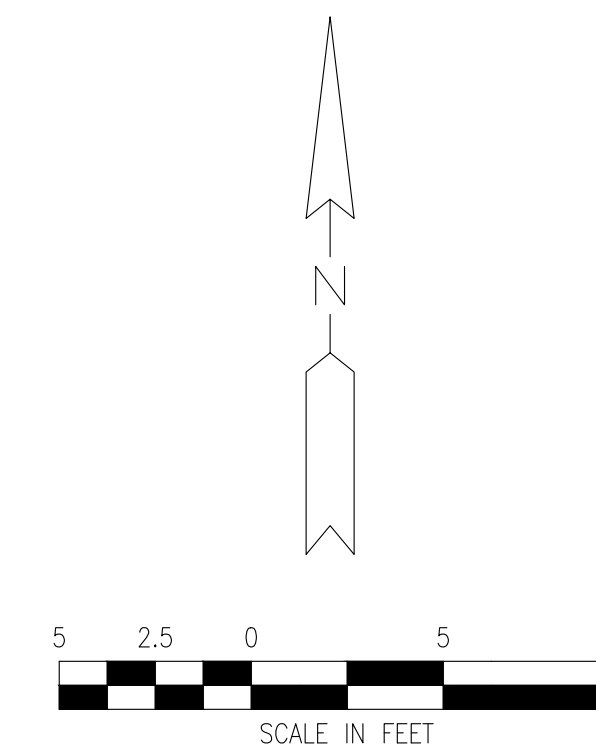
NE QUADRANT
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NOTES:
 FOR DETAILED SIDEWALK GRADING INFORMATION SEE GRADING DETAIL SHEETS.

FOR REFERENCE ONLY

THE CITY OF PLYMOUTH HAS RETAINED "RAUHORN ELECTRIC TO INSTALL THE NEW MAST ARMS AND PEDESTRIAN CROSSING SIGNALS

THE CONTRACTOR SELECTED BY THE CITY OF PLYMOUTH FOR THE 2024 INFRASTRUCTURE PROGRAM SHALL COORDINATE THEIR WORK IN COOPERATION WITH RAUHORN ELECTRIC



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ISSUED FOR:	DATE:	BY:
BID	3-25-24	SWK
<p>CITY OF PLYMOUTH 201 S MAIN ST WAYNE COUNTY, MICHIGAN 48170 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM CHURCH STREET TRAFFIC SIGNAL CONSTRUCTION PLAN</p>		
JOB NO.	DATE	DESCRIPTION
PLY2129-01T		
SHEET	REV#	DATE
11		

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BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

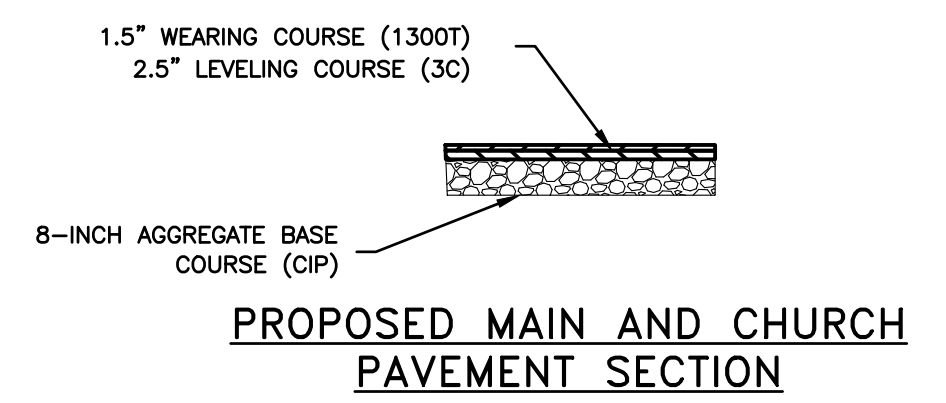
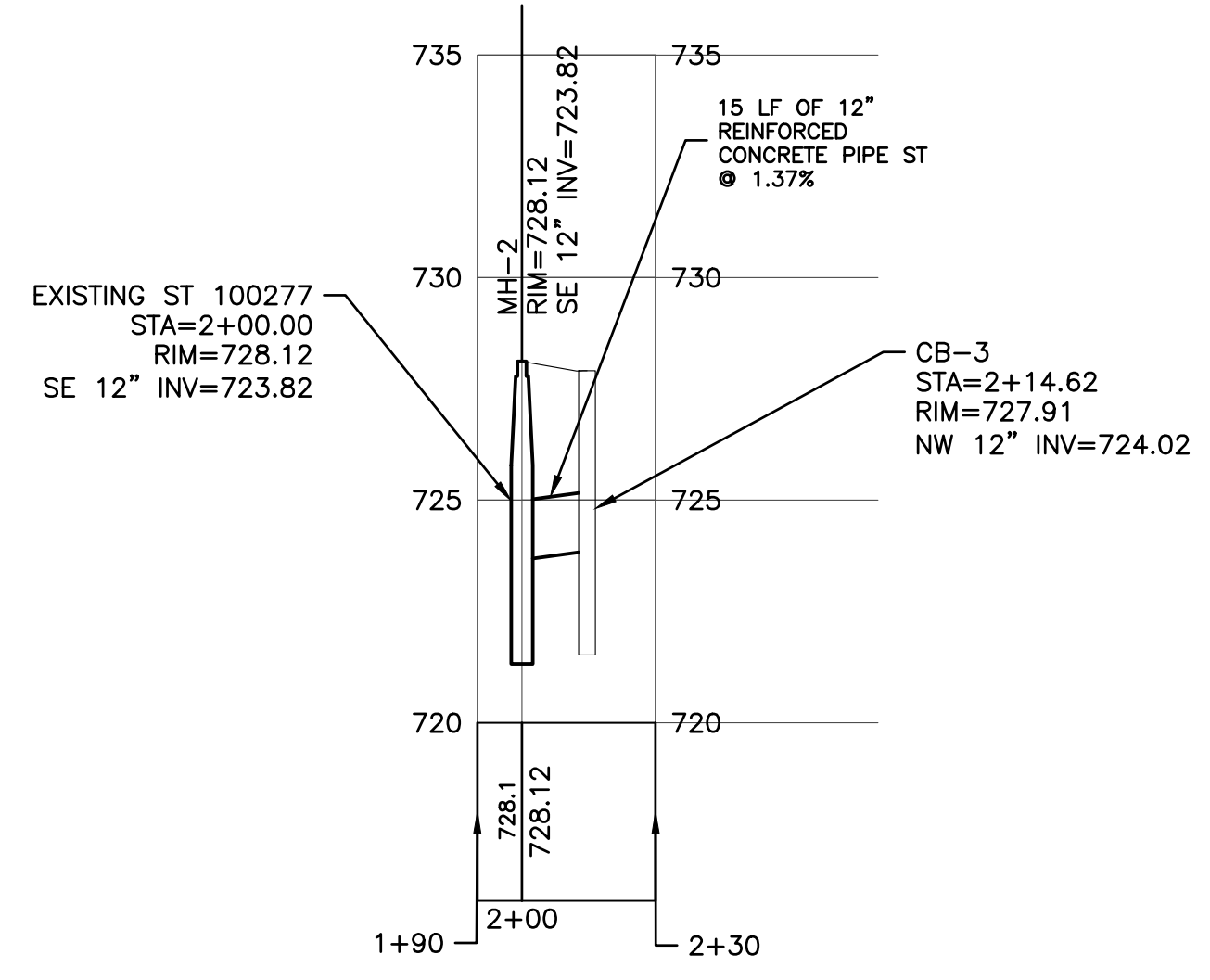
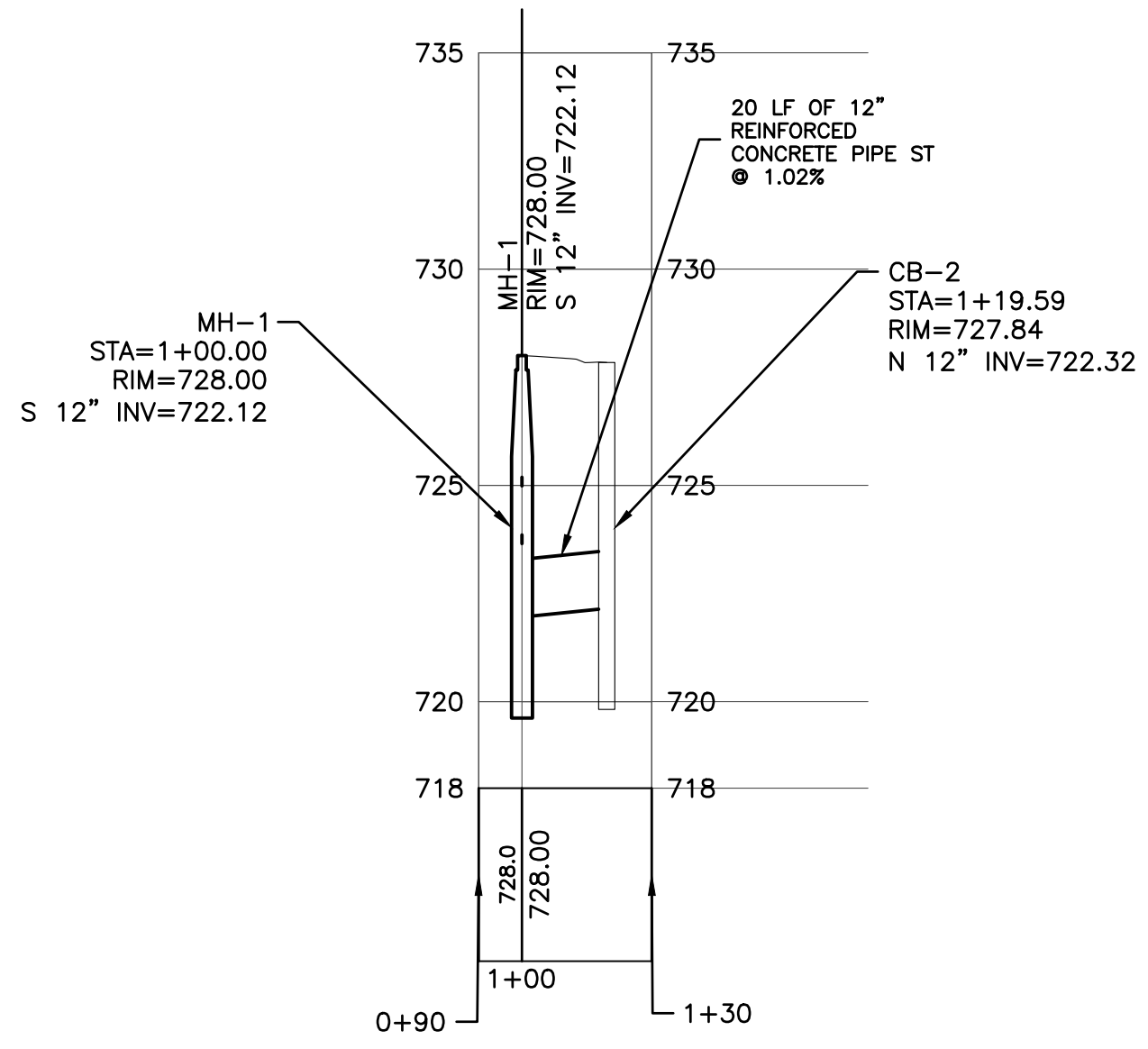
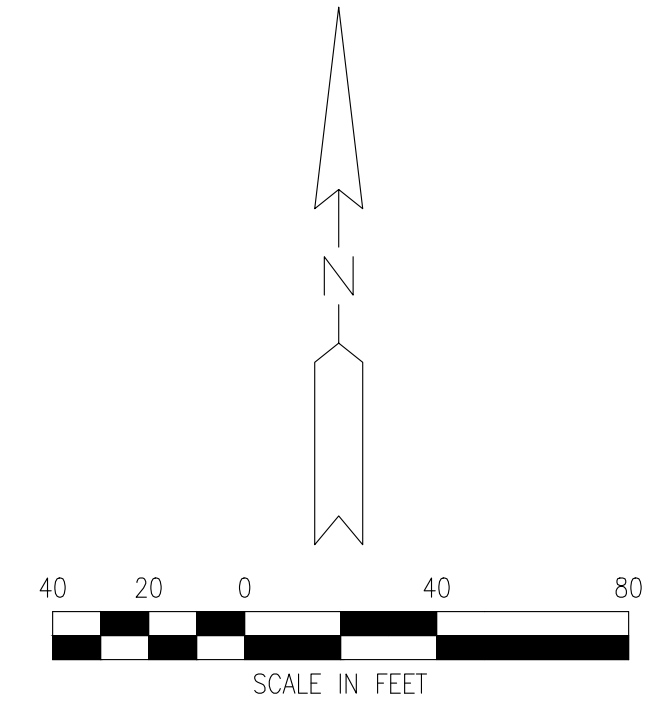
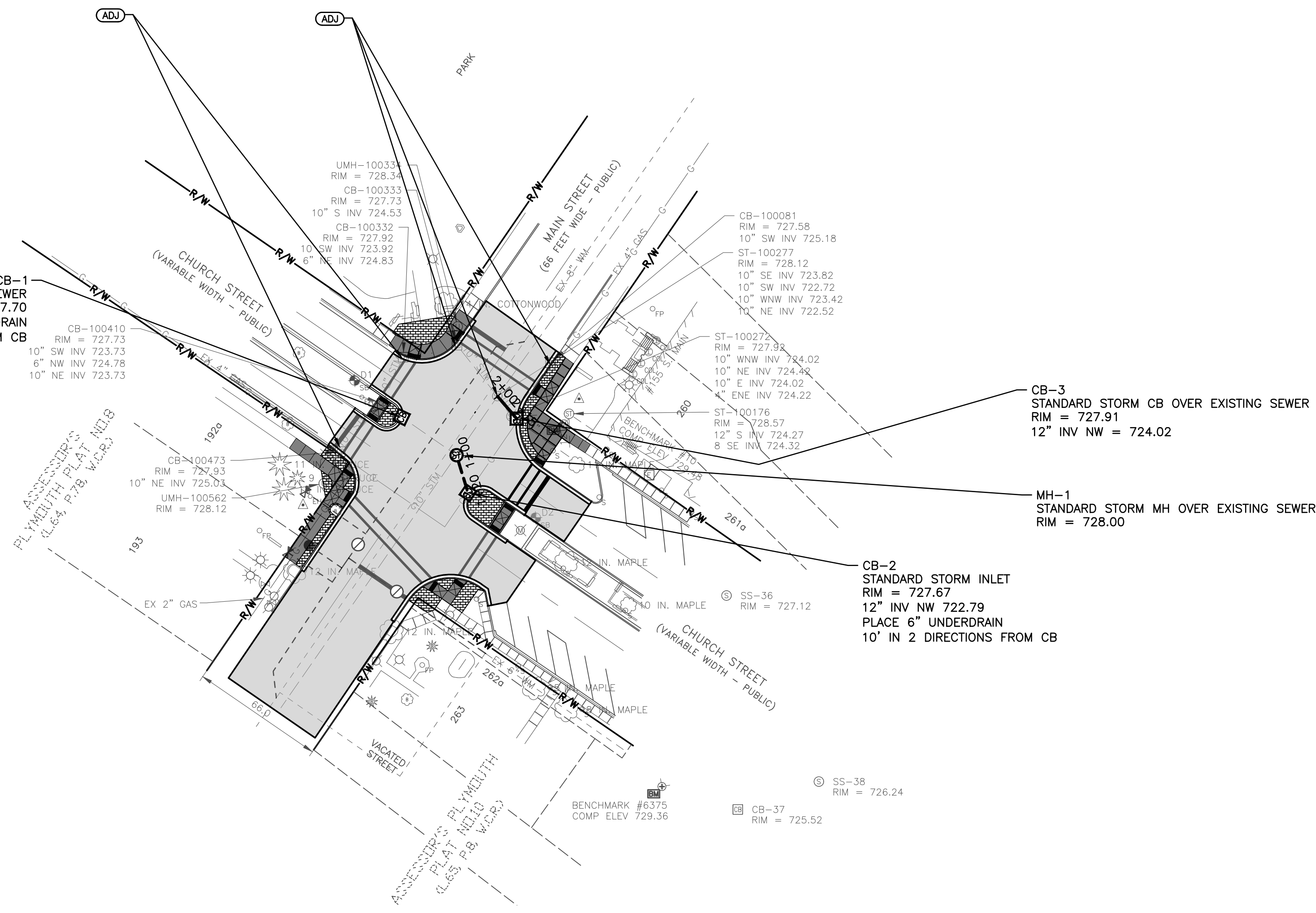
BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION

NOTE:

THE CITY OF PLYMOUTH IS RESPONSIBLE FOR PLACING PROPOSED THE SALVAGED AND PROPOSED BRICK. CONTRACTOR TO COORDINATE WITH FIELD ENGINEER AND CITY STAFF WHEN THIS WORK IS TO BE COMPLETED. ESTIMATED QUANTITY OF SALVAGED AND PROPOSED BRICK IS 1450 SFT.

CB-1
STANDARD STORM CB OVER EXISTING SEWER
RIM = 727.70
PLACE 6" UNDERDRAIN
10' IN 2 DIRECTIONS FROM CB



HMA APPLICATION ESTIMATE

IDENTIFICATION NO.	RATE PER SYD	PERFORMANCE GRADE	REMARKS
1300T	165*	64-22	WEARING
3C	275*	64-22	LEVELING

* BOND COAT 0-0.10 GAL/SYD FOR INFORMATION ONLY

SUMMARY OF QUANTITIES THIS SHEET

100	CY	SUBGRADE UNDERCUT AND 21AA AGGREGATE BACKFILL
12	VF	RECONSTRUCT STRUCTURE
350	TON	AGGREGATE BASE COURSE, 21AA
150	TON	BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
250	TON	BITUMINOUS PAVEMENT, LEVELING COURSE, 3C
400	LF	CURB AND GUTTER, CONCRETE, DET F4
6	EA	ADJUST STRUCTURE
1745	LB	REMOVE AND REPLACE FRAME AND COVER
60	LF	UNDERDRAIN, 6-INCH W/ GEOTEXTILE FABRIC WRAP
40	LF	12-INCH STORM SEWER, C76 CLIV, TRENCH B
1	EA	STANDARD STORM INLET
2	EA	BUILD STANDARD CB OVER EXISTING SEWER
1	EA	BUILD STANDARD MH OVER EXISTING SEWER
1	LS	PAVEMENT MARKING
5	EA	INLET FILTER

PROJECT MANAGER: SHAWN KEOUGH, C.E.P., WORA WILKINSON, INC. FIELD BOOK INFORMATION: LAYOUT - PLOTTED 3/25/2024 12:52 PM BY: FLANGAN, MARTIN



REV#	DATE	DESCRIPTION	BY

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www.wadetrims.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170

2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
RECONSTRUCTION PLAN AND STORM PROFILE

ISSUED FOR: BID	DATE: 3-25-24	BY: SWK
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JOB NO: PLY2129-01T
SHEET 12

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BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

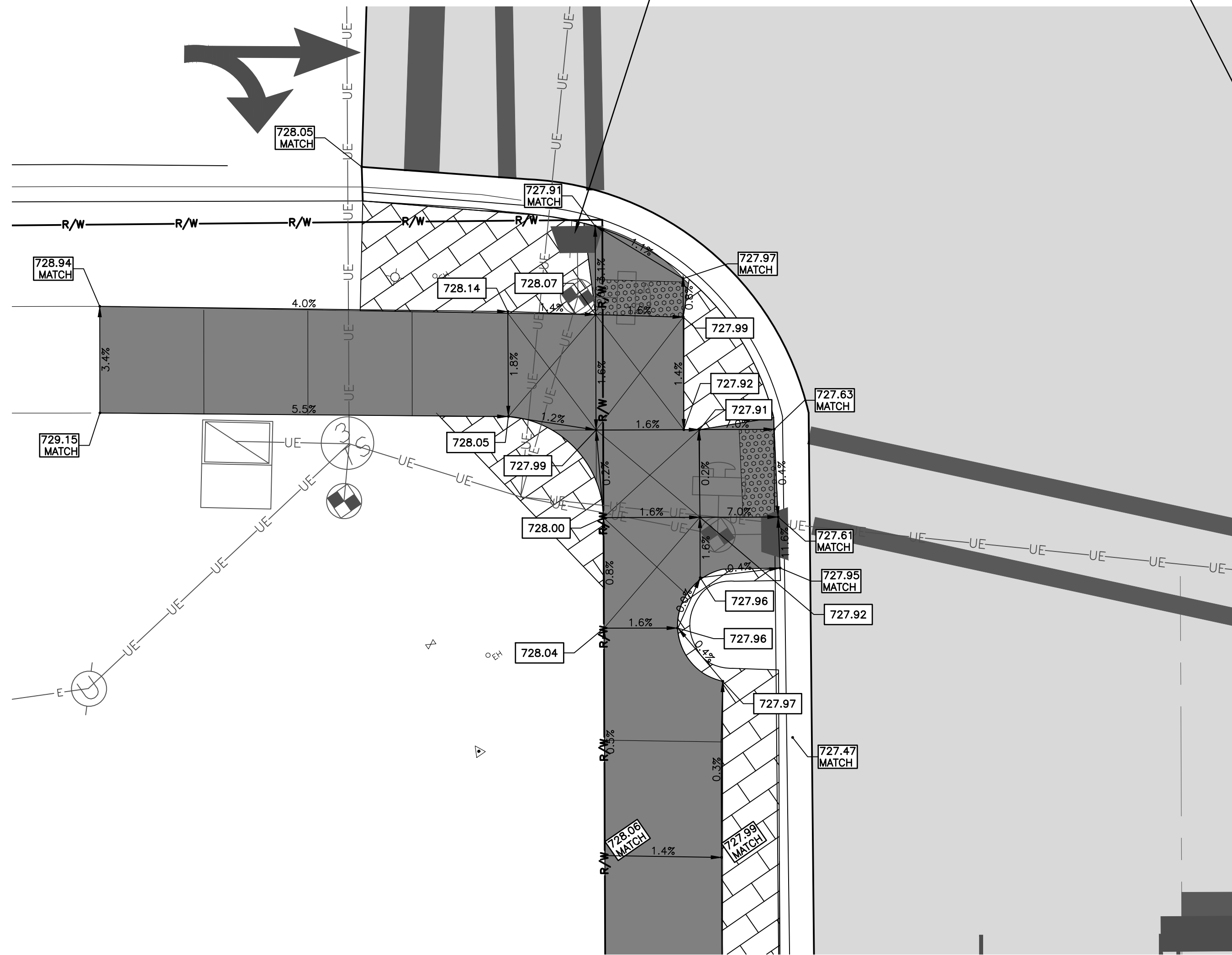
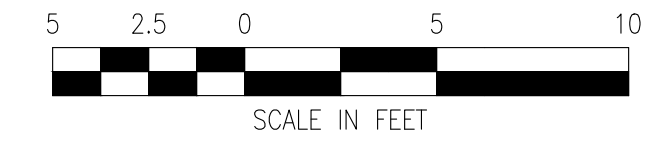
BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION

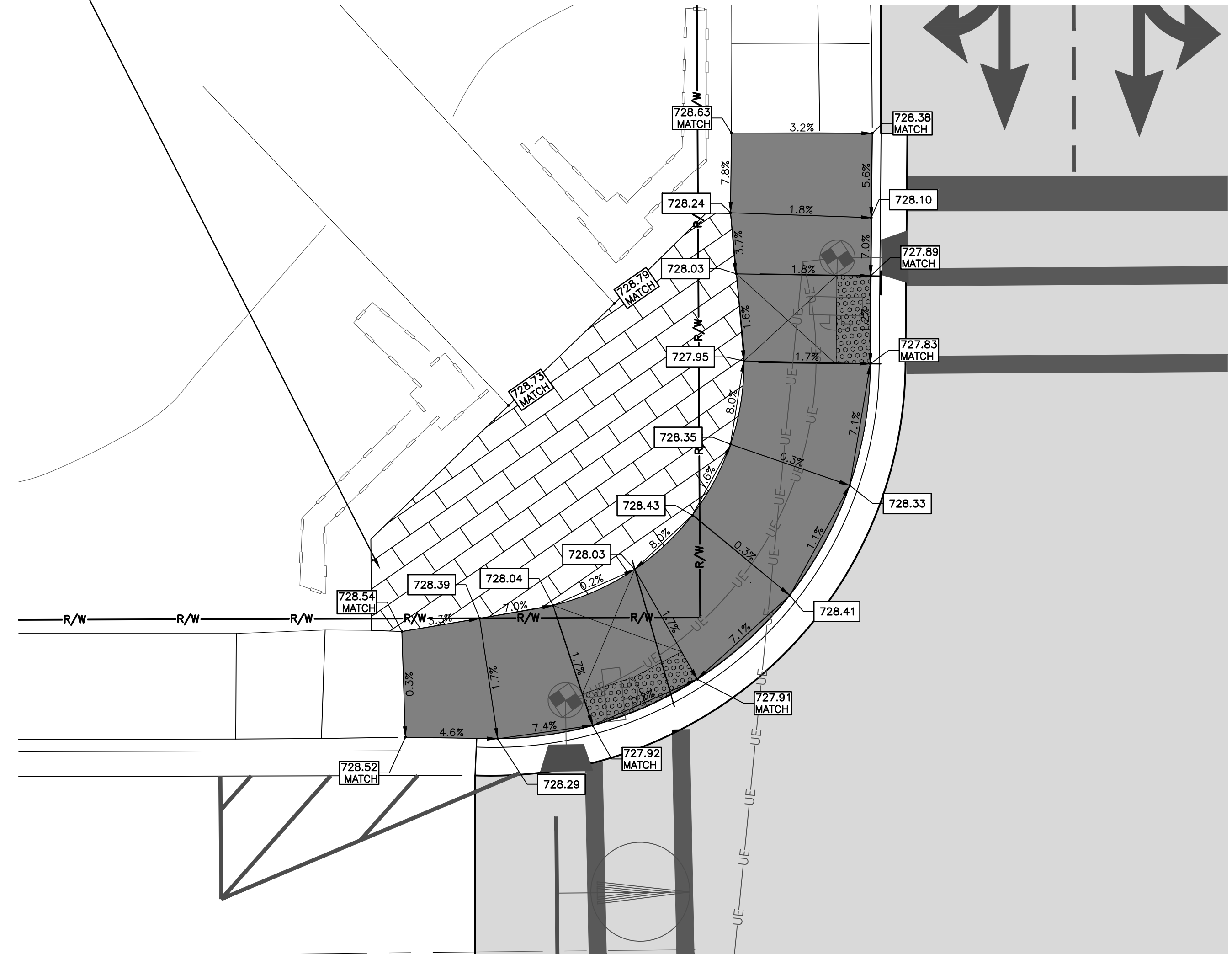
ALL BRICK WORK IS TO BE DONE BY THE CITY OF PLYMOUTH

NOTES:

1. SIDEWALK RAMPS SHALL BE INSTALLED PER ADA AND ACCESS PEDESTRAIN SIGNALS COMPLIANCE, WHICH INCLUDE, BUT IS NOT LIMITED TO 10-FOOT CLEARANCE BETWEEN PUSHBUTTONS AND LANDINGS WITHIN 2-FOOT OF PUSHBUTTONS. REFER TO MDOT DESIGN GUIDE SIG-DESIGN-120-A.
2. ADA LANDINGS ARE DENOTED WITH AN 'X'. ADA LANDINGS SHALL NOT EXCEED 2% IN ANY DIRECTION.
3. IF THE CONSTRUCTED SIDEWALK IS FOUND TO EXCEED THE MAXIMUM TRANSVERSE SLOPE OF 2% OR LONGITUDINAL SLOPE AT RAMPS OF 8.3%, THE SIDEWALK SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL PROTECT ALL BRICK PAVER AREAS ADJACENT TO SIDEWALKS AND SIDEWALK RAMPS.



SIDEWALK RAMP
S MAIN STREET AND CHURCH STREET
(SW QUADRANT)



SIDEWALK RAMP
S MAIN STREET AND CHURCH STREET
(NW QUADRANT)

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\W\LAGRAN\1402889\C3D-PLTS-ADA RAMPS.DWG - ADA 3 - PLOTTED 3/25/2024 12:52 PM BY: FLAANGAN, MARTIN



Know what's below.
Call before you dig.

SUMMARY OF QUANTITIES THIS SHEET

650	SF	SIDEWALK, CONCRETE, 4-INCH
85	SF	SIDEWALK RAMP, CONCRETE, 6-INCH

REV#	DATE	DESCRIPTION	BY

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
ADA RAMOS NW AND SW QUADRANTS
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T SHEET

13

BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

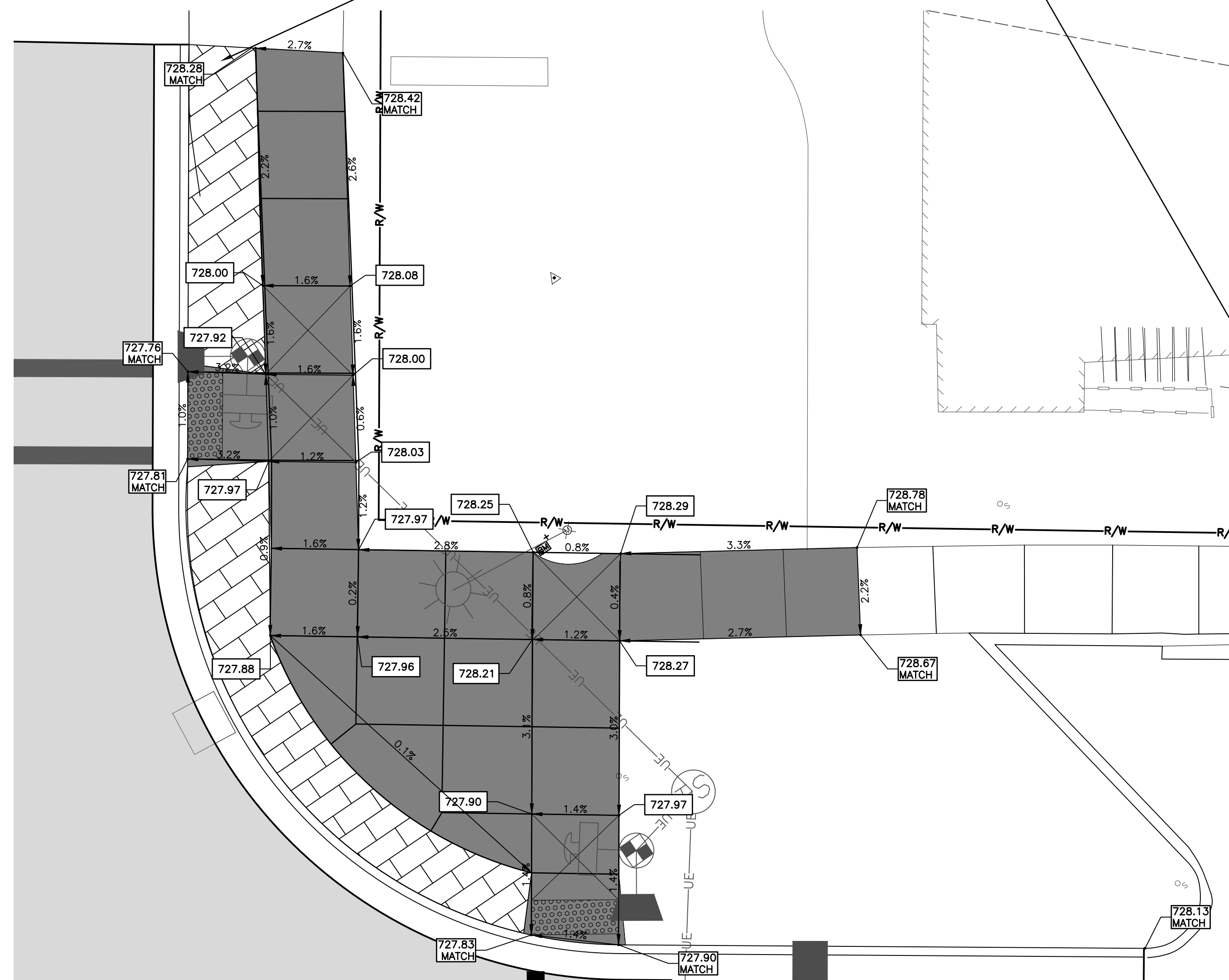
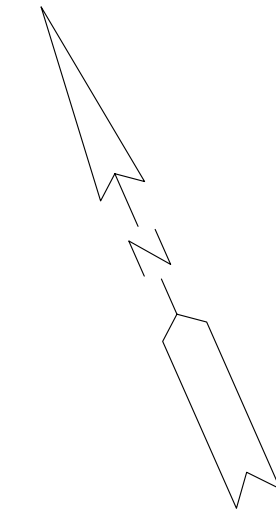
BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION

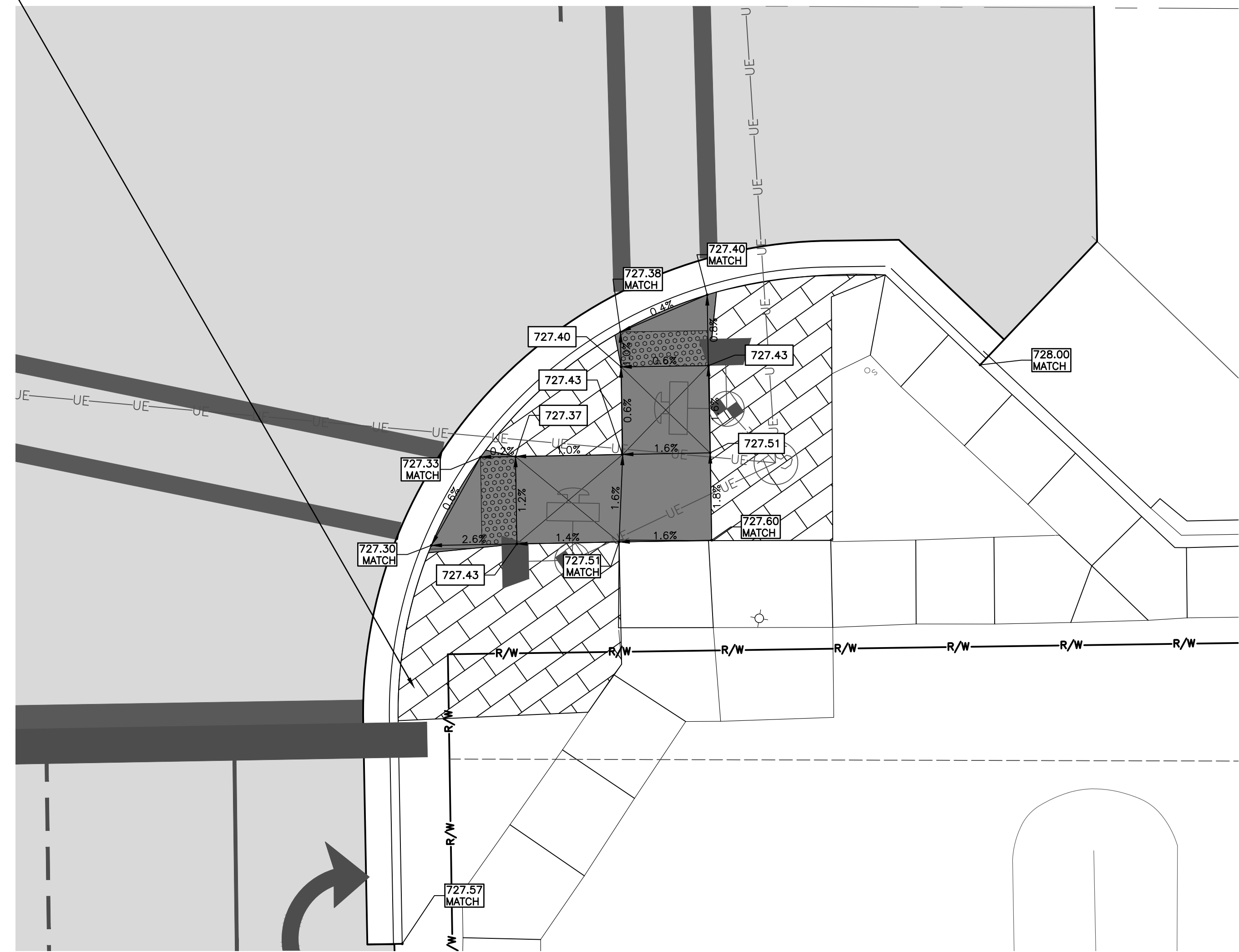
ALL BRICK WORK IS TO BE DONE BY THE CITY OF PLYMOUTH

NOTES:

- 1. SIDEWALK RAMP SHALL BE INSTALLED PER ADA AND ACCESS PEDESTRIAN SIGNALS COMPLIANCE, WHICH INCLUDE, BUT IS NOT LIMITED TO 10-FOOT CLEARANCE BETWEEN PUSHBUTTONS AND LANDINGS WITHIN 2-FOOT OF PUSHBUTTONS. REFER TO MDOT DESIGN GUIDE SIG-DESIGN-120-A.
- 2. ADA LANDINGS ARE DENOTED WITH AN 'X'. ADA LANDINGS SHALL NOT EXCEED 2% IN ANY DIRECTION.
- 3. IF THE CONSTRUCTED SIDEWALK IS FOUND TO EXCEED THE MAXIMUM TRANSVERSE SLOPE OF 2% OR LONGITUDINAL SLOPE AT RAMP OF 8.3%, THE SIDEWALK SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL PROTECT ALL BRICK PAVER AREAS ADJACENT TO SIDEWALKS AND SIDEWALK RAMP.



**SIDEWALK RAMP
S MAIN STREET AND CHURCH STREET
(NE QUADRANT)**



**SIDEWALK RAMP
S MAIN STREET AND CHURCH STREET
(SE QUADRANT)**

SUMMARY OF QUANTITIES THIS SHEET

600	SF	SIDEWALK, CONCRETE, 4-INCH
85	SF	SIDEWALK RAMP, CONCRETE, 6-INCH



Know what's below.
Call before you dig.

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELLS\LGA\2414\02\WELLS-ADA RAMP\DWG - ADA 2 - PLOTTED 3/25/2024 12:52 PM BY: FLAMANGAN, MARTIN

REV#	DATE	DESCRIPTION	BY

20251 Northline Rd.
Taylor, MI 48180
www.wade-trim.com

**CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170**

2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
ADA RAMP NE AND SE QUADRANTS
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO.
PLY2129-01T

SHEET

BENCHMARK#10 ELEV 729.48

SET "X" MARK ON WESTERLY MOST BOLT OF LIGHT POLE, NORTHEAST CORNER OF S MAIN ST AND CHURCH

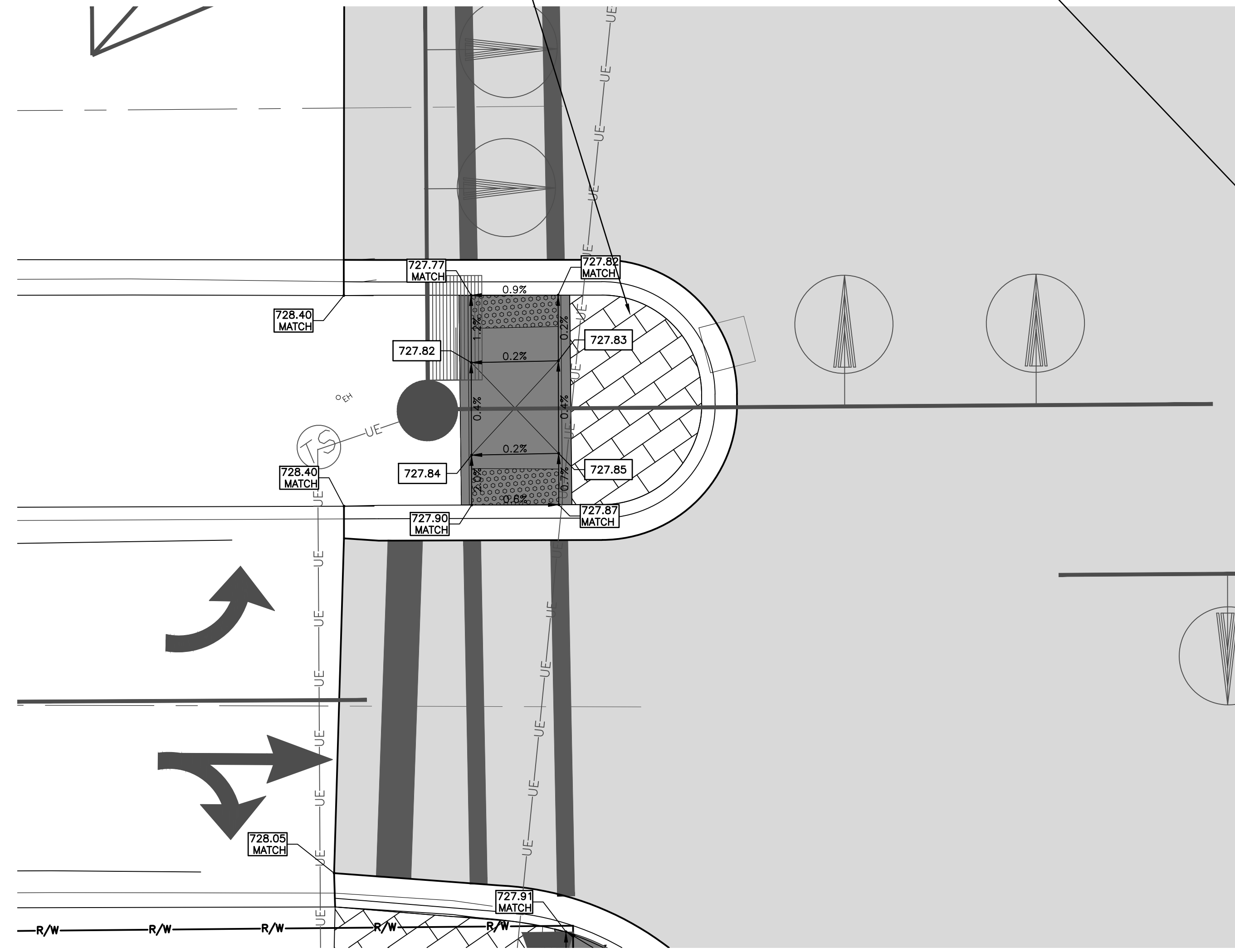
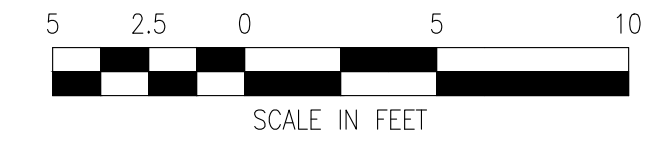
BENCHMARK#6375 ELEV 729.36

ARROW ON HYDRANT AT SOUTHWEST CORNER OF CITY HALL AND FIRE STATION

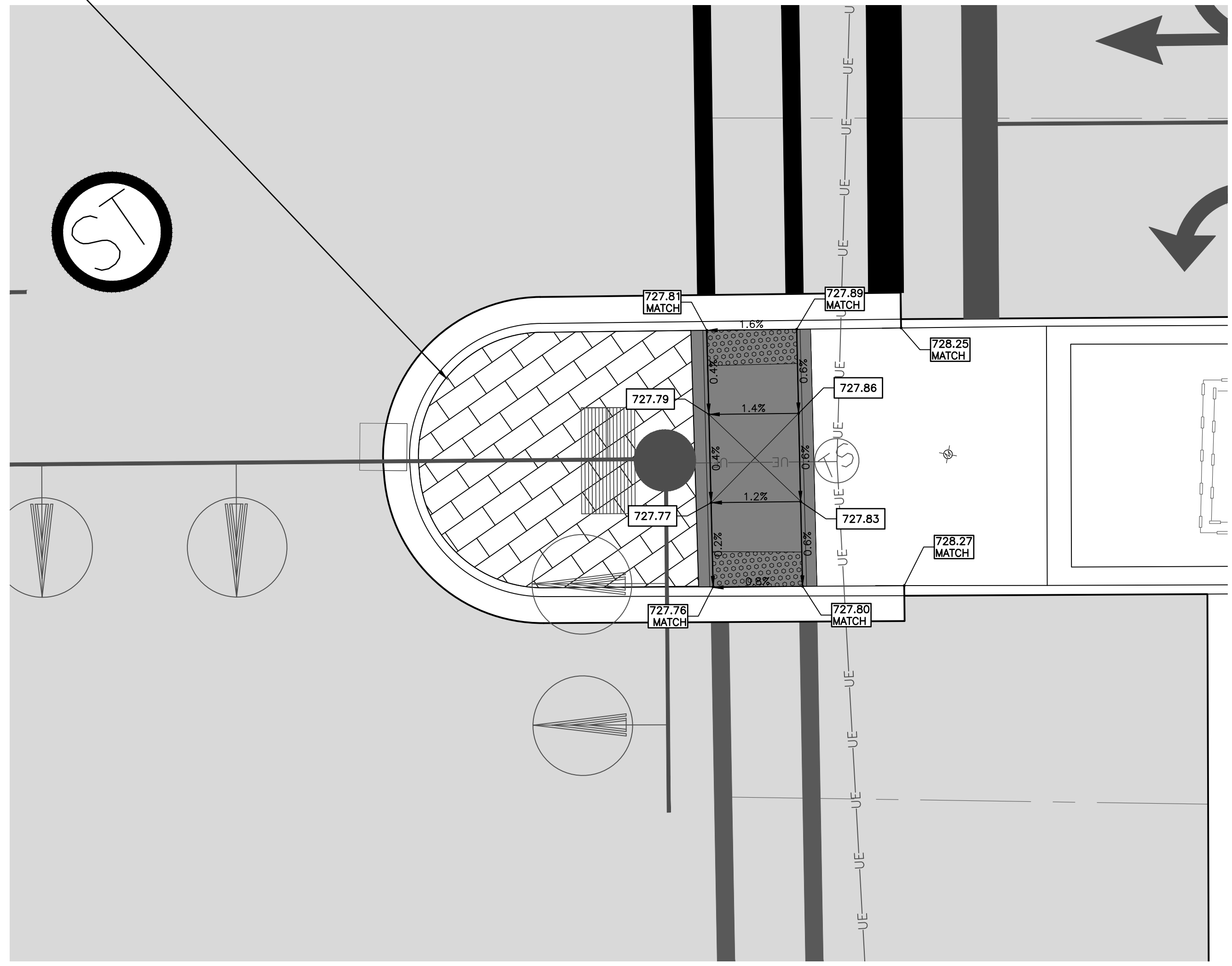
ALL BRICK WORK IS TO BE DONE BY THE CITY OF PLYMOUTH

NOTES:

1. SIDEWALK RAMP SHALL BE INSTALLED PER ADA AND ACCESS PEDESTRIAN SIGNALS COMPLIANCE, WHICH INCLUDE, BUT IS NOT LIMITED TO 10-FOOT CLEARANCE BETWEEN PUSHBUTTONS AND LANDINGS WITHIN 2-FOOT OF PUSHBUTTONS. REFER TO MDOT DESIGN GUIDE SIG-DESIGN-120-A.
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4. THE CONTRACTOR SHALL PROTECT ALL BRICK PAVER AREAS ADJACENT TO SIDEWALKS AND SIDEWALK RAMP.



SIDEWALK RAMP
S MAIN STREET AND CHURCH STREET
(W MEDIAN)



SIDEWALK RAMP
S MAIN STREET AND CHURCH STREET
(E MEDIAN)

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\W\CAROLINA\1402689\CAD-PLTS-ADA-RAMPS.DWG - ADA 1 - PLOTTED 3/25/2024 12:52 PM BY: FLAANGAN, MARTIN



Know what's below.
Call before you dig.

SUMMARY OF QUANTITIES THIS SHEET

180 SF SIDEWALK RAMP, CONCRETE, 6-INCH

REV#	DATE	DESCRIPTION	BY

20251 Northline Rd.
Taylor, MI 48180
www.wade-trim.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
CHURCH STREET
ADA RAMPS WEST AND EAST MEDIAN
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
15

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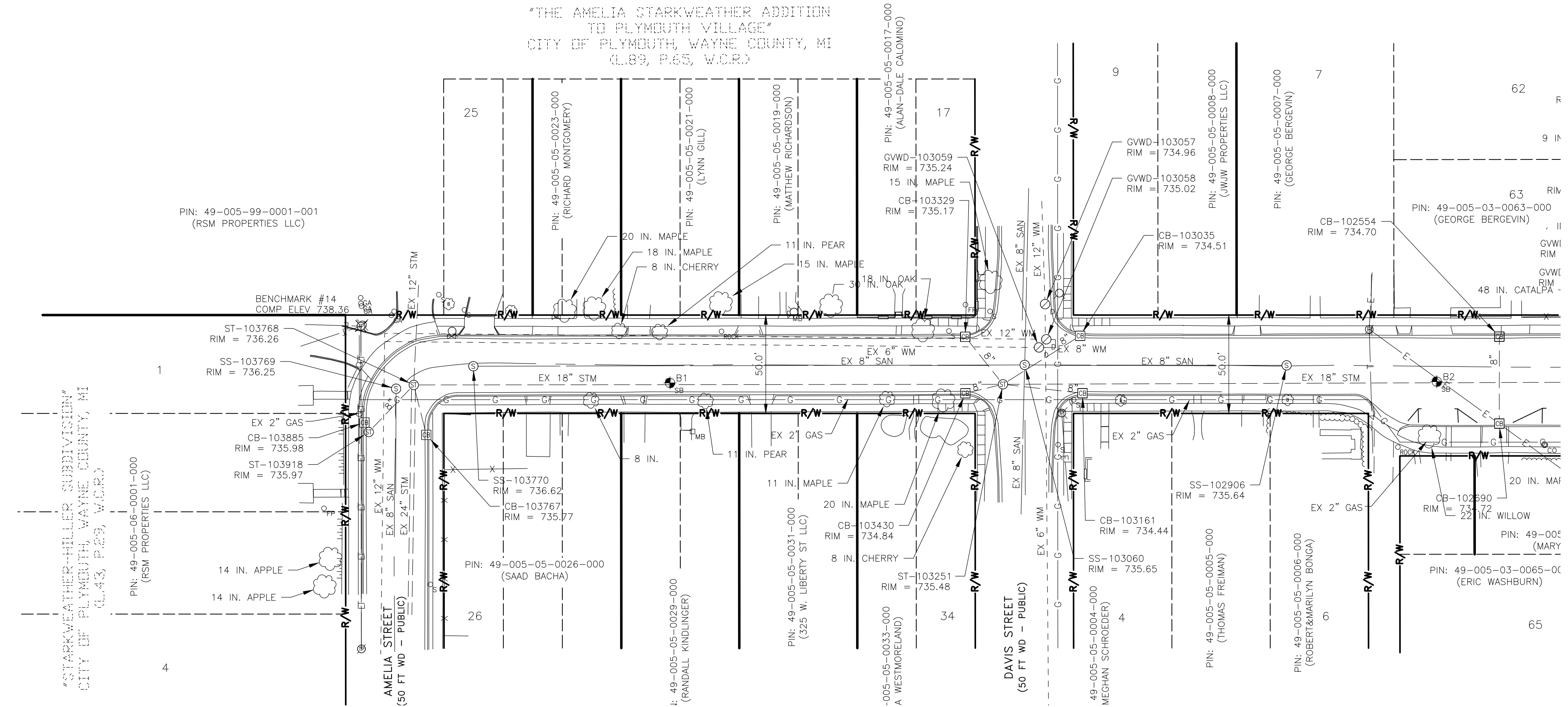
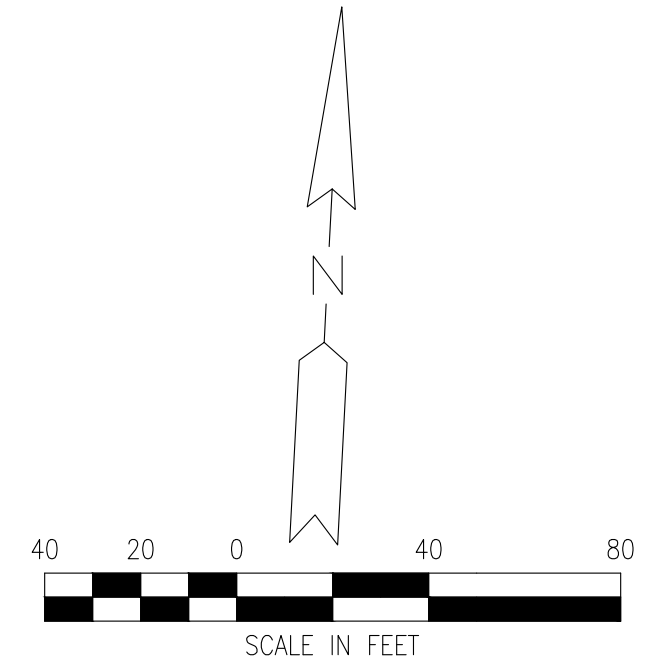
BENCHMARK#13 ELEV 739.14

SET ARROW ON HYDRANT, NORTHEAST CORNER OF WEST LIBERTY STREET AND STARKWEATHER AVENUE.

BENCHMARK#14 ELEV 738.36

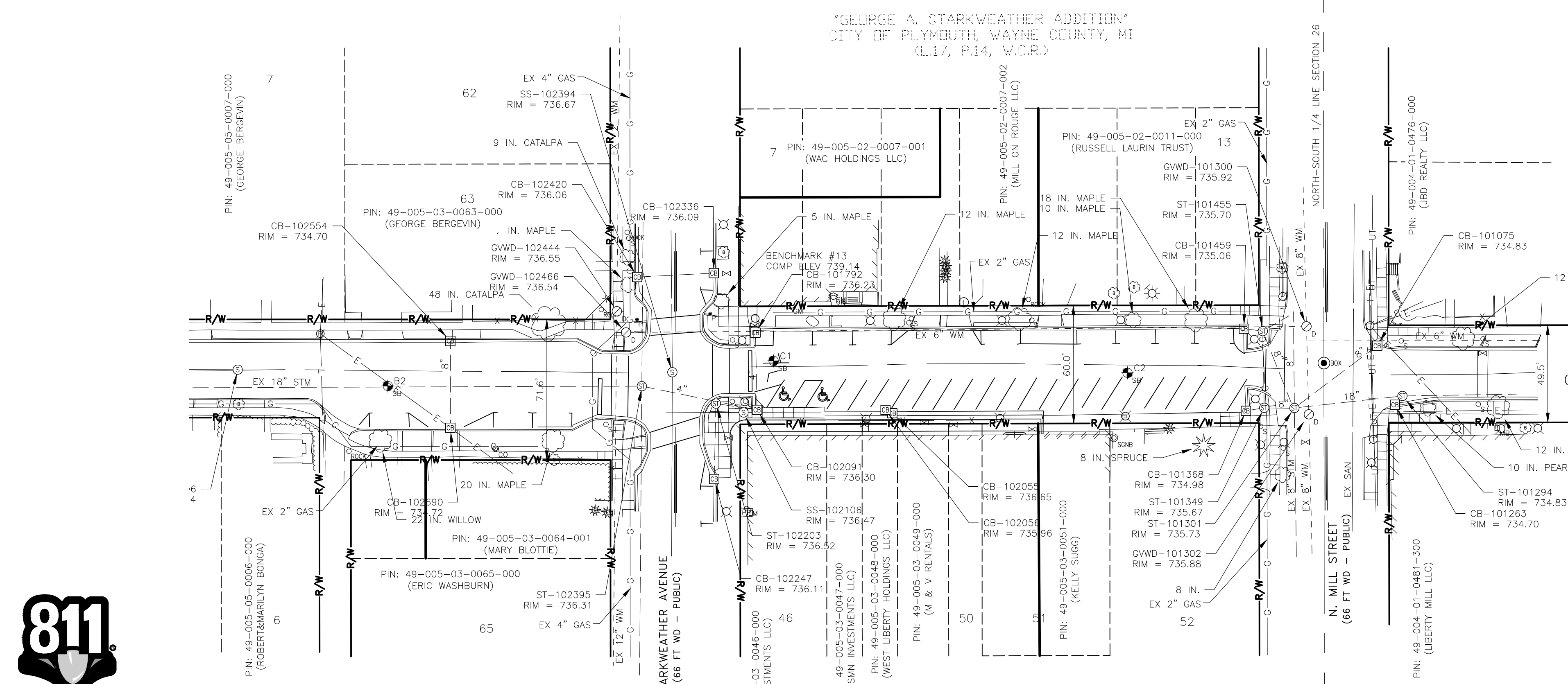
SET MAG. IN SOUTH SIDE OF POWER POLE, NORTHWEST CORNER OF WEST LIBERTY STREET AND AMELIA STREET.

"THE AMELIA STARKWEATHER ADDITION TO PLYMOUTH VILLAGE" CITY OF PLYMOUTH, WAYNE COUNTY, MI (L89, P63, W.C.R.)



STRUCTURE INVENTORY

Table listing infrastructure structures including catch basins (CB), manholes (MH), storm inlets (ST), and valves (V) with their respective IDs, rim elevations, and invert elevations.



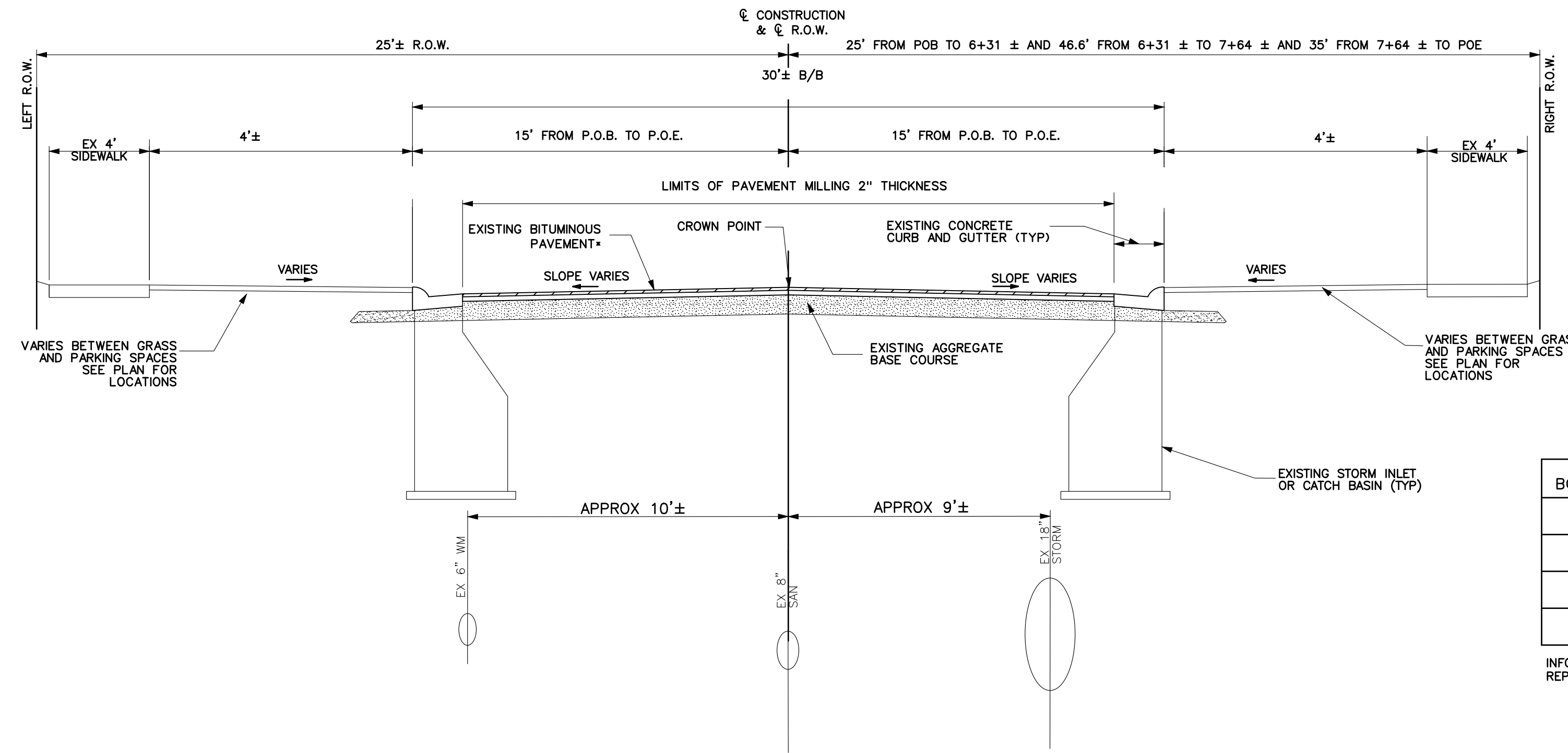
"ASSESSOR'S PLYMOUTH PLAT NO.4" CITY OF PLYMOUTH, WAYNE COUNTY, MI

PROJECT MANAGER: SHAWN KEOUGH, C.P.L. NO. 10346 (MICHIGAN) / 422689 (VSP-PLS-EX, CON, LIBERTY.DWG - LAYOUT) - PLOTTED 5/23/2024, 12:52 PM BY: FLANAGAN, MARTIN



Know what's below. Call before you dig.

Vertical sidebar containing the WADE TRIM logo, project title 'CITY OF PLYMOUTH 201 S MAIN ST WAYNE COUNTY, MICHIGAN 48170', and a table for revision tracking with columns for REV#, DATE, and DESCRIPTION.



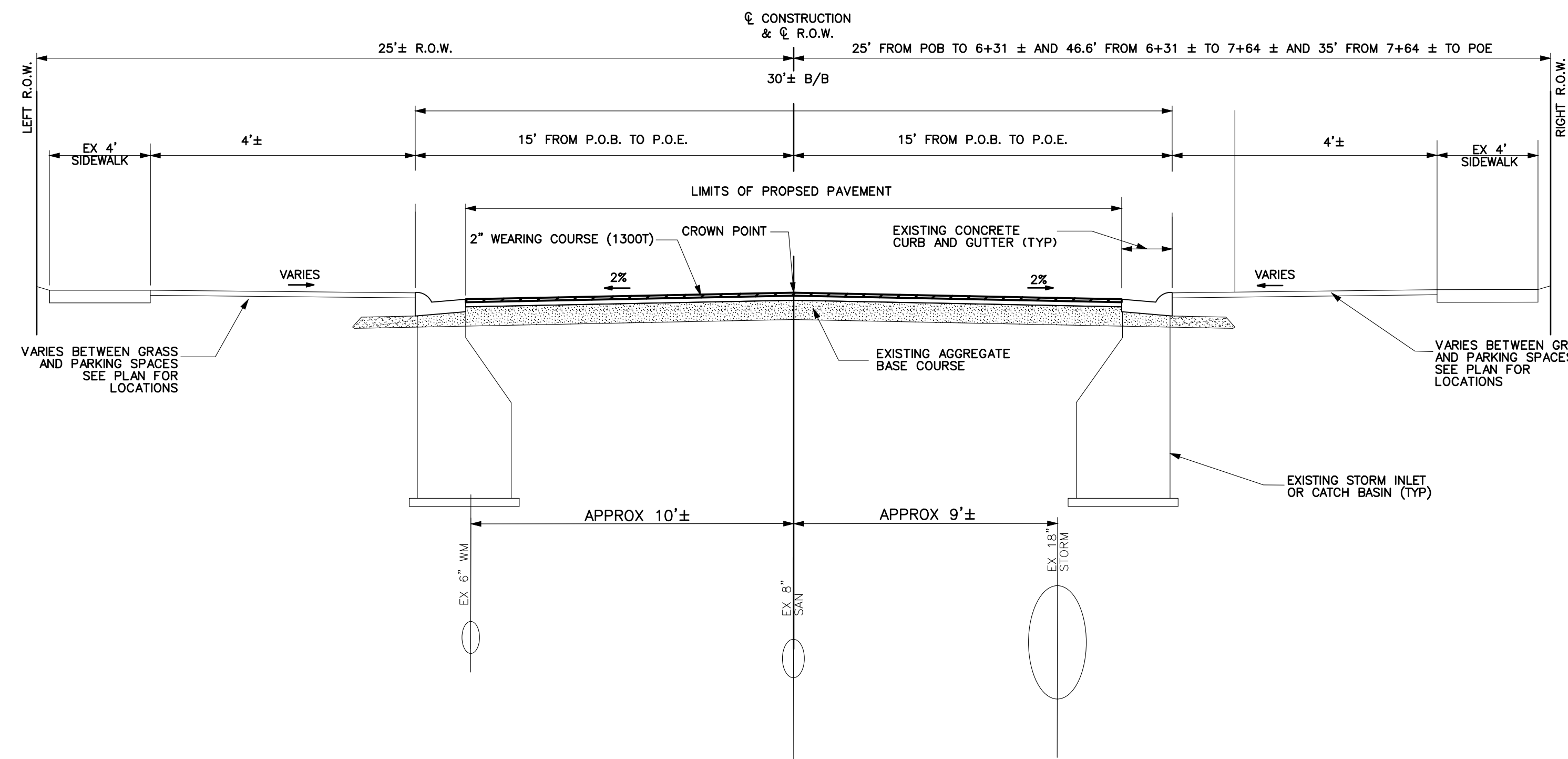
- ALL MILLINGS SHALL BE DELIVERED BY CONTRACTOR TO RIVERSIDE CEMETARY 680 PLYMOUTH ROAD, PLYMOUTH MI. THIS WILL BE PAID FOR IN THE COST OF MILLING PAVEMENT
- * FROM POB TO STA 4+09 EXISTING PAVEMENT THICKNESS 4.75" BITUMINOUS PAVEMENT AND 6.25" CRUSHED LIMESTONE. FROM STA 4+09 TO STA 7+64 EXISTING PAVEMENT THICKNESS IS 4.25" BITUMINOUS PAVEMENT AND 9.75" FURNACE SLAG. FROM STA 7+64 TO STA 10+89 EXISTING PAVEMENT AVERAGES 3.63" BITUMINOUS PAVEMENT AND 6.83" CONCRETE. PLEASE SEE PAVEMENT CORE FOR MORE DETAIL.

BORING	ROAD	ASPHALT	CONCRETE	BASE	BASE MATERIAL
C1	LIBERTY	3.5"	6.25"	NOT ENCOUNTERED	NOT ENCOUNTERED
C2	LIBERTY	3.75"	7"	NOT ENCOUNTERED	NOT ENCOUNTERED
B1	LIBERTY	4.75"	NOT ENCOUNTERED	6.25"	NOT ENCOUNTERED
B2	LIBERTY	4.25"	NOT ENCOUNTERED	9.75"	NOT ENCOUNTERED

INFORMATION IN THE ABOVE CHART IS TAKEN FROM THE SME GEOTECHNICAL REPORT. FOR FURTHER DETAILES PEASE SEE REPORT FOUND IN THE PROPOSAL

**EXISTING TYPICAL CROSS SECTION
LIBERTY STREET**

P.O.B. STA 0+16.50 TO P.O.E. STA 10+86.42
NOT TO SCALE



- * FROM STA 6+08 TO POE ON THE SOUTH SIDE OF LIBERTY, THE PARKING AREA SHALL HAVE THE SAME CROSS SECTION AS THE PROPOSED PAVEMENT

HMA APPLICATION ESTIMATE

IDENTIFICATION NO.	RATE PER SYD	PERFORMANCE GRADE	REMARKS
1300T	220*	64-22	WEARING

* BOND COAT 0-0.10 GAL/SYD FOR INFORMATION ONLY

**PROPOSED TYPICAL CROSS SECTION
LIBERTY STREET**

P.O.B. STA 0+16.50 TO P.O.E. STA 10+86.42
NOT TO SCALE

PROJECT MANAGER: SHAWN KEOUGH
C:\PL\WORK\PLANS\CA\03\10\LIBERTY\TYPICALS.DWG - LIBERTY TYP - PLOTTED 3/27/2024 12:52 PM BY: FLANAGAN, MARTIN



Know what's below.
Call before you dig.

2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
LIBERTY STREET
EXISTING AND PROPOSED TYPICALS

REV#	DATE	DESCRIPTION	BY

20251 Northline Rd.
Taylor, MI 48180
www.wadetrtrim.com

WADE TRIM

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET **17**

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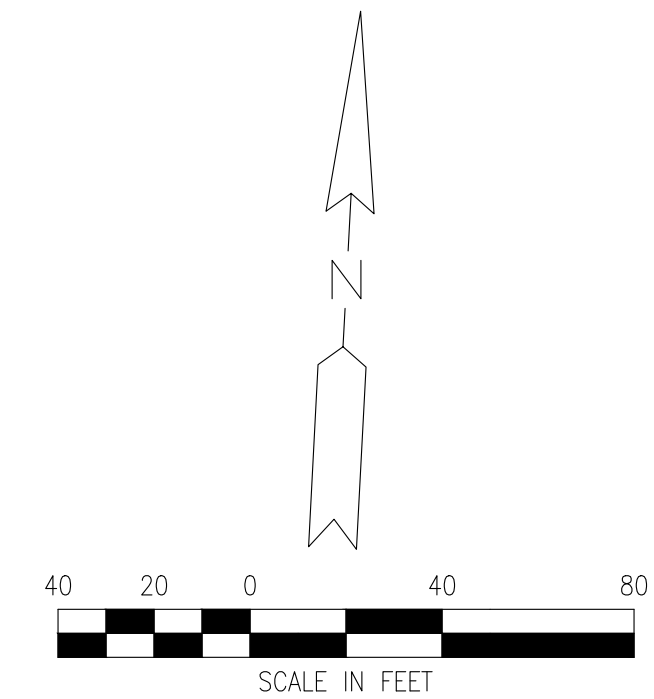
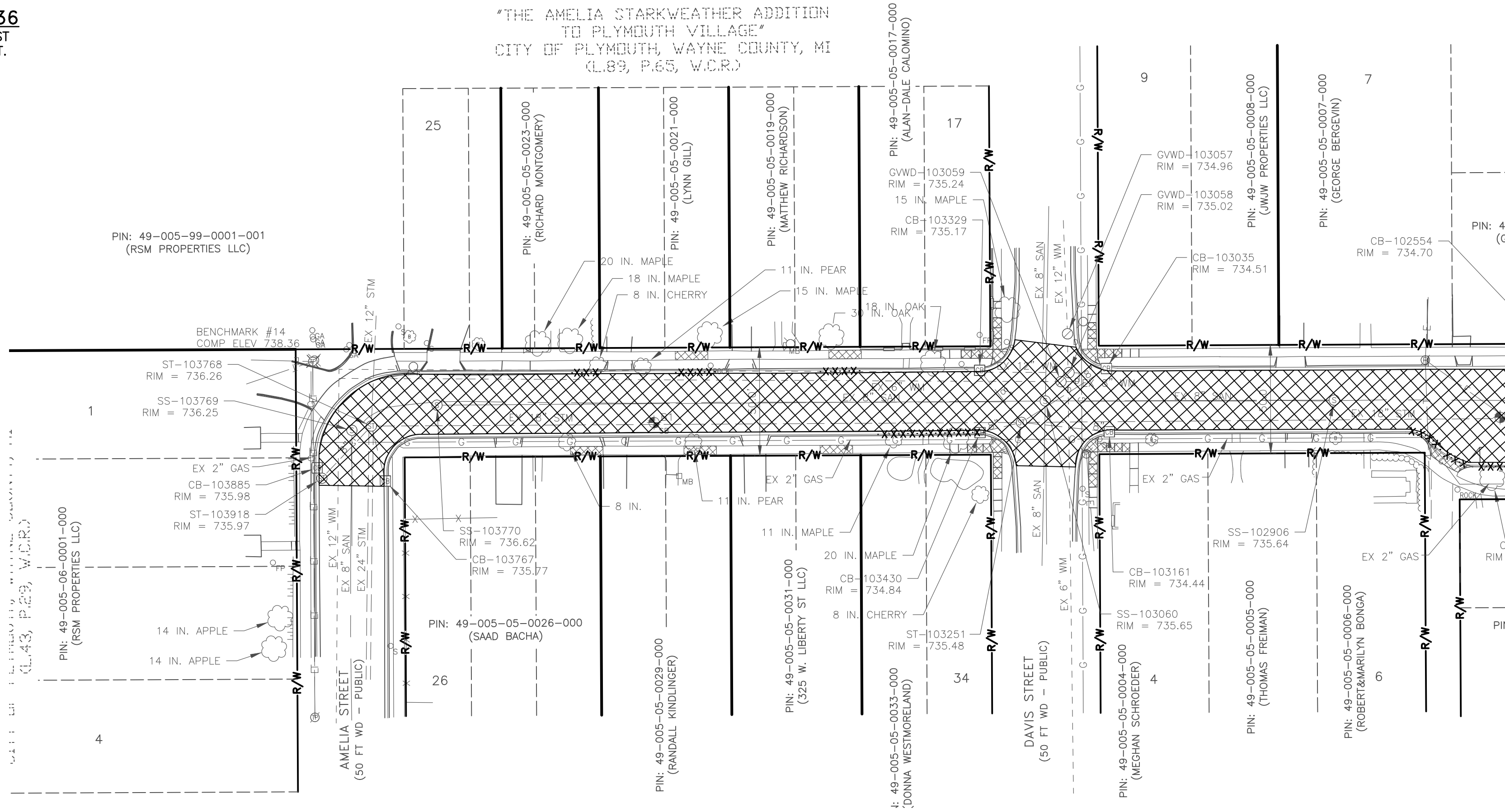
BENCHMARK#13 ELEV 739.14

SET ARROW ON HYDRANT, NORTHEAST CORNER OF WEST LIBERTY STREET AND STARKWEATHER AVENUE.

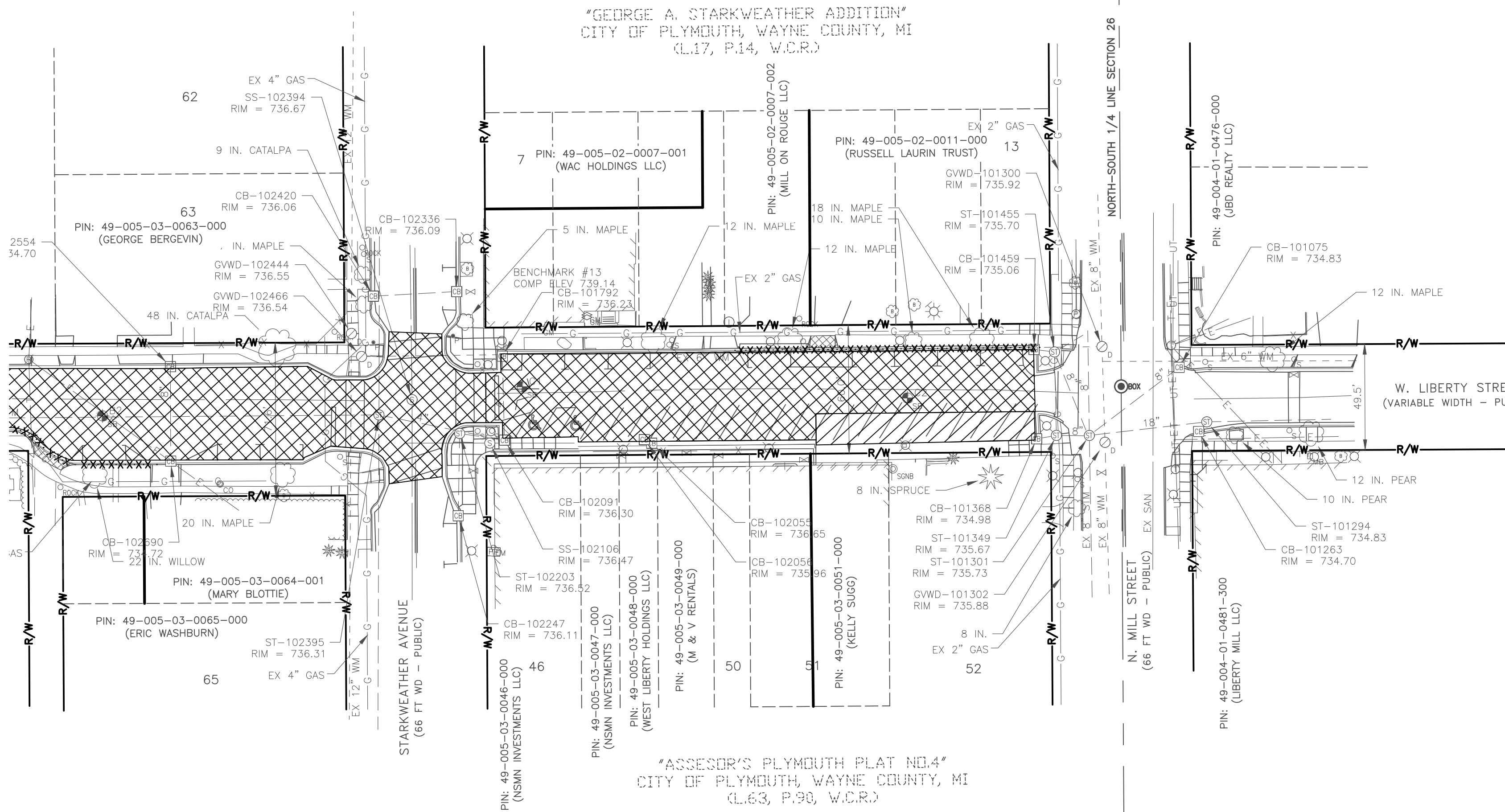
BENCHMARK#14 ELEV 738.36

SET MAG. IN SOUTH SIDE OF POWER POLE, NORTHWEST CORNER OF WEST LIBERTY STREET AND AMELIA STREET.




"THE AMELIA STARKWEATHER ADDITION TO PLYMOUTH VILLAGE"
CITY OF PLYMOUTH, WAYNE COUNTY, MI
(L.89, P.65, W.C.R.)



"GEORGE A. STARKWEATHER ADDITION"
CITY OF PLYMOUTH, WAYNE COUNTY, MI
(L.17, P.14, W.C.R.)



LEGEND

-  PAVEMENT EXCAVATION
-  MILL BITUMINOUS PAVEMENT
-  CONCRETE DRIVE AND SIDEWALK
- XXXXXXXXXXXXXXXXXXXX REMOVE UTILITY
- XXXXXXXXXXXXXXXXXXXX REMOVE CURB AND GUTTER

SUMMARY OF QUANTITIES THIS SHEET

4000	SY	COLD MILLING BITUMINOUS PAVEMENT 2-INCHES DEEP
500	LF	REMOVE CONCRETE CURB AND GUTTER
450	SF	REMOVE BRICK PAVERS
500	SF	CONCRETE DRIVES AND SIDEWALK REMOVE
60	CY	PAVEMENT EXCAVATION

PROJECT MANAGER: SHAWN KEOUGH, C.P.E., 1000 W. LANSING RD., #100, PLYMOUTH MI 48170
FIELD BOOK INFORMATION: LAYOUT - PLOTTED 3/29/2024 12:53 PM BY: FLANSKAN, MARTIN



Know what's below.
Call before you dig.

REV#	DATE	DESCRIPTION	BY

26251 Northline Rd.
Taylor, MI 48180
www.wadetrिम.com



CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
LIBERTY STREET
REMOVAL PLAN

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET **18**

BENCHMARK#13 ELEV 739.14

SET ARROW ON HYDRANT, NORTHEAST CORNER OF WEST LIBERTY STREET AND STARKWEATHER AVENUE.

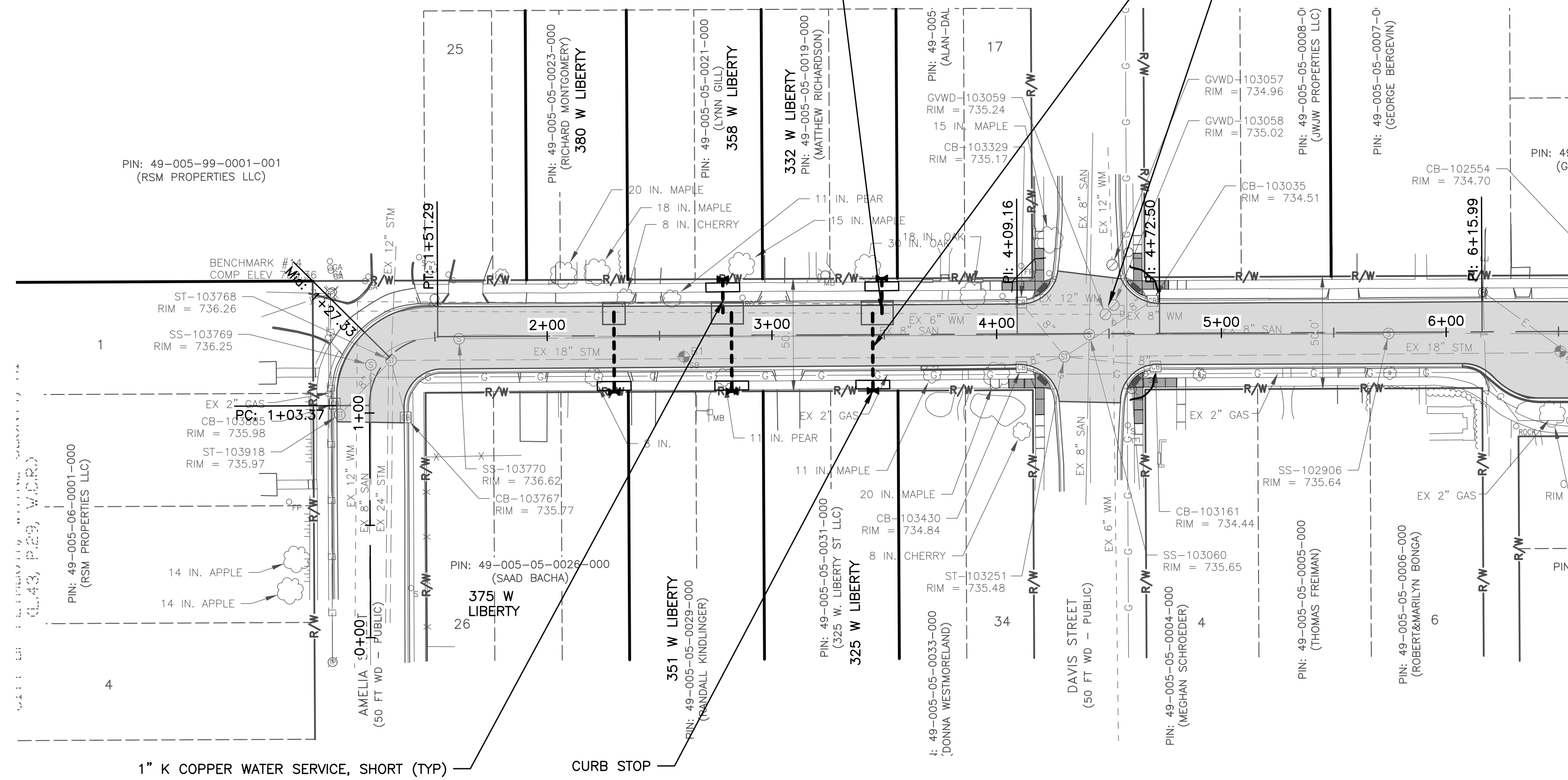
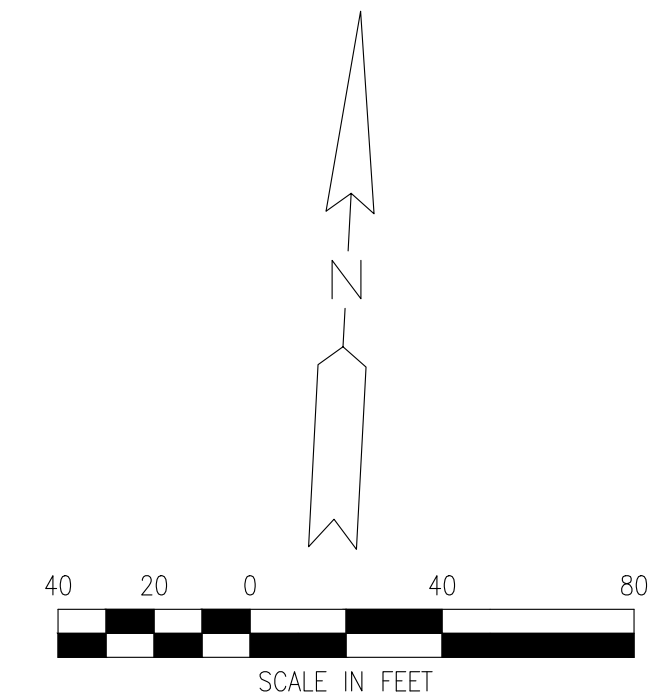
BENCHMARK#14 ELEV 738.36

SET MAG. IN SOUTH SIDE OF POWER POLE, NORTHWEST CORNER OF WEST LIBERTY STREET AND AMELIA STREET.

CONTRACTOR SHALL EXCAVATE AND EXPOSE EACH EXISTING WATER SERVICE AS SHOWN ON PLANS. CONTRACTOR SHALL DETERMINE IF WATER SERVICE IS CONNECTED TO 6" WM OR 12" WM AND VERIFY MATERIAL TYPE. IF WATER SERVICE IS CONNECTED TO 6" WM, CONTRACTOR SHALL INSTALL NEW WATER SERVICE AND CONNECT TO EXISTING 12" WM. IF EXISTING WATER SERVICE IS CONNECTED TO EXISTING 12" WATER MAIN AND SERVICE LINE MATERIAL IS COPPER, NO FURTHER ACTION IS NEEDED. IF ANY WATER SERVICE MATERIAL IS ANYTHING OTHER THAN COPPER, A NEW WATER SERVICE SHALL BE INSTALLED AND CONNECTED TO 12" WM. THIS APPLIES TO 325, 351, 352, 358, 375 W LIBERTY.

1" K COPPER WATER SERVICE, LONG (TYP)

CONTRACTOR TO EXCAVATE AND EXPOSE EXISTING WATER MAIN TO DETERMINE PIPE LAYOUT. THIS WORK SHALL BE PAID FOR WITH THE PROPOSED WATER SERVICE WORK ON LIBERTY ST.



1" K COPPER WATER SERVICE, SHORT (TYP)

CURB STOP

SUMMARY OF QUANTITIES THIS SHEET

2	EA	1-INCH, K COPPER WAER SERVICE, SHORT
3	EA	1-INCH, K COPPER WATER SERVICE, LONG
5	EA	CURB STOP AND BOX

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELLAGRA\1422889\CAD-PLS-LIBERTY WATER SERVICE.DWG - LAYOUT1 - PLOTTED 3/25/2024 12:53 PM BY: FLANAGAN, MARTIN



Know what's below.
Call before you dig.

REV#	DATE	DESCRIPTION	BY



CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
LIBERTY STREET WATER SERVICE PLAN

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
19

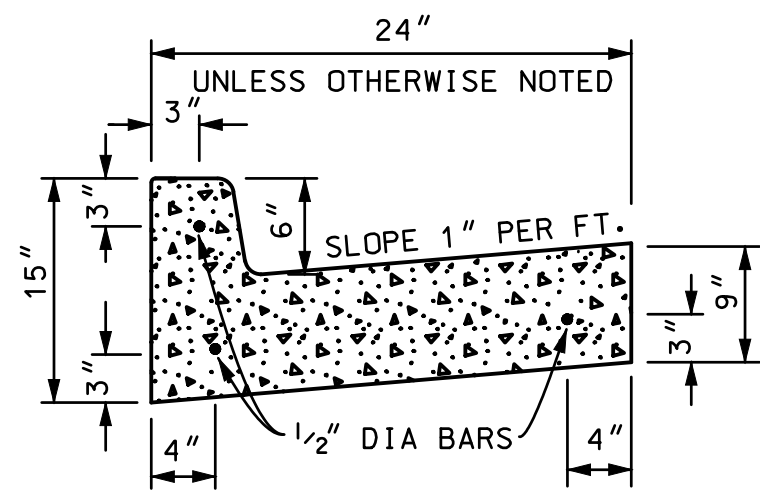
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BENCHMARK#13 ELEV 739.14

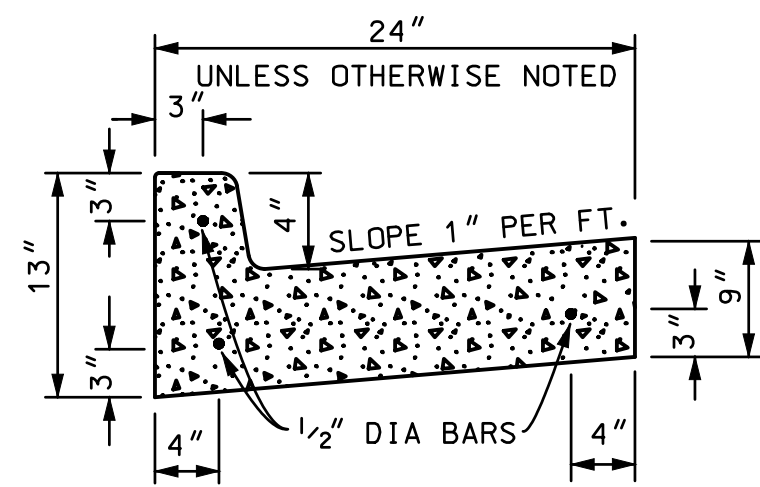
SET ARROW ON HYDRANT, NORTHEAST CORNER OF WEST LIBERTY STREET AND STARKWEATHER AVENUE.

BENCHMARK#14 ELEV 738.36

SET MAG. IN SOUTH SIDE OF POWER POLE, NORTHWEST CORNER OF WEST LIBERTY STREET AND AMELIA STREET.

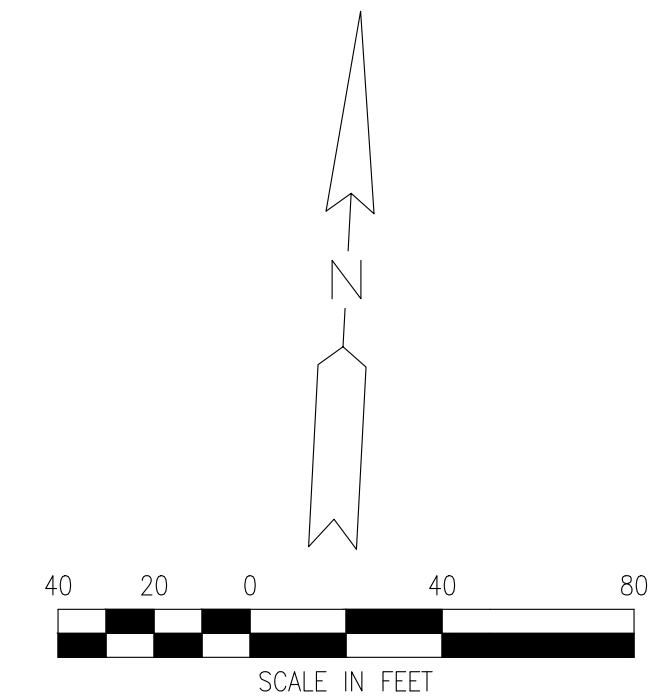
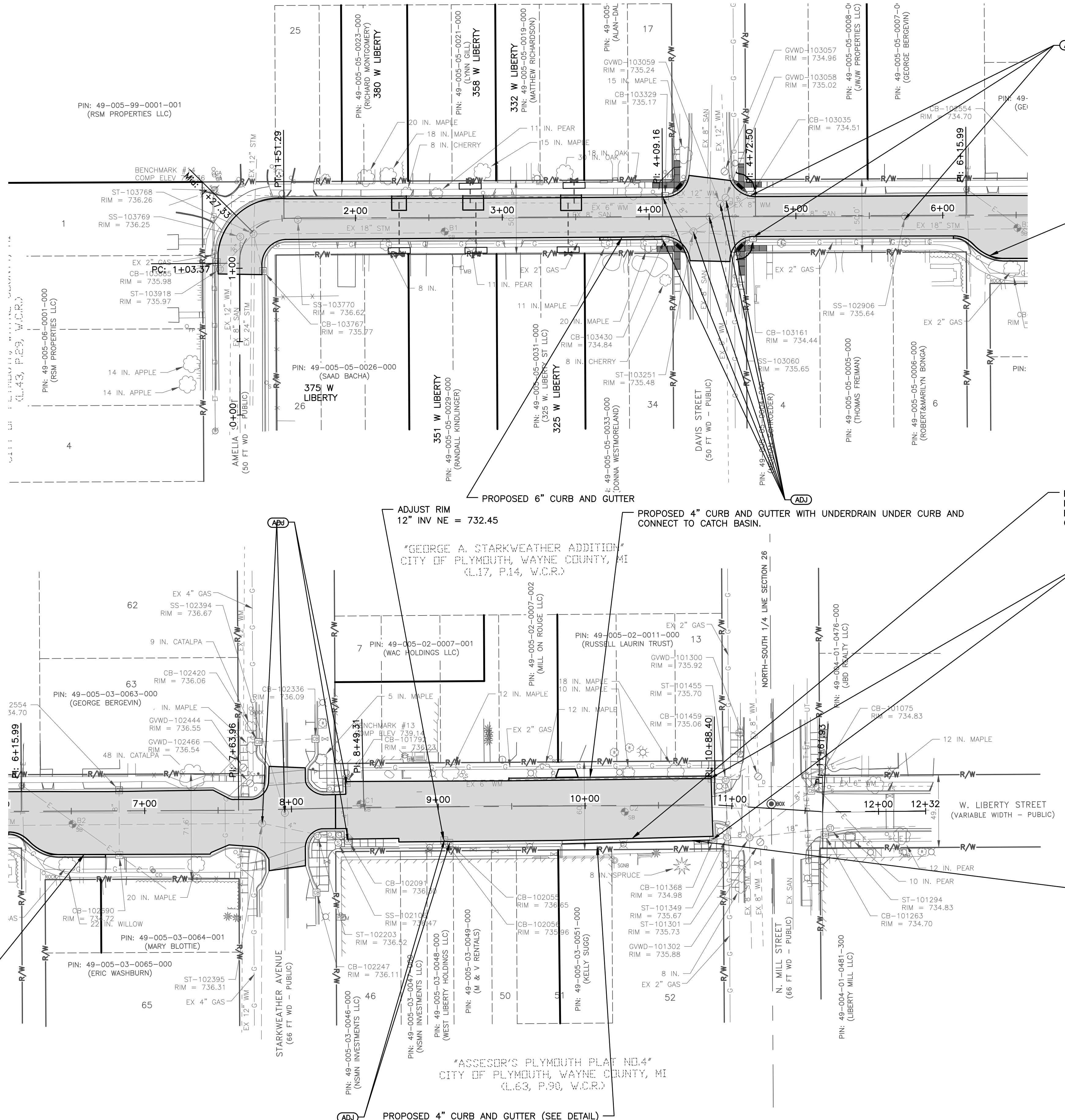


6" CURB & GUTTER DETAIL



4" CURB & GUTTER DETAIL

NOTE: PLACE UNDERDRAIN UNDER PROPOSED CURB AND GUTTER WHERE NOTED ON THE PLAN



PROPOSED 6" CURB AND GUTTER

PROPOSED 6" CURB AND GUTTER

PROPOSED 4" CURB AND GUTTER WITH UNDERDRAIN UNDER CURB AND CONNECT TO CATCH BASIN.

PROPOSED 4" CURB AND GUTTER SHALL BE INSTALLED SO THAT TOP OF CURB MATCHES EXISTING SIDEWALK. INSTALL UNDERDRAIN UNDER CURB AND CONNECT TO CATCH BASIN.

LEGEND

(ADJ) ADJUST STRUCTURE

NOTE: ALL STRUCTURES CALLED OUT ON THE PLANS TO BE ADJUSTED WILL GET A NEW FRAME AND COVER AND HAVE A CONTINGENCY QUANTITY OF TWO VERTICAL FEET OF RECONSTRUCTION. ANY ADDITIONAL RECONSTRUCTION DUE TO REPLACING THE FRAME AND COVER WILL BE AT THE CONTRACTORS EXPENSE.

TOP OF CURB SHALL TRANSITION FLAT TO MATCH GUTTER 10' AWAY FROM CATCH BASIN

SUMMARY OF QUANTITIES THIS SHEET

38	VF	RECONSTRUCT STRUCTURE
500	TON	BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
10	TON	BITUMINOUS PAVEMENT, LEVELING COURSE, 3C
425	LF	CURB AND GUTTER - CONCRETE
19	EA	ADJUST STRUCTURE
5780	LB	REMOVE AND REPLACE FRAME AND COVER
370	LF	UNDERDRAIN, 6-INCH W/ GEOTEXTILE FABRIC WRAP
1	LS	PAVEMENT MARKING
14	EA	INLET FILTER
50	SY	RESTORATION WITH 2" TOPSOIL AND SOD
200	SF	CONCRETE DRIVES AND SIDEWALK, 6-INCH
9	EA	REMOVE AND SALVAGE PARKING BUMPERS
6	EA	CONCRETE PARKING BUMPER
15	TON	21AA AGGREGATE BASE COURSE

FIELD BOOK INFORMATION: PROJECT MANAGER: SPAIN, KEOUGH; C:\P\WORK\LIBERTY\CD-PLS-LIBERTY_RESURFACE.DWG - LAYOUT - PLOTTED: 3/25/2024 12:53 PM BY FLANAGAN, MARTIN



	DESCRIPTION
	DATE
	REV#

WADE TRIM

20251 Northline Rd.
Taylor, MI 48180
313.481.1800
www.wadetrims.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
LIBERTY STREET
RESURFACING PLAN

ISSUED FOR: _____ DATE: _____ BY: _____
 BID: _____ 3-25-24 SWK

JOB NO: _____
PLY2129-01T

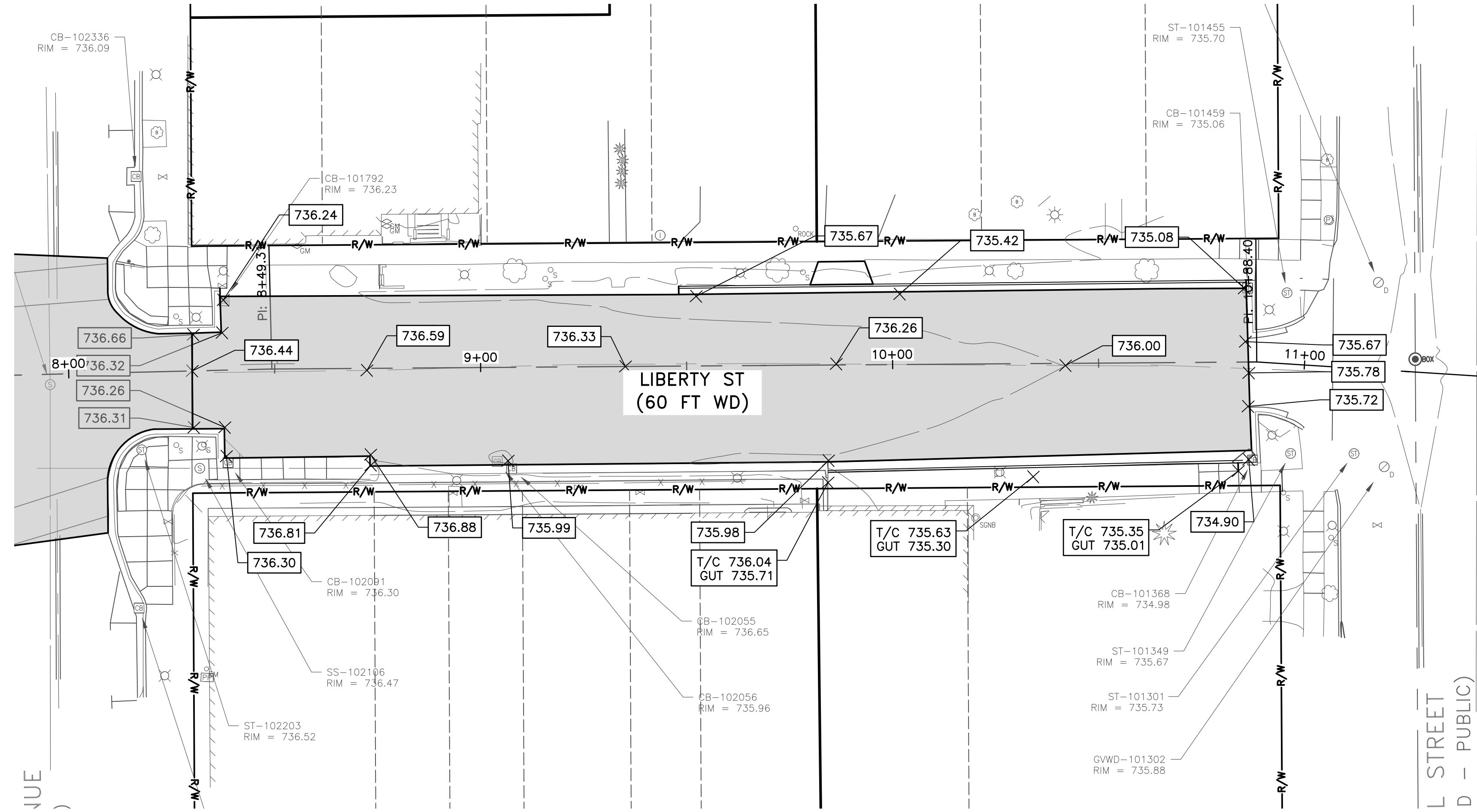
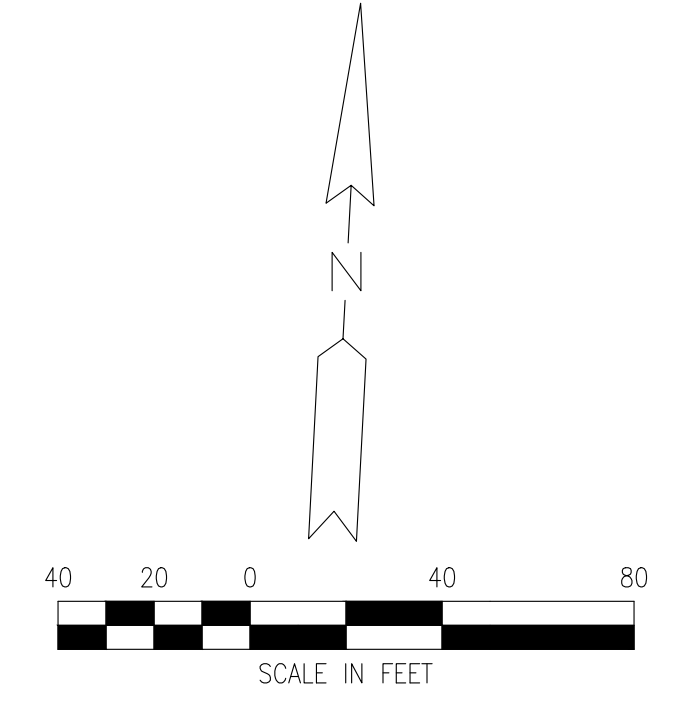
SHEET
20

BENCHMARK#13 ELEV 739.14

SET ARROW ON HYDRANT, NORTHEAST CORNER OF WEST LIBERTY STREET AND STARKWEATHER AVENUE.

BENCHMARK#14 ELEV 738.36

SET MAG. IN SOUTH SIDE OF POWER POLE, NORTHWEST CORNER OF WEST LIBERTY STREET AND AMELIA STREET.



PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WFLA\2024\CD-PLS-LIBERTY RESURFACE-GRADING.DWG - LAYOUT - PLOTTED 3/25/2024 12:53 PM BY: FLANAGAN, MARTIN



Know what's below.
Call before you dig.

REV#	DATE	DESCRIPTION	BY

26251 Northline Rd.
Taylor, MI 48180
www.wade-trim.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
LIBERTY STREET
GRADING PLAN

ISSUED FOR: BID
DATE: 3-25-24
BY: SWK

JOB NO.
PLY2129-01T

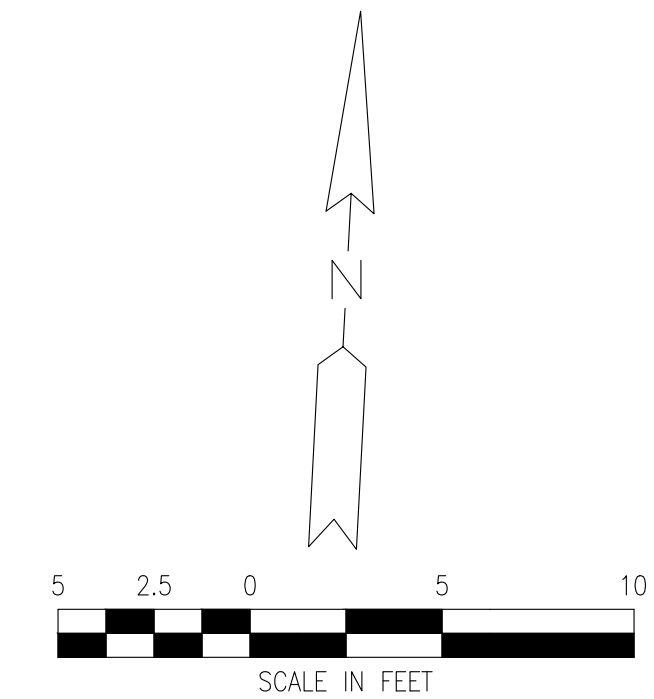
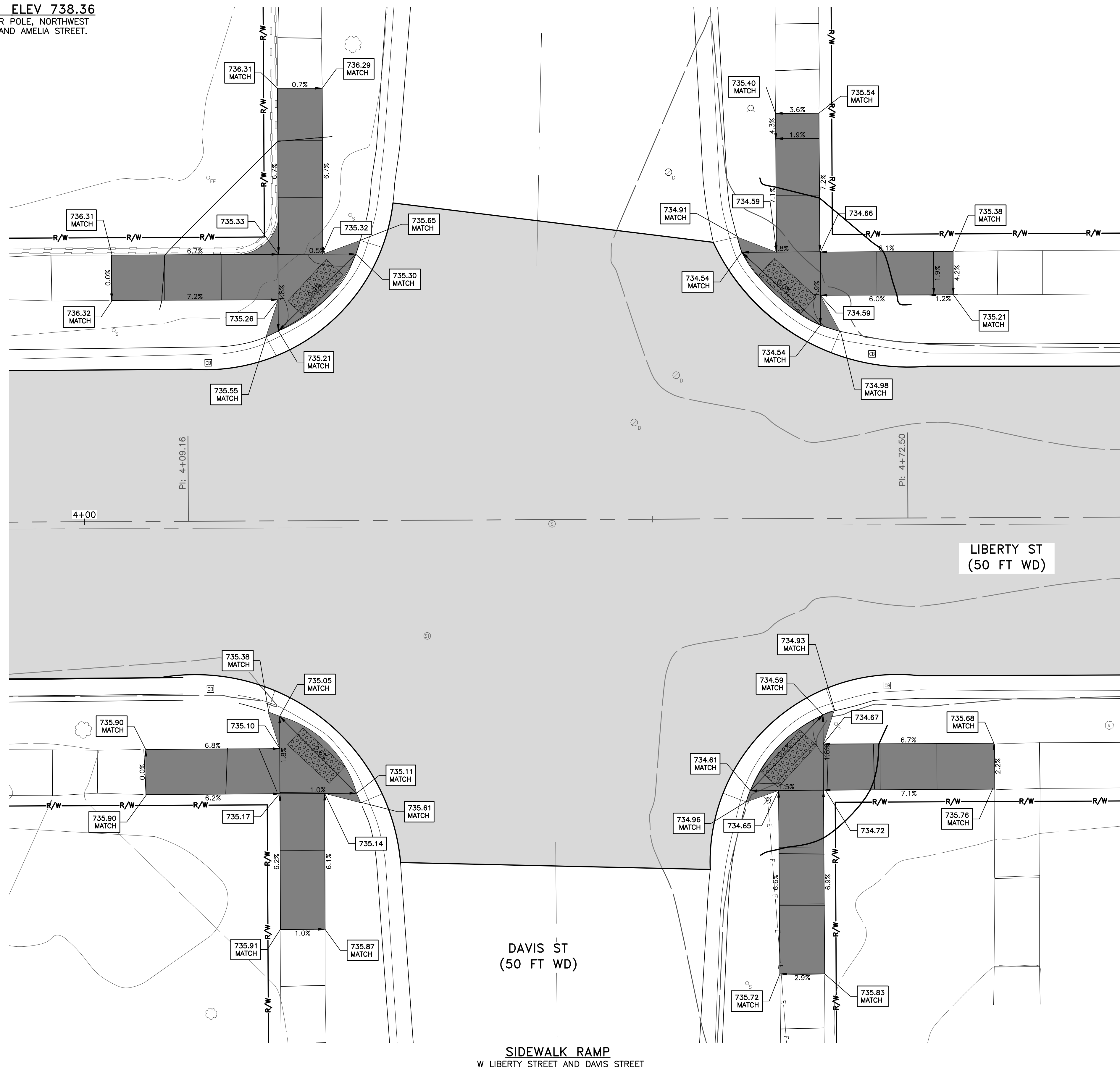
SHEET

BENCHMARK#13 ELEV 739.14

SET ARROW ON HYDRANT, NORTHEAST CORNER OF WEST LIBERTY STREET AND STARKWEATHER AVENUE.

BENCHMARK#14 ELEV 738.36

SET MAG. IN SOUTH SIDE OF POWER POLE, NORTHWEST CORNER OF WEST LIBERTY STREET AND AMELIA STREET.



NOTES:

1. SIDEWALK RAMPS SHALL BE INSTALLED PER ADA AND ACCESS PEDESTRAIN SIGNALS COMPLIANCE, WHICH INCLUDE, BUT IS NOT LIMITED TO 10-FOOT CLEARANCE BETWEEN PUSHBUTTONS AND LANDINGS WITHIN 2-FOOT OF PUSHBUTTONS. REFER TO MDOT DESIGN GUIDE SIG-DESIGN-120-A.
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3. THE CONTRACTOR SHALL PROTECT ALL BRICK PAVER AREAS ADJACENT TO SIDEWALKS AND SIDEWALK RAMPS.

SUMMARY OF QUANTITIES THIS SHEET

200	SF	6-INCH CONCRETE SIDEWALK RAMP, ADA
700	SF	4-INCH CONCRETE SIDEWALK

SIDEWALK RAMP
W LIBERTY STREET AND DAVIS STREET

PROJECT MANAGER: SHAWN KEOUGH
C:\P\1\WORK\LIBERTY\LIBERTY-RESURFACE-ADA\DWG - ADA RAMPS 2 - PLOTTED 3/25/2024 12:53 PM BY: FLAHOAGAN, MARTIN



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20251 Northline Rd. Taylor, MI 48180 www.wadetrिम.com	WADE TRIM
CITY OF PLYMOUTH 201 S MAIN ST WAYNE COUNTY, MICHIGAN 48170	2024 INFRASTRUCTURE IMPROVEMENT PROGRAM LIBERTY STREET ADA RAMPS - LIBERTY AT DAVIS
ISSUED FOR: BID	DATE: 3-25-24
BY: SWK	
JOB NO. PLY2129-01T	
SHEET	22
REV#	DATE
	DESCRIPTION
	BY

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PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\WELAGRA\LD\42689\CSP-PLTS-MOT.DWG - SPRING ST DETOUR - PLOTTED 3/29/2024 12:53 PM BY: FLANGAN, MARTIN



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W20-1
48"x48"



R11-2
48"x30"

WITH TYPE III BARRICADES. R11-2 SHALL BE PLACED ON SEPARATE SIGN SUPPORT BEHIND BARRICADES.

- NOTE:
- CONSTRUCTION, WARNING, REGULATORY, AND GUIDE SIGNS SHOWN MUST BE PLACED ACCORDING TO MDT'S WORK ZONE SAFETY AND MOBILITY MANUAL AND MAY REQUIRE FIELD ADJUSTMENTS AS DIRECTED BY THE ENGINEER.
 - TRAFFIC SHALL BE MAINTAINED ACCORDING TO MDT'S STANDARD SPECIFICATIONS, MDT'S WORK ZONE SAFETY AND MOBILITY MANUAL, AND AS SPECIFIED IN THIS PLAN SHEET.
 - AT LEAST ONE ACCESS TO BUSINESSES AND RESIDENTS MUST BE MAINTAINED AT ALL TIME.
 - UTILIZE TRAFFIC REGULATORS WHEN NEEDED TO MAINTAIN TRAFFIC AT INTERSECTIONS.
 - CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.

LEGEND

- T TEMPORARY TRAFFIC SIGN
- T BARRICADE, TYPE III, HIGH INTENSITY
- WORK ZONE
- TRAFFIC FLOW

SUMMARY OF QUANTITIES THIS SHEET (INFORMATION ONLY)

78	SF	SIGN, TYPE B, TEMP, PRISMATIC
8	EA	BARRICADE, TYPE III, HIGH INTENSITY

REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 MAINTENANCE OF TRAFFIC
 LIBERTY AND SPRING

ISSUED FOR: BID
 DATE: 3-25-24
 BY: SWK

JOB NO.
PLY2129-01T

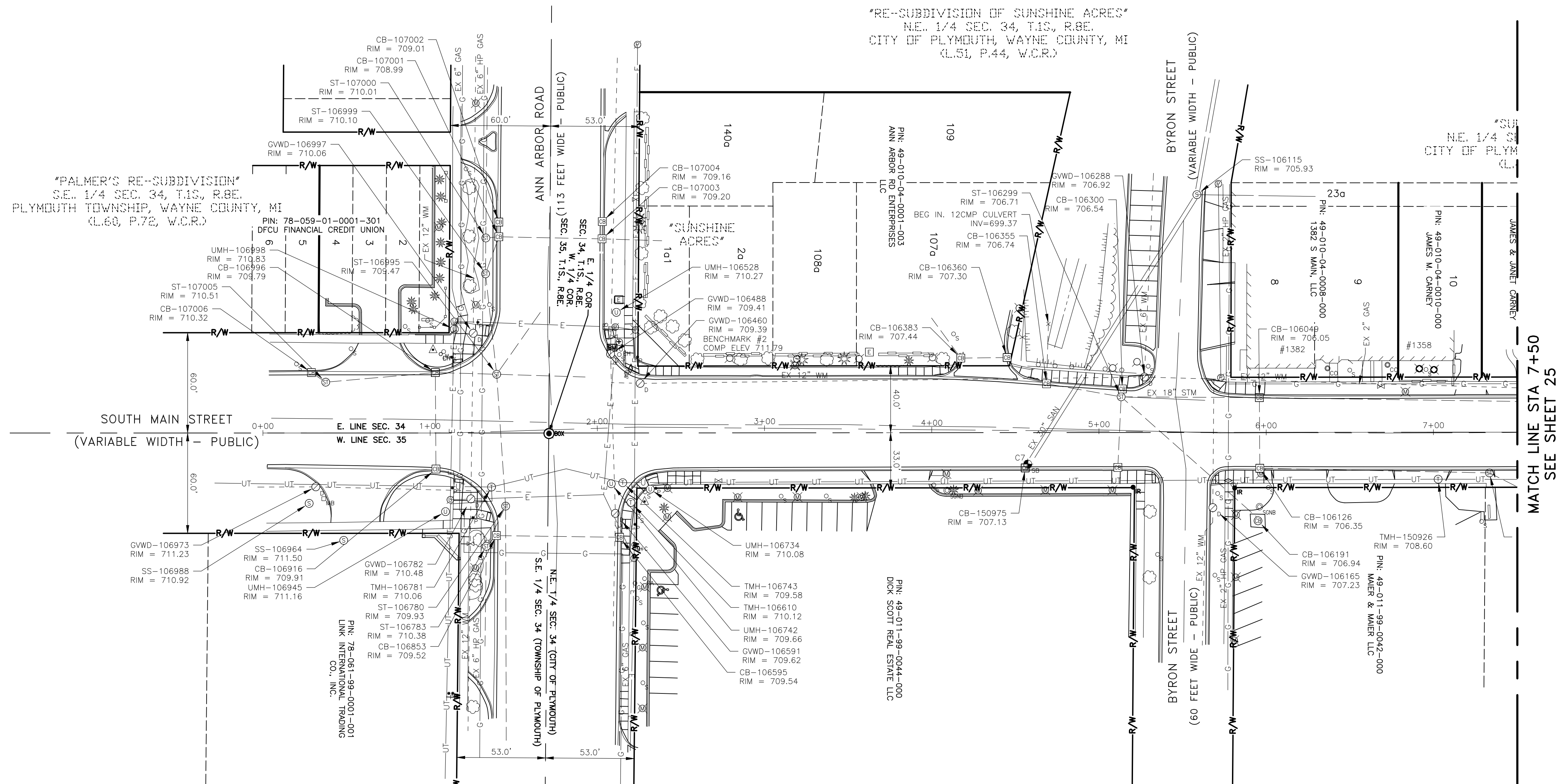
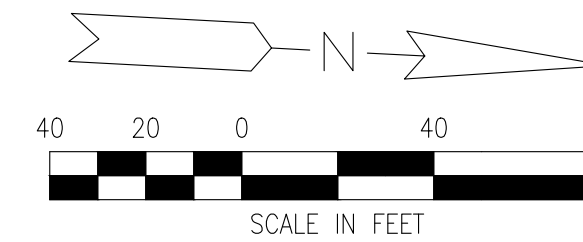
SHEET
23

BENCHMARK#2 ELEV 711.79

ARROW ON HYDRANT NORTHWEST QUADRANT OF ANN ARBOR ROAD AND MAIN STREET.

BENCHMARK#3 ELEV 713.53

NORTHEAST BOLT ON LIGHT POST BASE, SOUTHWEST QUADRANT OF MAIN STREET AND SIMPSON AVENUE.



MATCH LINE STA 7+50
SEE SHEET 25

REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
S MAIN STREET
EXISTING CONDITIONS STA 0+00 TO STA 7+50

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T
SHEET

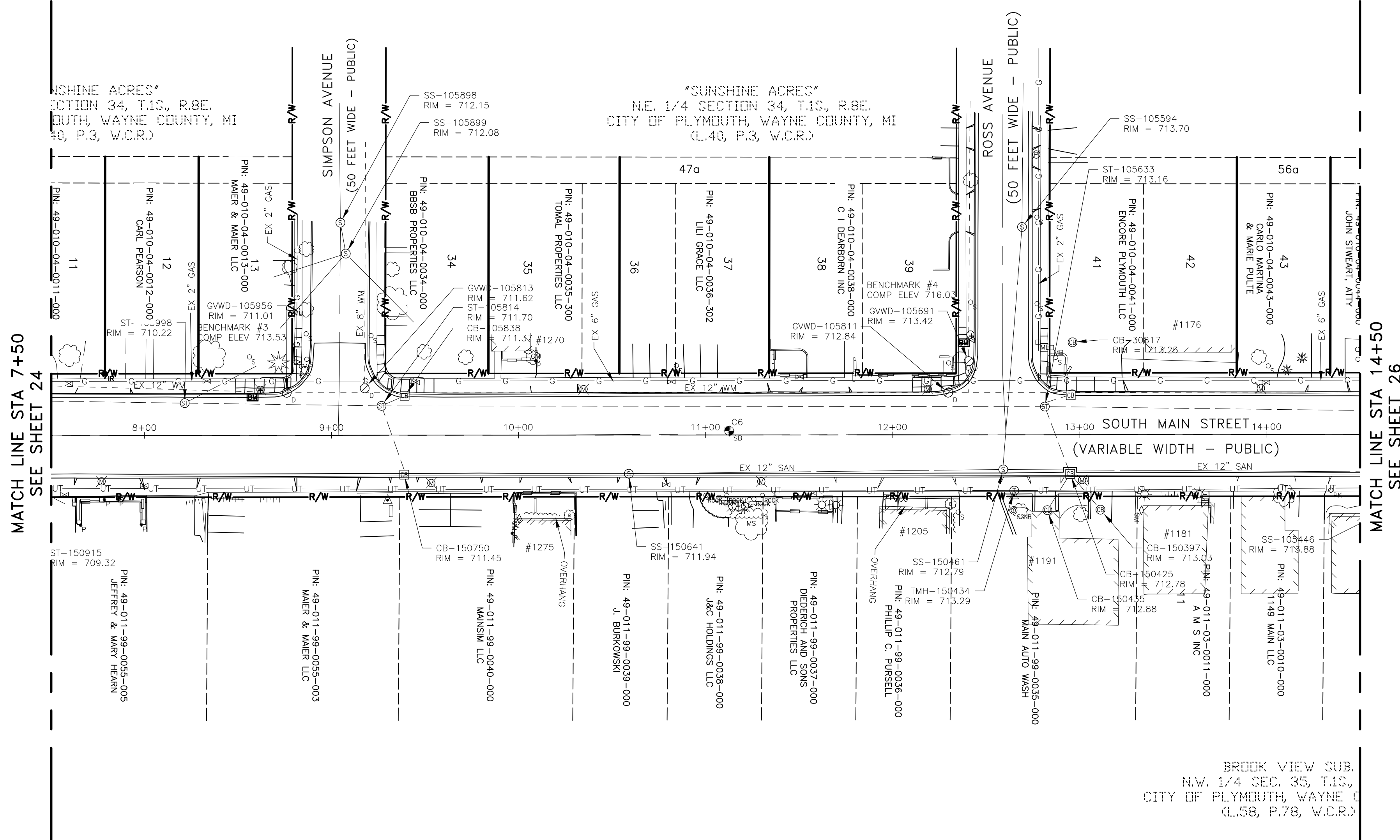
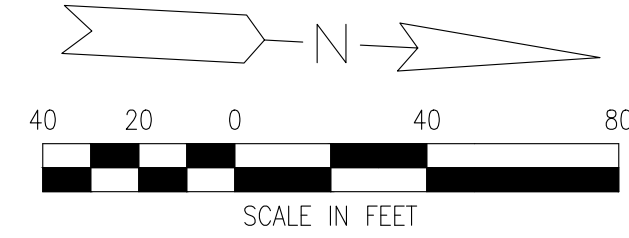
PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELAGRA\LD\402689\ISP-PLIS-EX_CON_S_MANDWG - LAYOUT1 - PLOTTED 3/25/2024 12:54 PM BY: FLANAGAN, MARTIN



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BENCHMARK#4 ELEV 716.03
 ARROW ON HYDRANT SOUTHWEST QUADRANT OF
 MAIN STREET AND ROSS AVENUE.

BENCHMARK#5 ELEV 716.84
 NORTHEAST NUT ON HYDRANT NORTHWEST
 QUADRANT OF MAIN STREET AND HARTSOUGH.



MATCH LINE STA 7+50
 SEE SHEET 24

MATCH LINE STA 14+50
 SEE SHEET 26

PROJECT MANAGER: SHAWN KEOUGH
 C:\P_L\WORK\PLANS\2024\SP-PLTS-EX_CON_S_MAINDNG - LAYOUT1 (2) - PLOTTED 3/25/2024 12:54 PM BY ELANCAN, MARTIN



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REV#	DATE	DESCRIPTION	BY

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 www.wadetrिम.com

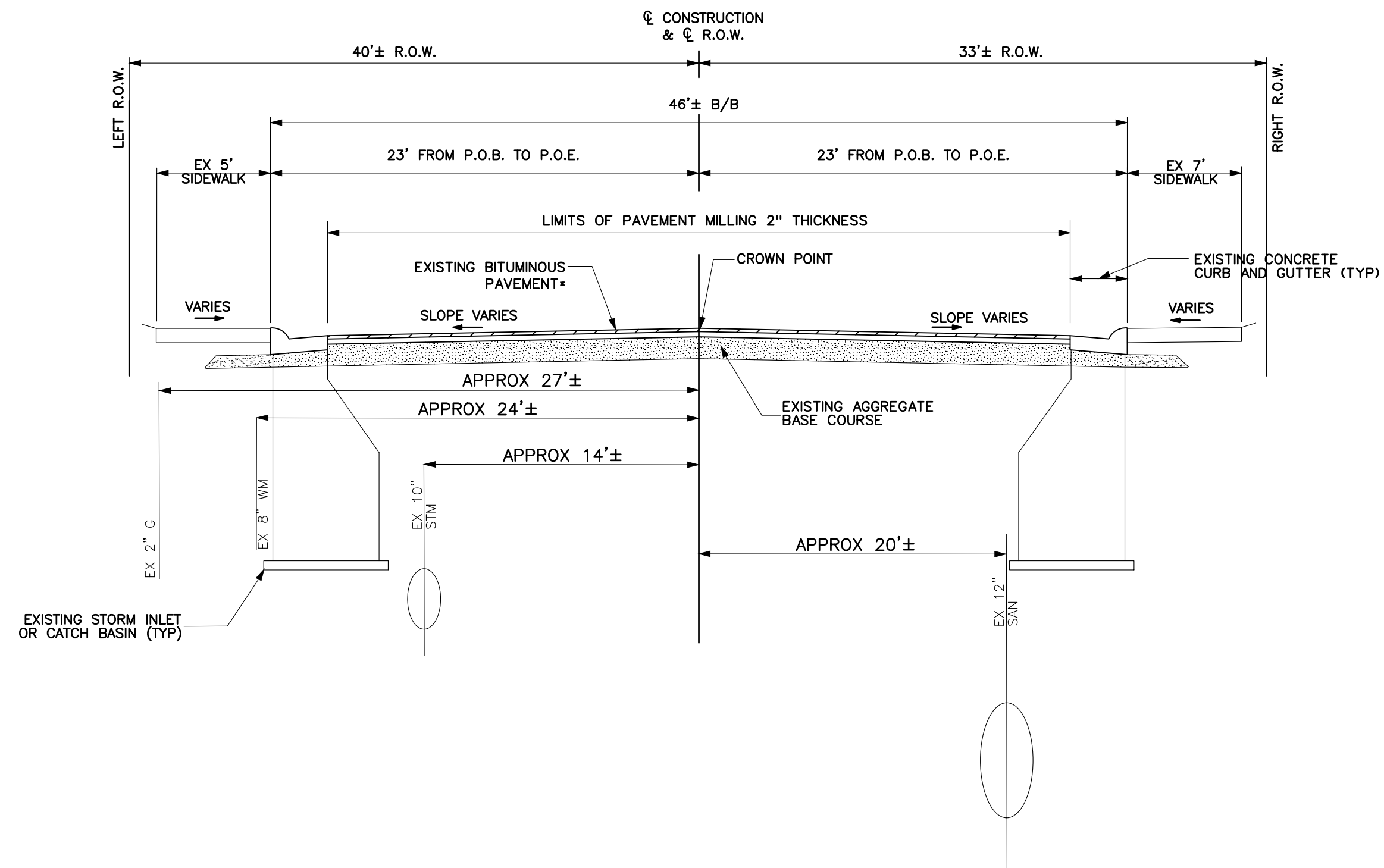
CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 S MAIN STREET
 EXISTING CONDITIONS STA 7+50 TO STA 14+50
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

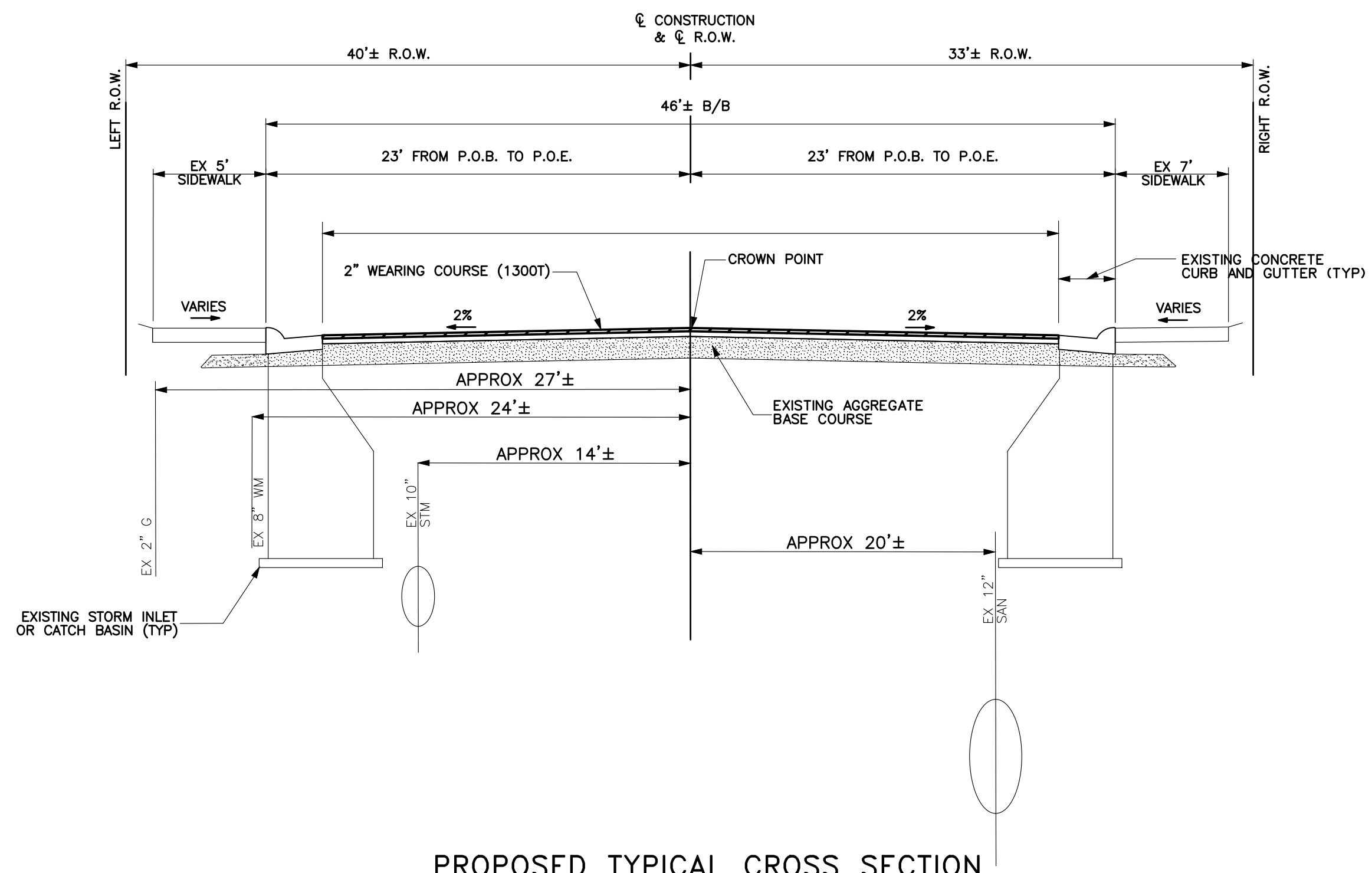
SHEET 25

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**EXISTING TYPICAL CROSS SECTION
S MAIN STREET**

P.O.B. STA 0+79.78 TO P.O.E. STA 16+33.55
NOT TO SCALE



**PROPOSED TYPICAL CROSS SECTION
S MAIN STREET**

P.O.B. STA 0+79.78 TO P.O.E. STA 16+33.55
NOT TO SCALE

ALL MILLINGS SHALL BE DELIVERED BY CONTRACTOR TO RIVERSIDE CEMETARY 680 PLYMOUTH ROAD, PLYMOUTH MI THIS WILL BE PAID FOR IN THE COST OF MILLING PAVEMENT

* PAVEMENT CORES INDICATE EXISTING AVERAGE BITUMINOUS PAVEMENT THICKNESS OF 4" AND EXISTING CONCRETE BASE OF 5.69" ONE CORE INDICATED 1.75" OF CONCRETE OVER 8.75 OF SLAG. PLEASE SEE PAVEMENT CORES FOR MORE DETAIL.

BORING	ROAD	ASPHALT	CONCRETE	BASE	BASE MATERIAL
C4	MAIN	5.5"	7.75"	NOT ENCOUNTERED	NOT ENCOUNTERED
C5	MAIN	5.25"	9"	NOT ENCOUNTERED	NOT ENCOUNTERED
C6	MAIN	4.5"	9"	NOT ENCOUNTERED	NOT ENCOUNTERED
C7	MAIN	7"	8"	NOT ENCOUNTERED	NOT ENCOUNTERED

INFORMATION IN THE ABOVE CHART IS TAKEN FROM THE SME GEOTECHNICAL REPORT. FOR FURTHER DETAILS PLEASE SEE REPORT FOUND IN THE PROPOSAL

HMA APPLICATION ESTIMATE

IDENTIFICATION NO.	RATE PER SYD	PERFORMANCE GRADE	REMARKS
1300T	220*	64-22	WEARING
* BOND COAT 0-0.10 GAL/SYD FOR INFORMATION ONLY			

2624 Northrup Rd.
Troy, MI 48068
734.847.9700
www.wadetrtrim.com



CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
S MAIN STREET
EXISTING AND PROPOSED TYPICALS

ISSUED FOR: DATE: BY:
BY: 3-25-24 SWK

JOB NO. PLY2129-01T

SHEET

27



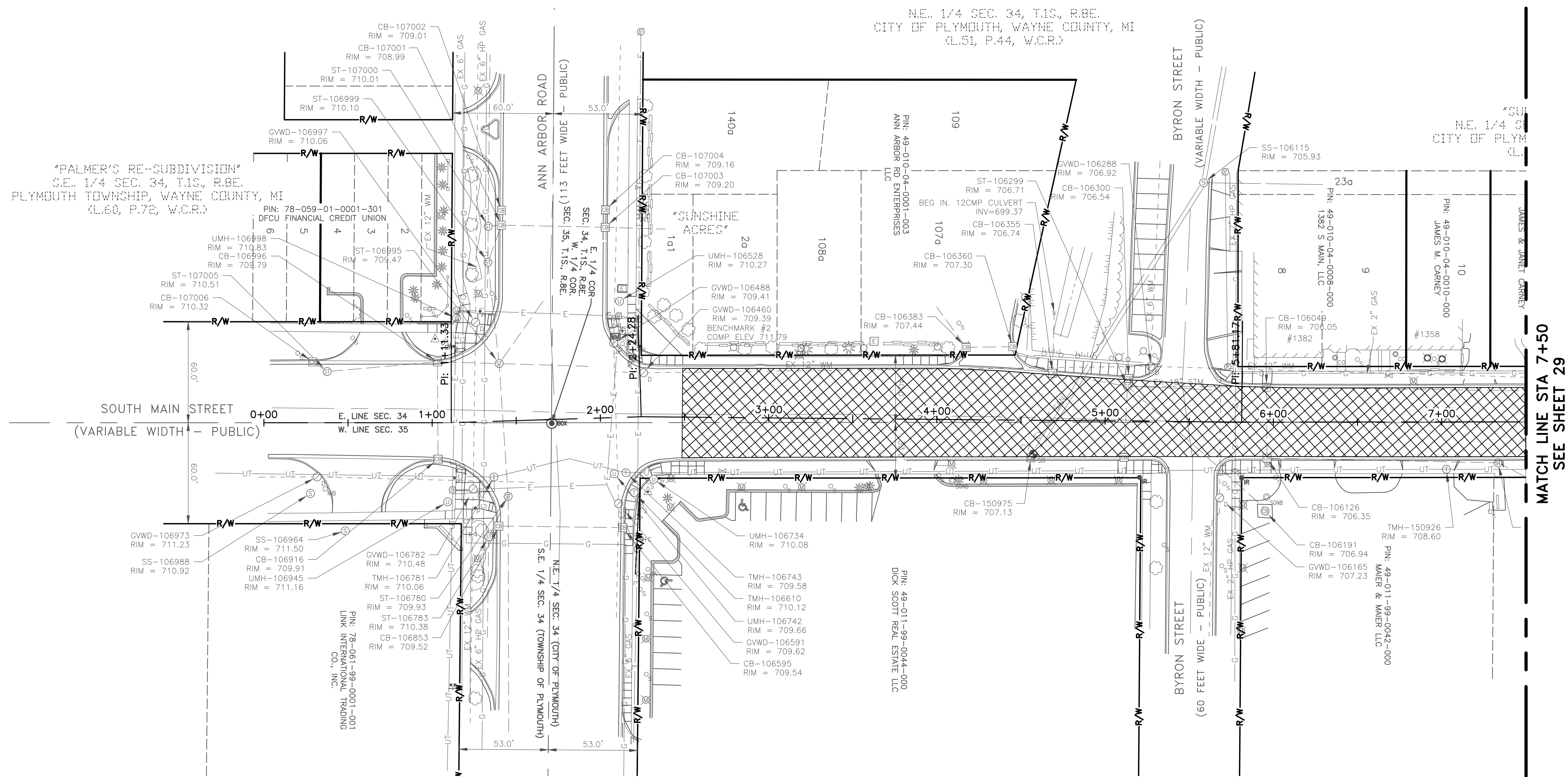
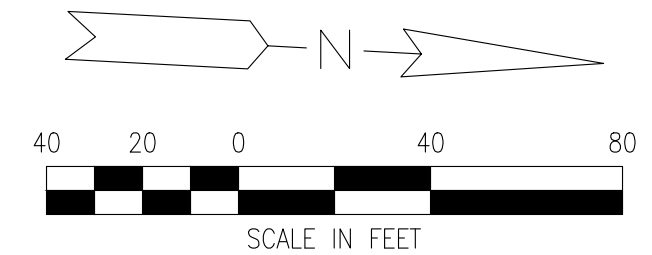
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BENCHMARK#2 ELEV 711.79

ARROW ON HYDRANT NORTHWEST QUADRANT OF ANN ARBOR ROAD AND MAIN STREET.

BENCHMARK#3 ELEV 713.53

NORTHEAST BOLT ON LIGHT POST BASE, SOUTHWEST QUADRANT OF MAIN STREET AND SIMPSON AVENUE.



NOTE: REMOVAL OF CONCRETE CURB AND GUTTER WILL BE MARKED BY ENGINEER/CITY PRIOR TO MILLING OF CONCRETE PAVEMENT. AN ESTIMATED QUANTITY OF CURB AND GUTTER REMOVAL HAS BEEN INCLUDED ON S MAIN REMOVAL SHEETS

LEGEND

- MILL BITUMINOUS PAVEMENT
CONCRETE DRIVE AND SIDEWALK
CONCRETE CURB AND GUTTER REMOVE

SUMMARY OF QUANTITIES THIS SHEET

Table with 3 columns: Quantity, Unit, and Description (e.g., 3000 SY COLD MILLING BITUMINOUS PAVEMENT 1.5-INCHES DEEP)

PROJECT MANAGER: SHAWN KEOUGH, C.P. LORRA WILKINSON, FIELD BOOK INFORMATION: LAYOUT - PLOTTED: 3/23/2024 12:54 PM BY ELANAGAN, MARTIN



Table with columns: REV#, DATE, DESCRIPTION

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
REMOVAL PLAN STA 0+00 TO STA 7+50

Table with columns: ISSUED FOR, DATE, BY, BID, JOB NO., SHEET (28)

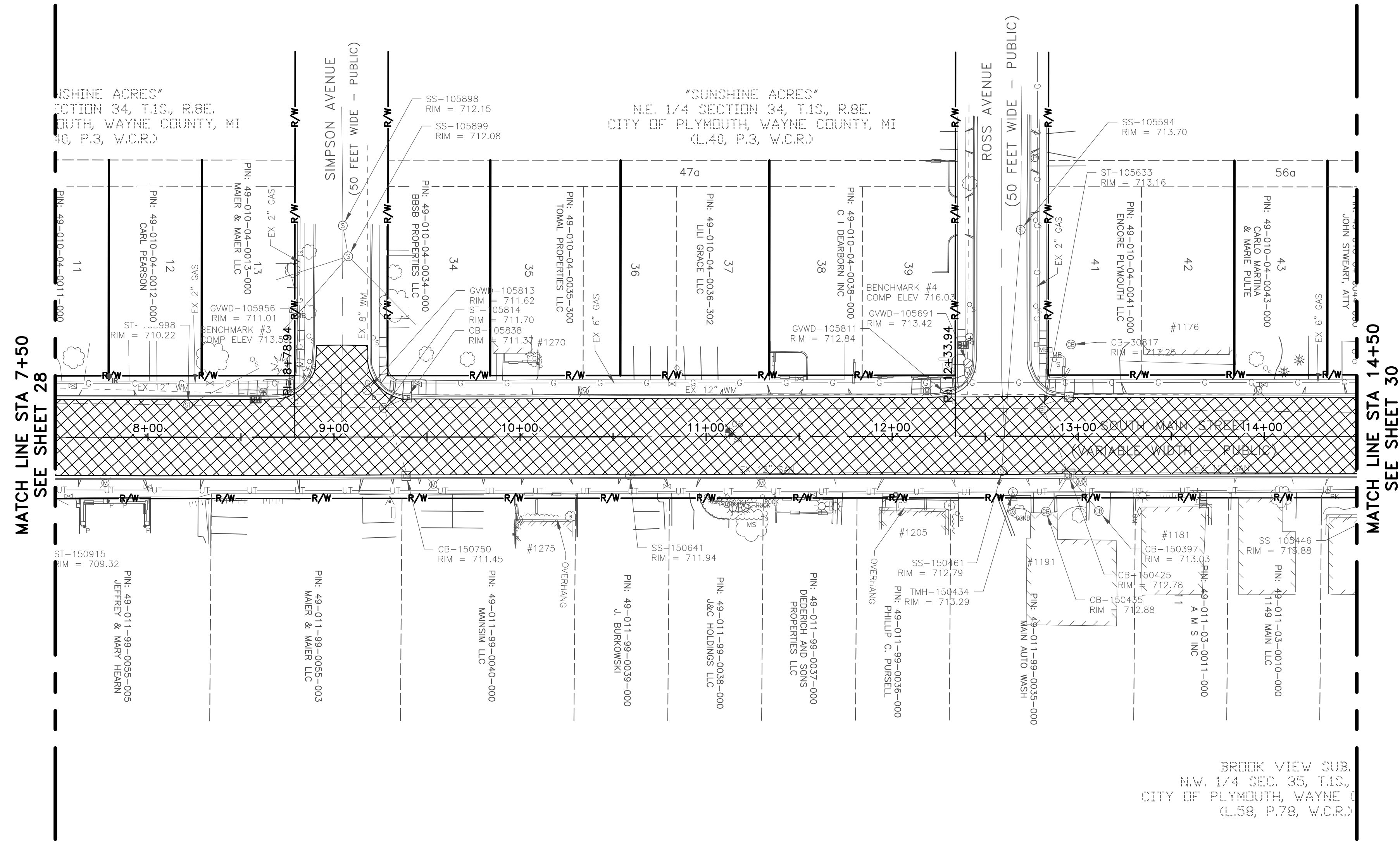
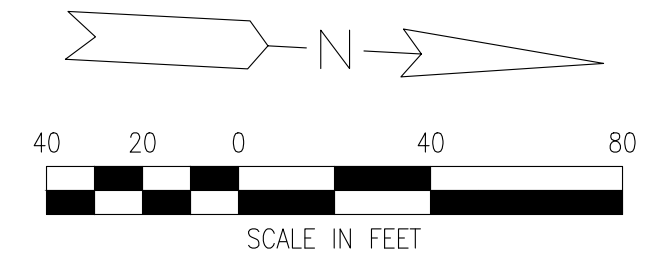
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BENCHMARK#4 ELEV 716.03

ARROW ON HYDRANT SOUTHWEST QUADRANT OF MAIN STREET AND ROSS AVENUE.

BENCHMARK#5 ELEV 716.84

NORTHEAST NUT ON HYDRANT NORTHWEST QUADRANT OF MAIN STREET AND HARTSOUGH.



MATCH LINE STA 7+50 SEE SHEET 28

MATCH LINE STA 14+50 SEE SHEET 30

NOTE: REMOVAL OF CONCRETE CURB AND GUTTER WILL BE MARKED BY ENGINEER/CITY PRIOR TO MILLING OF CONCRETE PAVEMENT.

AN ESTIMATED QUANTITY OF CURB AND GUTTER REMOVAL HAS BEEN INCLUDED ON S MAIN REMOVAL SHEETS

LEGEND

- Mill Bituminous Pavement
Concrete Drive and Sidewalk
Concrete Curb and Gutter, Remove

SUMMARY OF QUANTITIES THIS SHEET

Table with 4 columns: Quantity, Unit, Description, and Unit. Includes items like COLD MILLING BITUMINOUS PAVEMENT 1.5-INCHES DEEP, CONCRETE DRIVES AND SIDEWALK, REMOVE, CURB AND GUTTER, REMOVE, and PAVEMENT FOR BUTT JOINT REMOVE.

Revision table with columns: REV#, DATE, DESCRIPTION, BY.

20251 Northline Rd. Taylor, MI 48180



CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
REMOVAL PLAN STA 7+50 TO STA 14+50

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
29

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELAGRA\LD\402689\CRM-PLTS-S MAIN REMOVAL.DWG - LAYOUT (2) - PLOTTED 3/25/2024 12:54 PM BY: FLANAGAN, MARTIN



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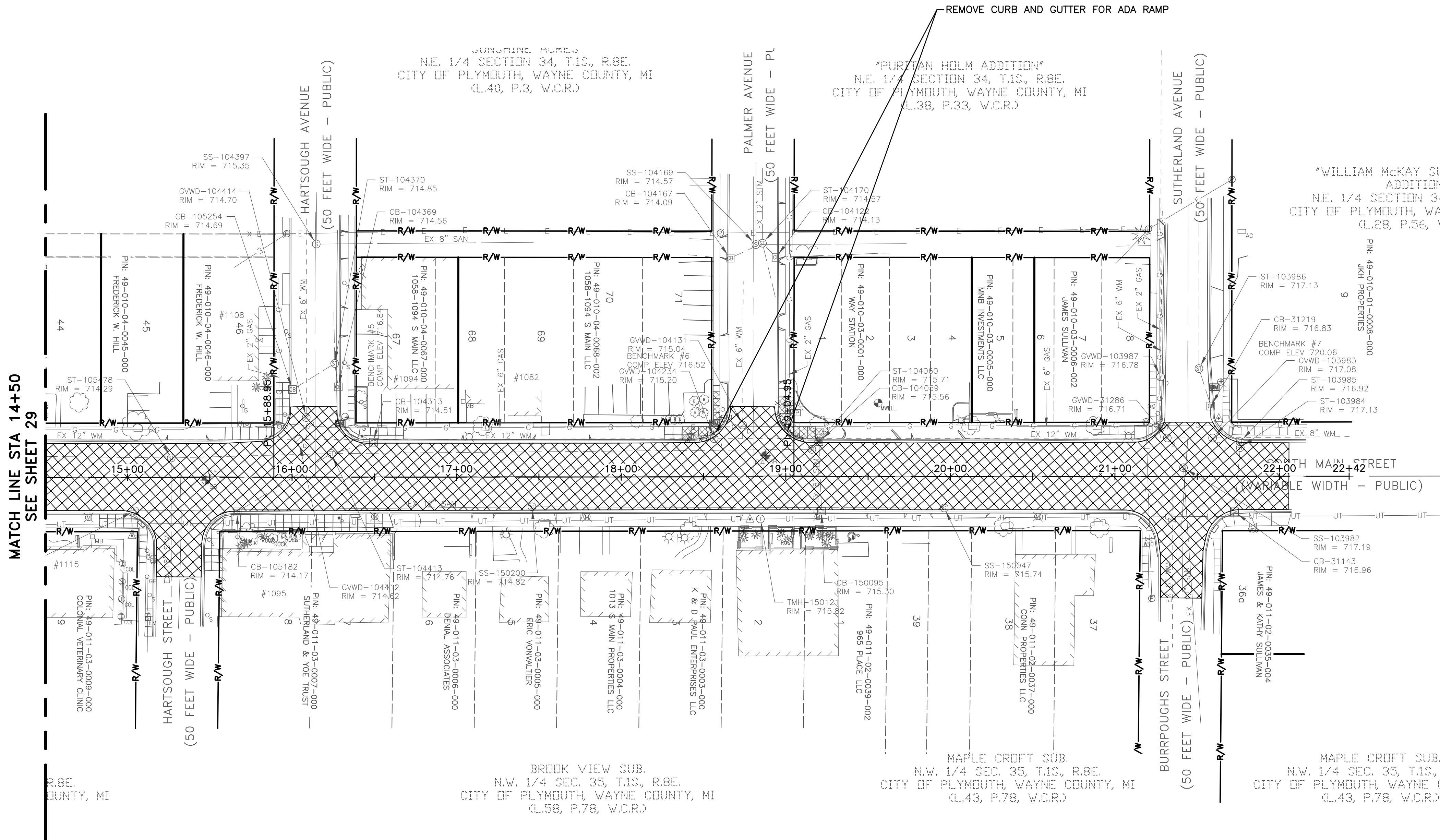
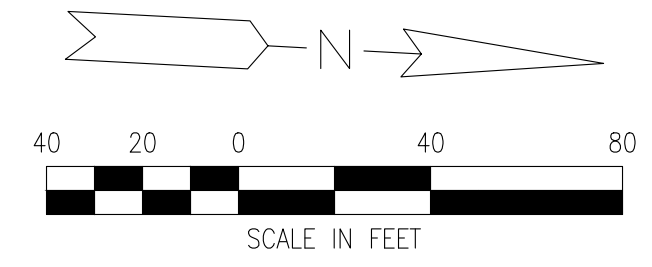
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BENCHMARK #6 ELEV 716.52

SOUTHEAST NUT ON HYDRANT SOUTHWEST QUADRANT OF PALMER AVENUE AND MAIN STREET.

BENCHMARK #7 ELEV 720.06

ARROW ON HYDRANT NORTHWEST QUADRANT OF MAIN STREET AND SUTHERLAND AVENUE.



NOTE: REMOVAL OF CONCRETE CURB AND GUTTER WILL BE MARKED BY ENGINEER/CITY PRIOR TO MILLING OF CONCRETE PAVEMENT.

AN ESTIMATED QUANTITY OF CURB AND GUTTER REMOVAL HAS BEEN INCLUDED ON S MAIN REMOVAL SHEETS

LEGEND

- Mill bituminous pavement (cross-hatch pattern)
Concrete drive and sidewalk (dotted pattern)
Concrete curb and gutter, remove (dashed pattern)

SUMMARY OF QUANTITIES THIS SHEET

Table with 4 columns: Quantity, Unit, Description, and Notes. Includes rows for cold milling bituminous pavement, concrete drives and sidewalk, curb and gutter removal, and pavement for butt joint removal.

PROJECT MANAGER: SHAWN KEOUGH, C.P. PROJECT MANAGER: SHAWN KEOUGH, C.P. FIELD BOOK INFORMATION: LAYOUT (3) - PLOTTED 3/25/2024 12:54 PM BY: FLANAGAN, MARTIN



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Table with 2 columns: REV#, DATE, DESCRIPTION

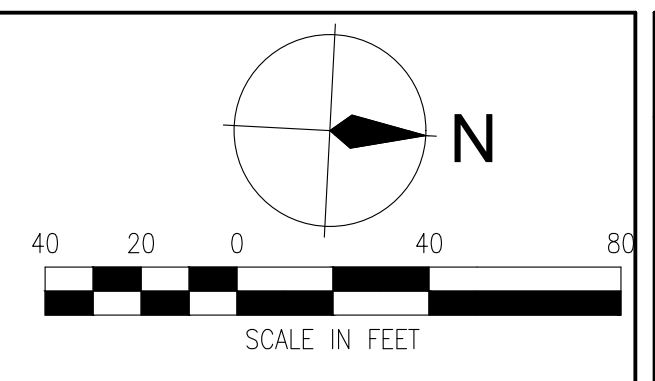
WADE TRIM logo and contact information: 20251 Northline Rd., Taylor, MI 48180, www.wadetrim.com

CITY OF PLYMOUTH
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WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
REMOVAL PLAN STA 14+50 TO STA 22+05

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO: PLY2129-01T SHEET: 30

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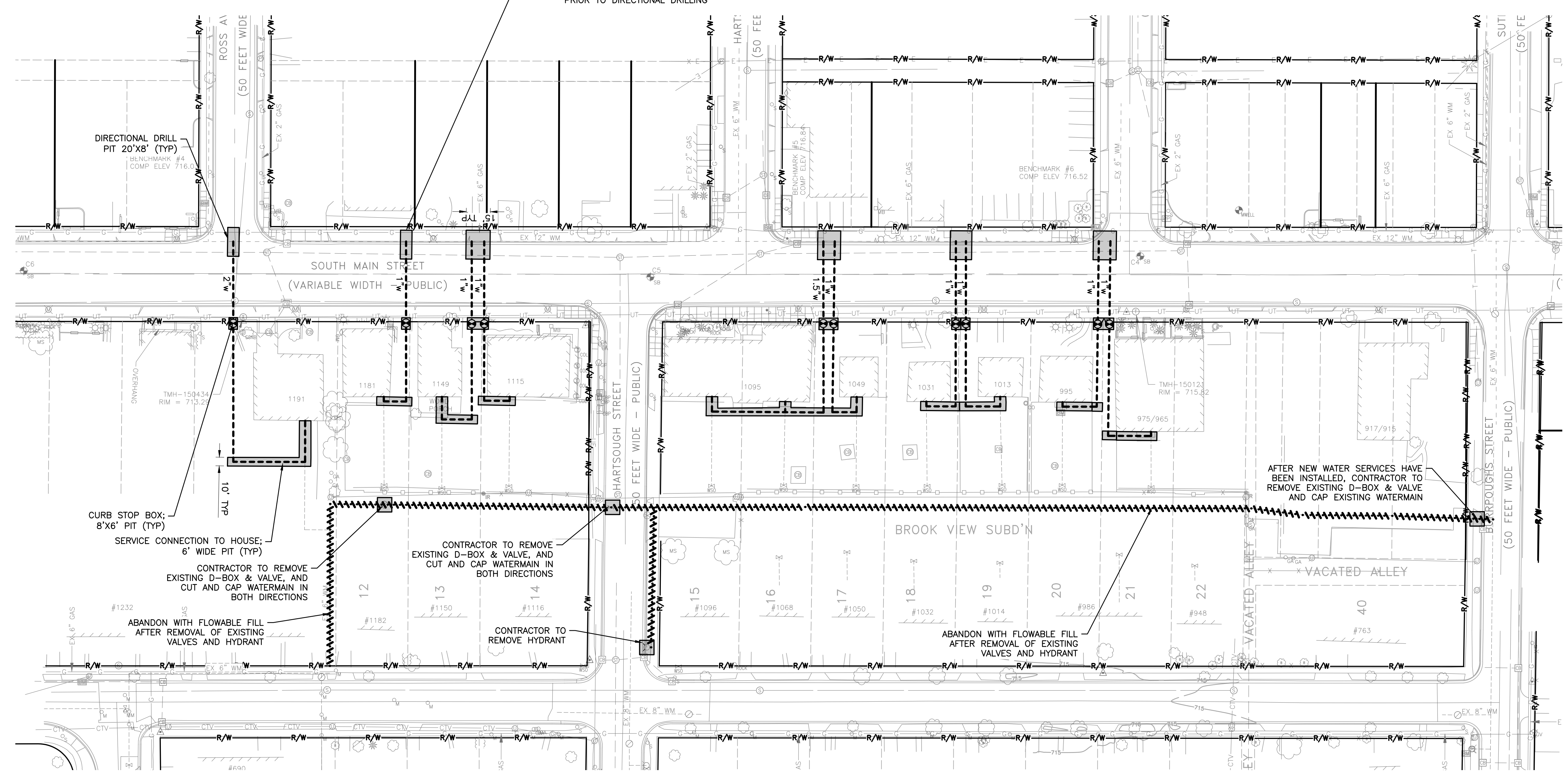


CONTRACTOR SHALL EXPOSE EX 12" WATER MAIN PRIOR TO PERFORMING ANY DIRECTIONAL DRILLING

ALL WATER SERVICES SHALL BE INSTALLED UNDER MAIN STREET VIA DIRECTIONAL DRILL

CONTRACTOR SHALL LIMIT DISTURBANCE AREA NEAR BUILDINGS TO 10' WIDE

CONTRACTOR SHALL VERIFY DEPTH OF EXISTING UTILITIES PRIOR TO DIRECTIONAL DRILLING



PROPERTY SERVICES		
ADDRESS	SERVICE SIZE	SERVICE LENGTH
1191 S MAIN ST	2"	230'
1181 S MAIN ST	1"	130'
1149 S MAIN ST	1"	160'
1115 S MAIN ST	1"	131'
1095/1098 S MAIN ST	1.5"	216'
1049 S MAIN ST	1"	147'
1031 S MAIN ST	1"	138'
1013 S MAIN ST	1"	146'
995 S MAIN ST	1"	142'
965 S MAIN ST	1"	168'

- SOUTH MAIN STREET SERVICE RECONNECTIONS**
- 7 CY WATERMAIN, ABANDON WITH FLOWABLE FILL
 - 1 EA REMOVE EXISTING FIRE HYDRANT
 - 3 EA REMOVE EXISTING GATE VALVE AND WELL
 - 66 SY CONCRETE PAVEMENT, REMOVE
 - 504 SY HMA PAVEMENT, REMOVE
 - 53 LF CONCRETE CURB AND GUTTER, REMOVE
 - 8 EA CURB STOP AND BOX, 1 INCH
 - 1 EA CURB STOP AND BOX, 1.5 INCH
 - 1 EA CURB STOP AND BOX, 2 INCH
 - 8 EA WATER SERVICE, HDPE, 1-INCH, LONG
 - 1 EA WATER SERVICE, HDPE, 1.5-INCH, LONG
 - 1 EA WATER SERVICE, HDPE, 2-INCH, LONG
 - 66 SY 8-INCH PLAIN CONCRETE PAVEMENT
 - 70 TON BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
 - 53 LF CURB AND GUTTER, CONC
 - 20 SY RESTORATION WITH 3-INCHES TOPSOIL & NURSERY SOD
 - 10 CY FLOWABLE FILL

PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\WELLS\2024\2024-01-15\2024-01-15-MAIN BACKYARD_WML.DWG - CAROUTI - PLOTTED: 3/25/2024 12:54 PM BY: ELANAGAN, MARTIN
 FIELD BOOK INFORMATION:



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www.wadetrim.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170

2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 SOUTH MAIN WATER SERVICES

REV#	DATE	DESCRIPTION	BY

ISSUED FOR: _____ DATE: _____ BY: _____
 BID: _____ 3-25-24 SWK

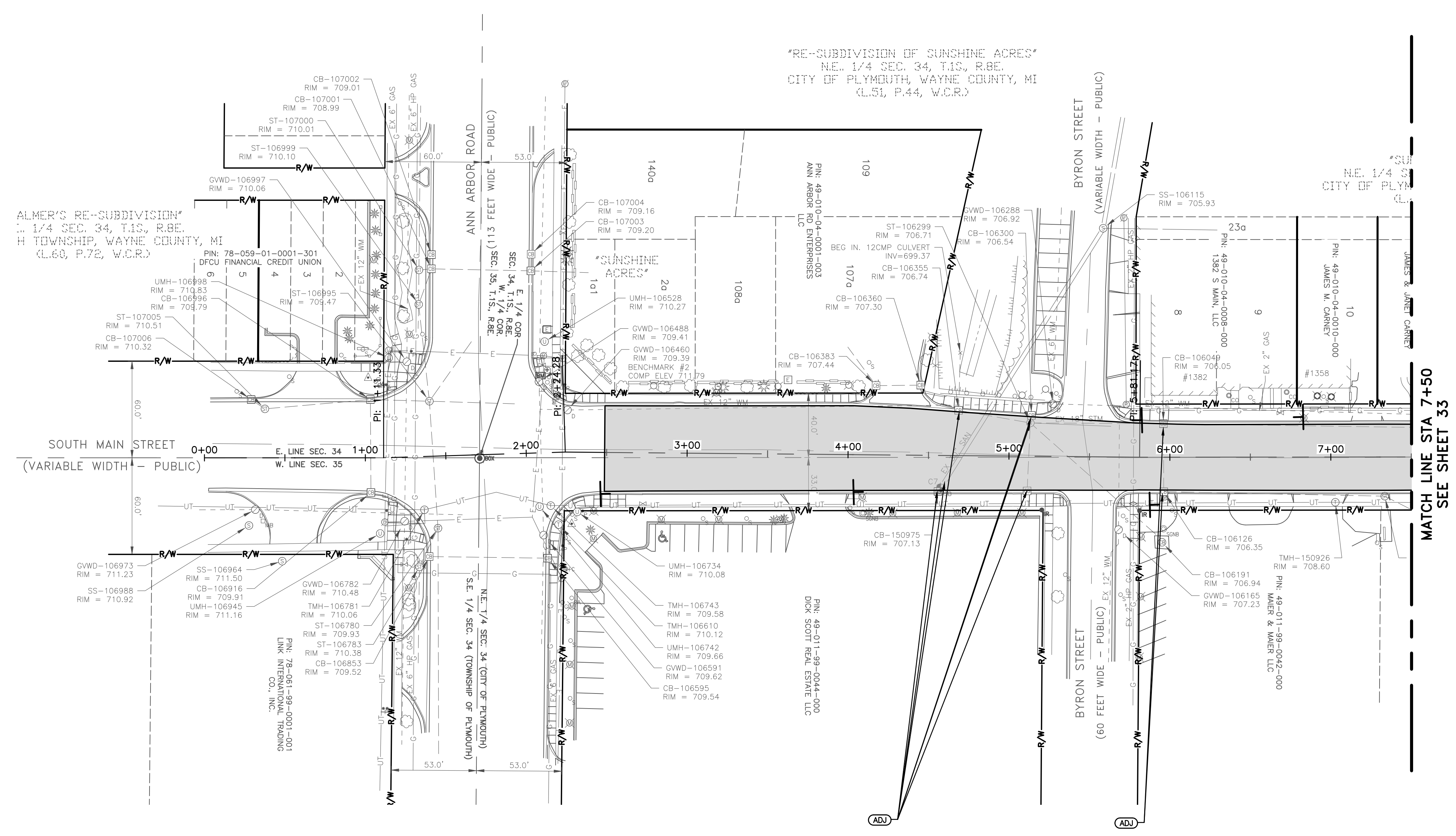
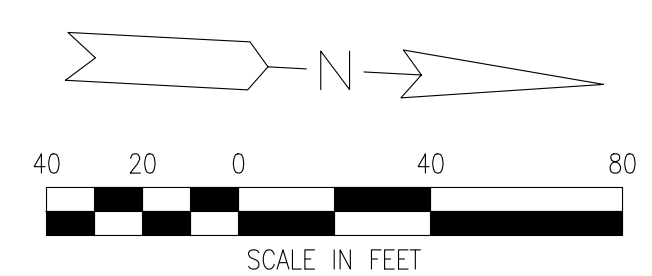
JOB NO: _____
PLY2129-01T

SHEET
31

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BENCHMARK#2 ELEV 711.79
 ARROW ON HYDRANT NORTHWEST QUADRANT OF
 ANN ARBOR ROAD AND MAIN STREET.

BENCHMARK#3 ELEV 713.53
 NORTHEAST BOLT ON LIGHT POST BASE,
 SOUTHWEST QUADRANT OF MAIN STREET AND
 SIMPSON AVENUE.



MATCH LINE STA 7+50
 SEE SHEET 33

PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\W\LA88\142269\CRD-PLT-S MAIN RESURFACE.DWG - LAYOUT - PLOTTED: 5/25/2024 12:54 PM BY: ELAHAGAN, MARTIN



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 WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 S MAIN STREET
 RESURFACING PLAN STA 0+00 TO STA 7+00
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM

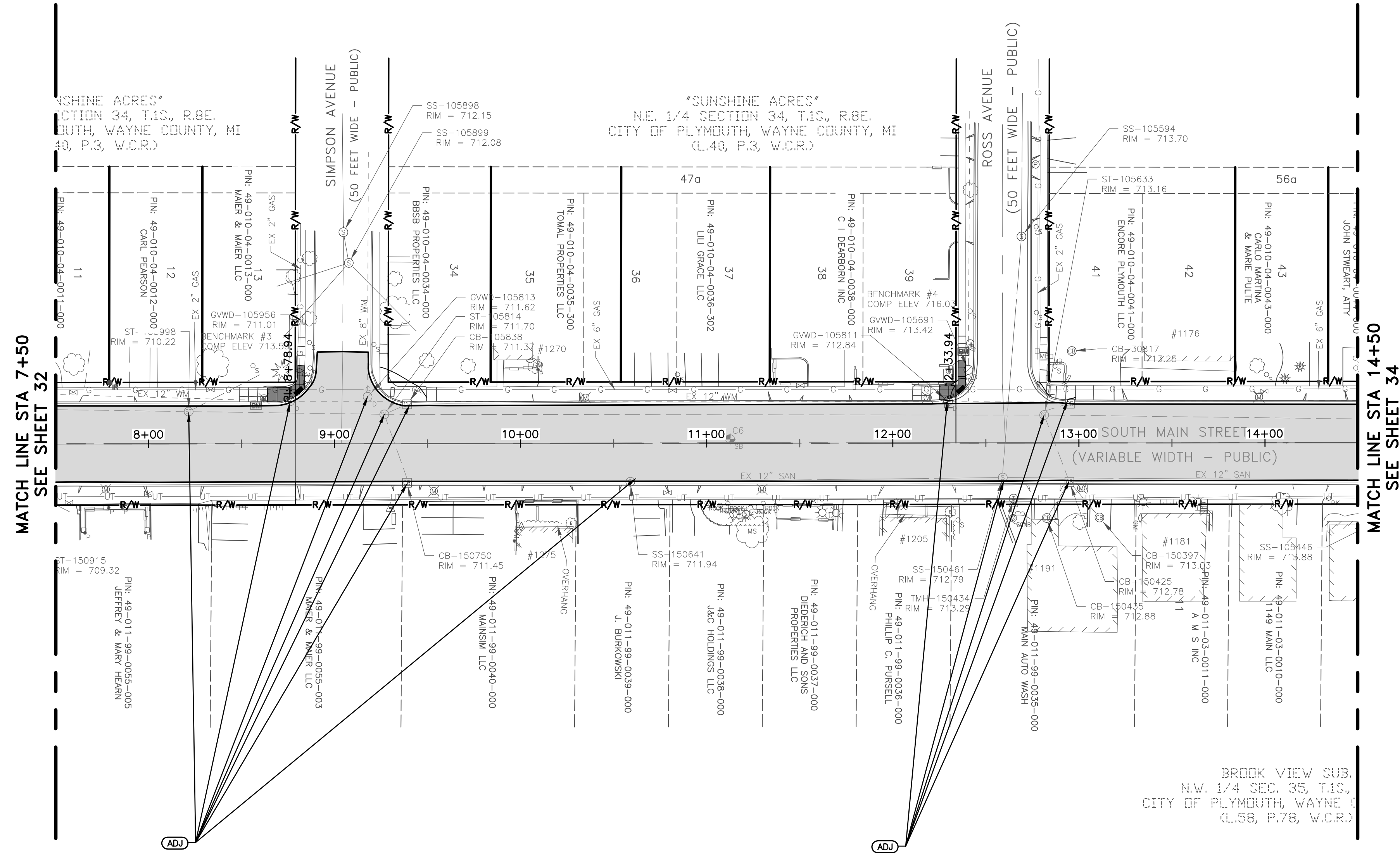
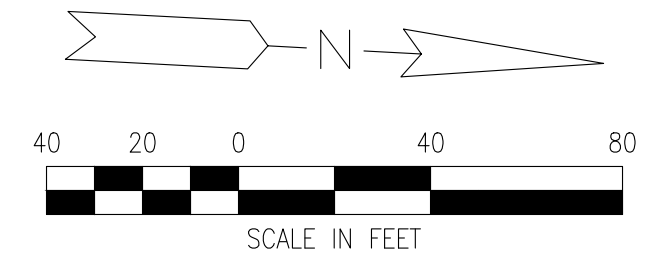
ISSUED FOR:	DATE:	BY:
BID	3-25-24	SWK
JOB NO.	PLY2129-01T	
SHEET	32	

SUMMARY OF QUANTITIES THIS SHEET

16	VF	RECONSTRUCT STRUCTURE
250	TON	BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
8	EA	CURB AND GUTTER, CONCRETE, DET F4
2690	LB	ADJUST STRUCTURE
6	EA	REMOVE AND REPLACE FRAME AND COVER
		INLET FILTER

BENCHMARK#4 ELEV 716.03
 ARROW ON HYDRANT SOUTHWEST QUADRANT OF
 MAIN STREET AND ROSS AVENUE.

BENCHMARK#5 ELEV 716.84
 NORTHEAST NUT ON HYDRANT NORTHWEST
 QUADRANT OF MAIN STREET AND HARTSOUGH.



PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\WILLAGRA\142689\CBD-PLTS-S MAIN RESURFACE.DWG - LAYOUT (2) - PLOTTED 3/25/2024 12:55 PM BY: FLANGAN, MARTIN



Know what's below.
 Call before you dig.

SUMMARY OF QUANTITIES THIS SHEET

24	VF	RECONSTRUCT STRUCTURE
310	TON	BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
350	LF	CURB AND GUTTER, CONCRETE, DET F4
12	EA	ADJUST STRUCTURE
4460	LB	REMOVE AND REPLACE FRAME AND COVER
4	EA	INLET FILTER

REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 RESURFACING PLAN STA 7+00 TO STA 14+50

ISSUED FOR: BID
 DATE: 3-25-24
 BY: SWK

JOB NO:
PLY2129-01T

SHEET
33

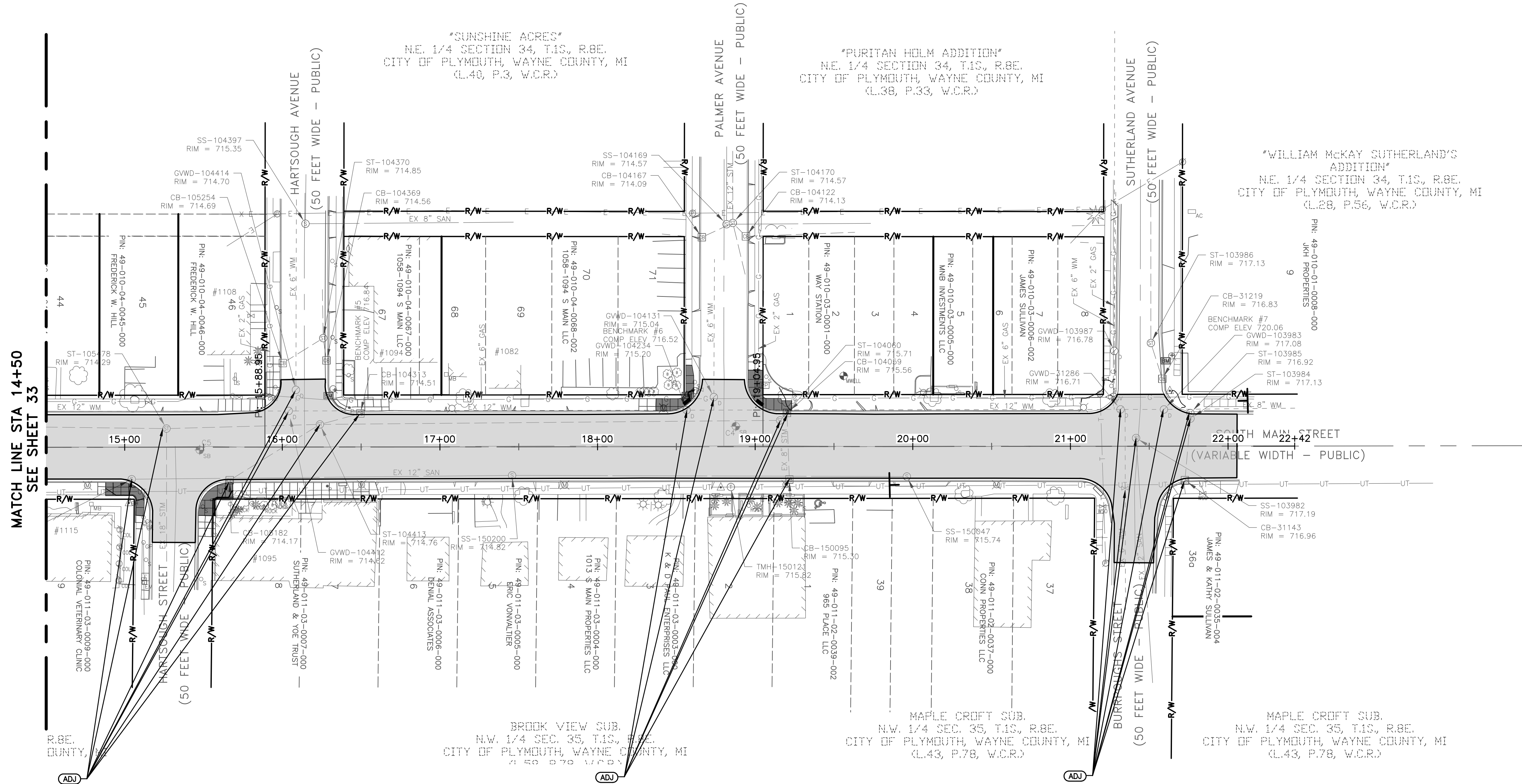
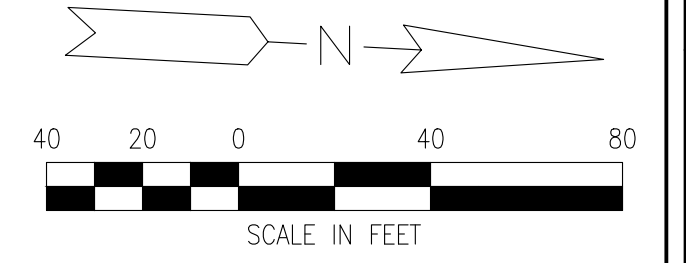
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BENCHMARK #6 ELEV 716.52

SOUTHEAST NUT ON HYDRANT SOUTHWEST QUADRANT OF PALMER AVENUE AND MAIN STREET.

BENCHMARK #7 ELEV 720.06

ARROW ON HYDRANT NORTHWEST QUADRANT OF MAIN STREET AND SUTHERLAND AVENUE.



PROJECT MANAGER: SWANN, KEOUGH
C:\P_L\WORK\WELAGARA\1422669\CBD-PLIS-S MAIN RESURFACE.DWG - LAYOUT (3) - PLOTTED 3/25/2024 12:55 PM BY: FLAVAGAN, MARTIN



REV#	DATE	DESCRIPTION

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
S MAIN STREET
RESURFACING PLAN STA 14+50 TO STA 22+05

ISSUED FOR:
 BID

DATE:
 3-25-24

BY:
 SWK

JOB NO.
 PLY2129-01T

SHEET
 34

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SUMMARY OF QUANTITIES THIS SHEET

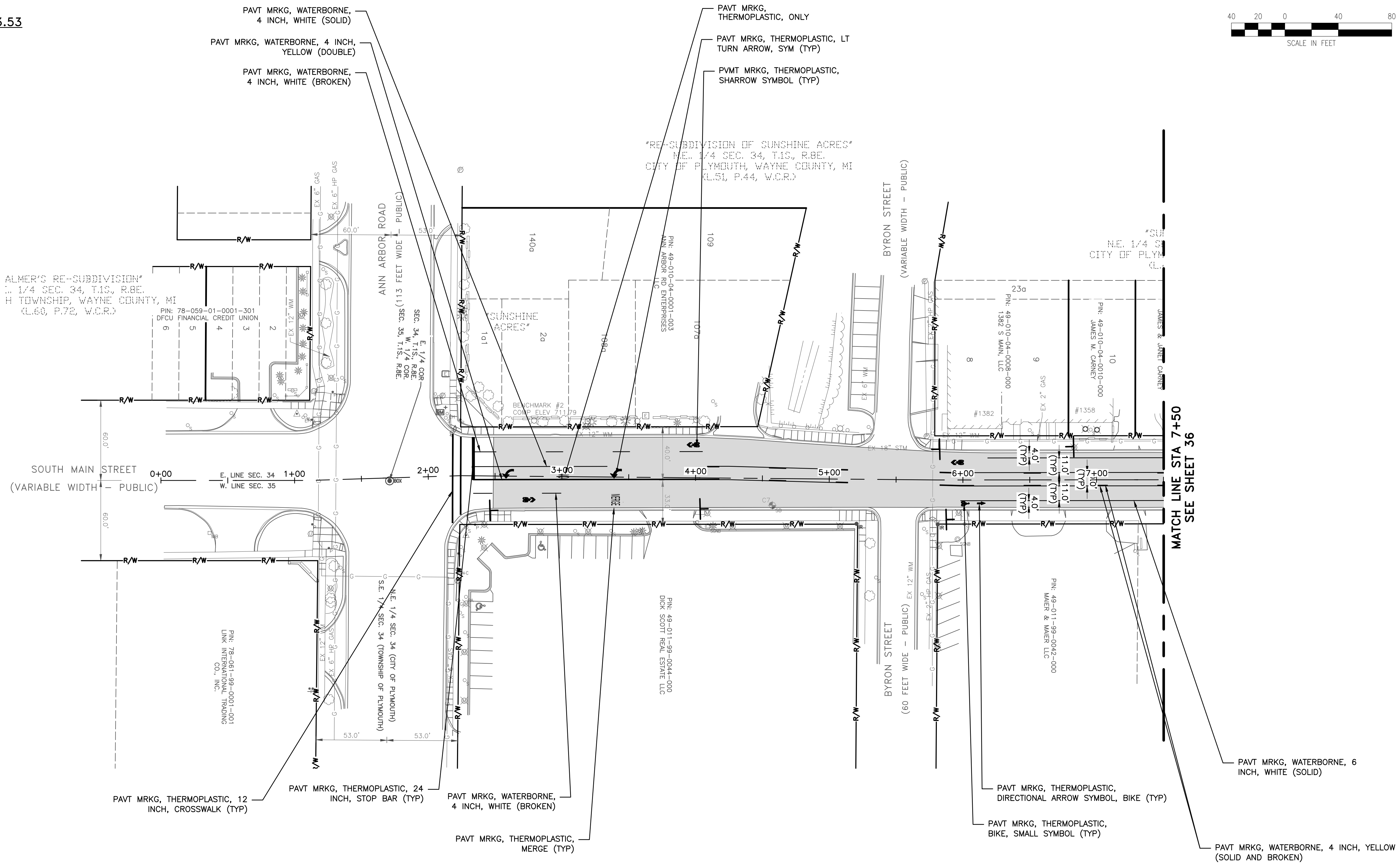
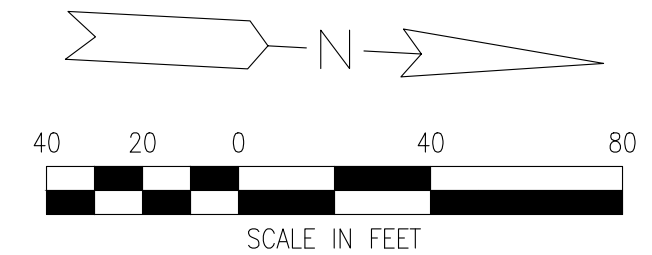
38	VF	RECONSTRUCT STRUCTURE
350	TON	BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
500	LF	CURB AND GUTTER, CONCRETE, DET F4
19	EA	ADJUST STRUCTURE
7175	LB	REMOVE AND REPLACE FRAME AND COVER
5	EA	INLET FILTER

BENCHMARK#2 ELEV 711.79

ARROW ON HYDRANT NORTHWEST QUADRANT OF ANN ARBOR ROAD AND MAIN STREET.

BENCHMARK#3 ELEV 713.53

NORTHEAST BOLT ON LIGHT POST BASE, SOUTHWEST QUADRANT OF MAIN STREET AND SIMPSON AVENUE.



- PAVT MRKG, WATERBORNE, 4 INCH, WHITE (SOLID)
- PAVT MRKG, WATERBORNE, 4 INCH, YELLOW (DOUBLE)
- PAVT MRKG, WATERBORNE, 4 INCH, WHITE (BROKEN)

- PAVT MRKG, THERMOPLASTIC, ONLY
- PAVT MRKG, THERMOPLASTIC, LT TURN ARROW, SYM (TYP)
- PVMT MRKG, THERMOPLASTIC, SHARROW SYMBOL (TYP)

PAVT MRKG, THERMOPLASTIC, 12 INCH, CROSSWALK (TYP)

PAVT MRKG, THERMOPLASTIC, 24 INCH, STOP BAR (TYP)

PAVT MRKG, WATERBORNE, 4 INCH, WHITE (BROKEN)

PAVT MRKG, THERMOPLASTIC, MERGE (TYP)

PAVT MRKG, THERMOPLASTIC, DIRECTIONAL ARROW SYMBOL, BIKE (TYP)

PAVT MRKG, THERMOPLASTIC, BIKE, SMALL SYMBOL (TYP)

PAVT MRKG, WATERBORNE, 6 INCH, WHITE (SOLID)

PAVT MRKG, WATERBORNE, 4 INCH, YELLOW (SOLID AND BROKEN)

SUMMARY OF QUANTITIES THIS SHEET

1	LS	PAVEMENT MARKING
---	----	------------------

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\W\LAGAR\1422689\CRD-PLTS-S MAIN RESURFACE PAVEMENT MARKING.DWG - LAYOUT1 - PLOTTED: 3/25/2024 12:55 PM BY: ELANGCAN, MARTIN



Know what's below. Call before you dig.

REV#	DATE	DESCRIPTION	BY

20251 Northline Rd.
Taylor, MI 48180
www.wadetrim.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
S MAIN STREET - PAVEMENT MARKING PLAN
STA 0+00 TO STA 7+50

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO: PLY2129-01T

SHEET 35

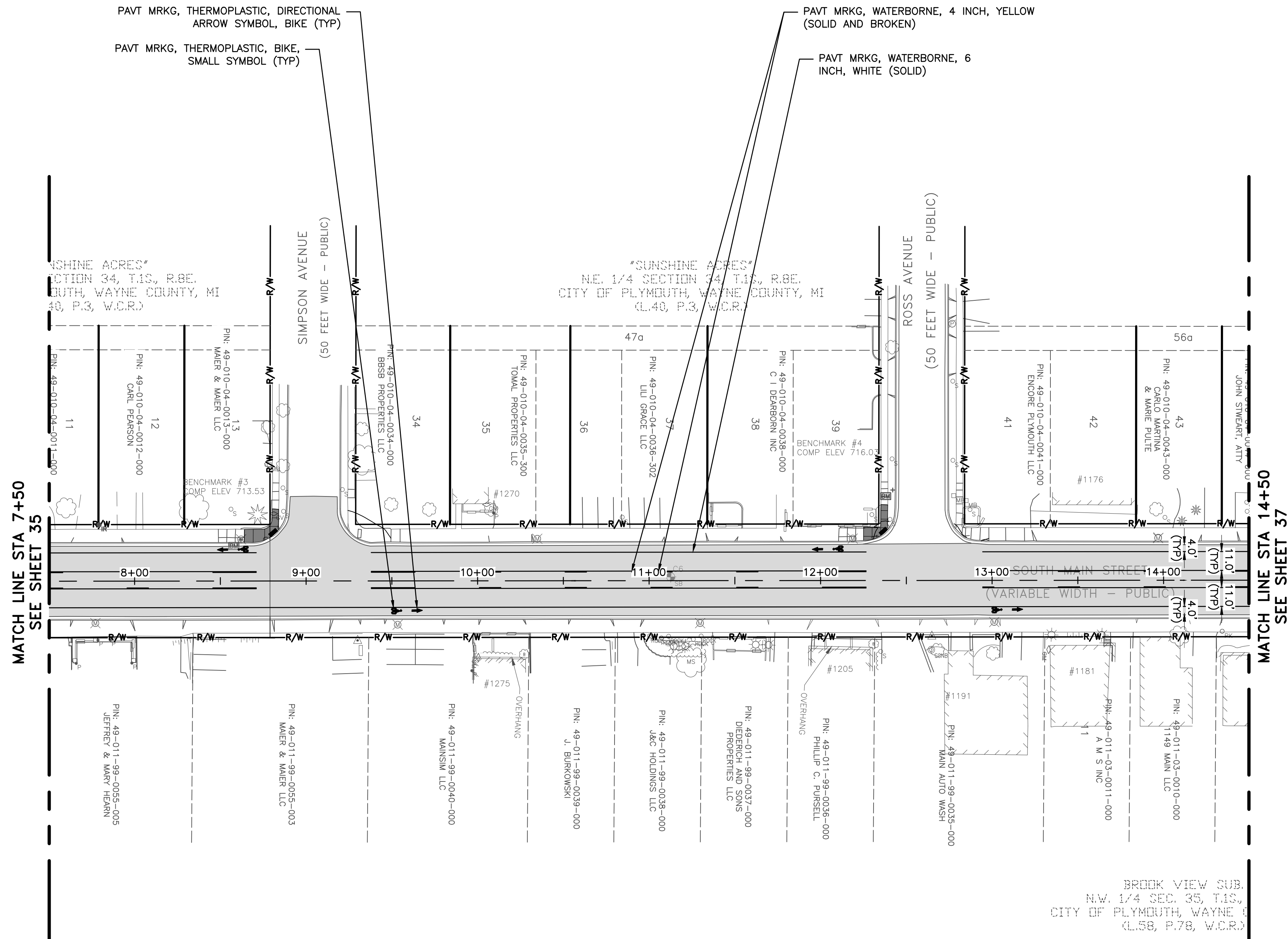
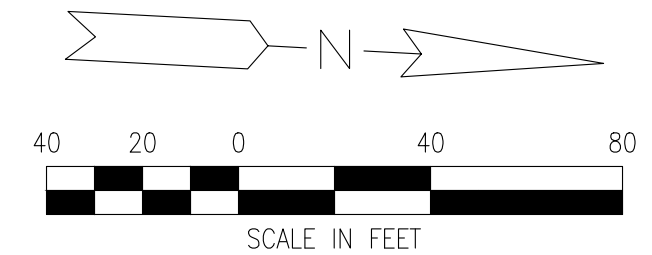
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BENCHMARK#4 ELEV 716.03

ARROW ON HYDRANT SOUTHWEST QUADRANT OF MAIN STREET AND ROSS AVENUE.

BENCHMARK#5 ELEV 716.84

NORTHEAST NUT ON HYDRANT NORTHWEST QUADRANT OF MAIN STREET AND HARTSOUGH.



PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\FLANAGAN\1422683\CBD-PLTS-S MAIN RESURFACE PAVEMENT MARKING.DWG - LAYOUT1 (2) - PLOTTED 3/25/2024 12:55 PM BY: FLANAGAN, MARTIN



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SUMMARY OF QUANTITIES THIS SHEET
1 LS PAVEMENT MARKING

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CITY OF PLYMOUTH
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WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
S MAIN STREET - PAVEMENT MARKING PLAN
STA 7+50 TO STA 14+50

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
36

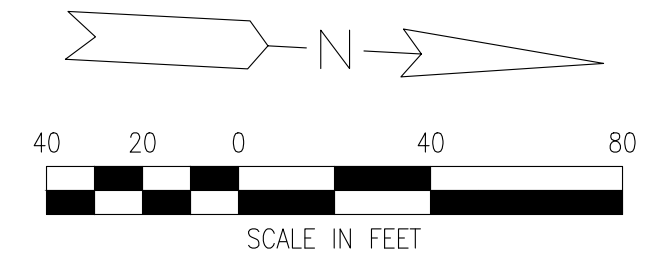
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BENCHMARK #6 ELEV 716.52

SOUTHEAST NUT ON HYDRANT SOUTHWEST QUADRANT OF PALMER AVENUE AND MAIN STREET.

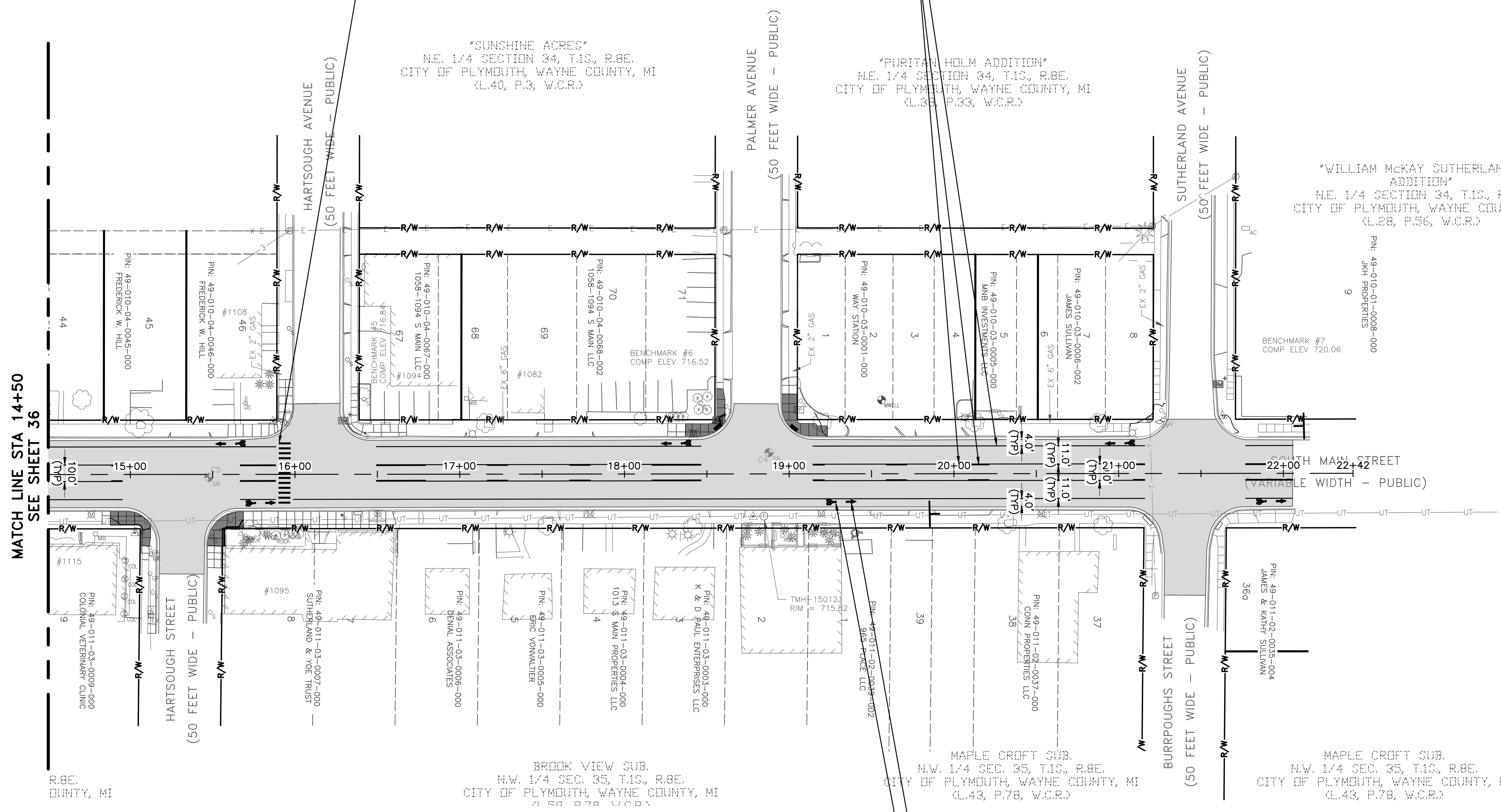
BENCHMARK #7 ELEV 720.06

ARROW ON HYDRANT NORTHWEST QUADRANT OF MAIN STREET AND SUTHERLAND AVENUE.



SPECIAL EMPHASIS CROSSWALK. PAVT MRKG, THERMOPLASTIC, 12 INCH, CROSSWALK, WHITE (TYP)
NOTE: THE PROPOSED LOCATION OF THIS CROSSWALK MAY SHIFT TO THE NORTH SIDE OF HARTSOUGH STREET DEPENDING ON THE FINAL DETERMINED LOCATION OF THE RECTANGULAR RAPID FLASHING BEACON (RRFB).

PAVT MRKG, WATERBORNE, 6 INCH, WHITE (SOLID)
PAVT MRKG, WATERBORNE, 4 INCH, YELLOW (SOLID AND BROKEN)



MATCH LINE STA 14+50 SEE SHEET 36

SUMMARY OF QUANTITIES THIS SHEET

1	LS	PAVEMENT MARKING
---	----	------------------

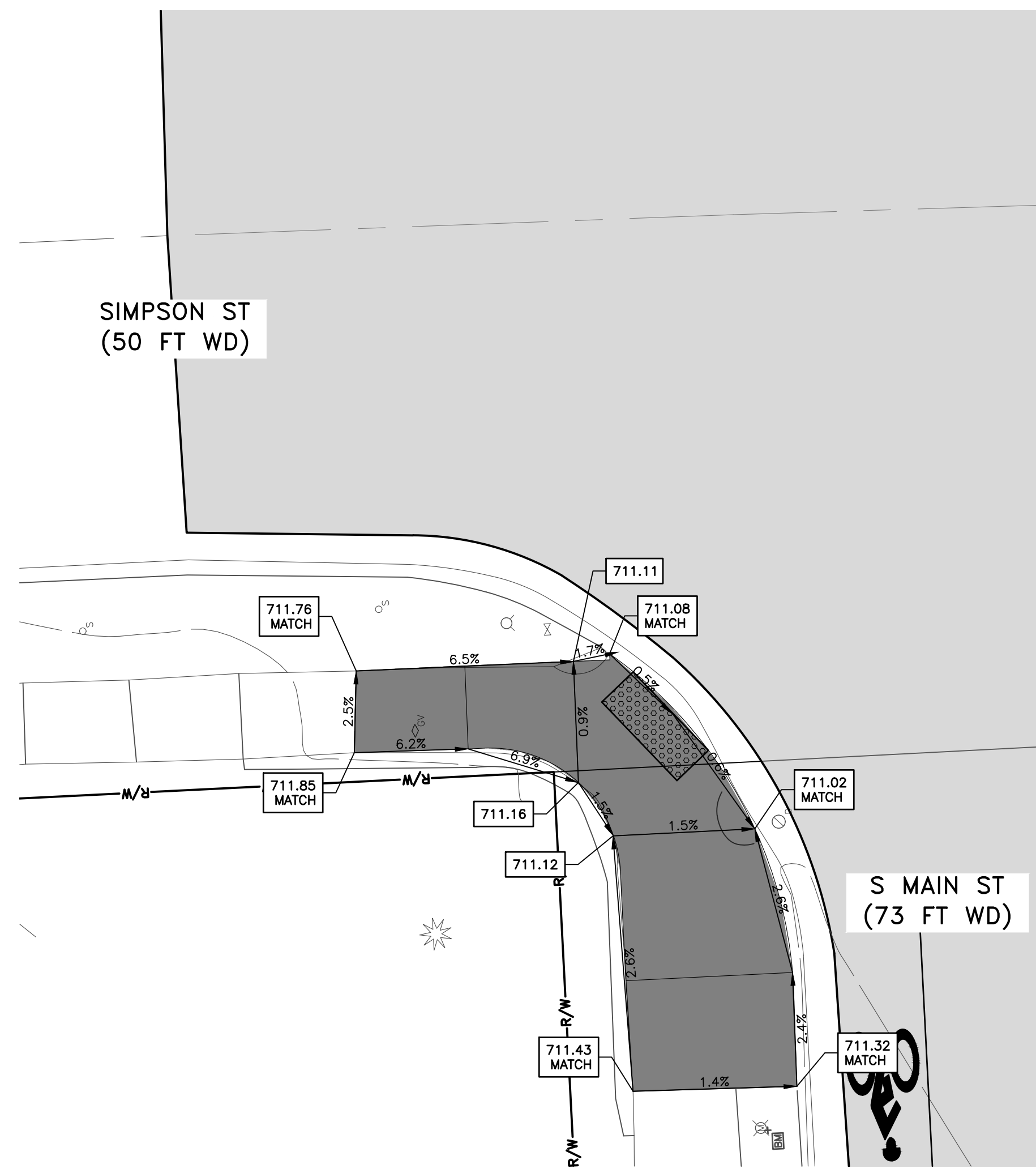
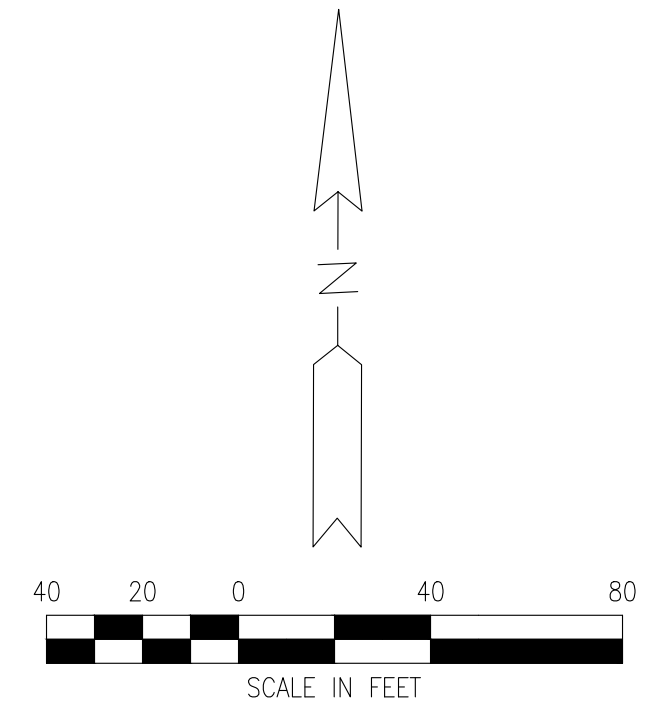
PROJECT MANAGER: SHAWN KEOUGH
CITY WORK: WILLAGRA, LD 422889 \CDD-PLTS-S MAIN RESURFACE PAVEMENT MARKING.DWG - LAYOUT (3) - PLOTTED 3/25/2024 12:55 PM BY: FLANAGAN, MARTIN



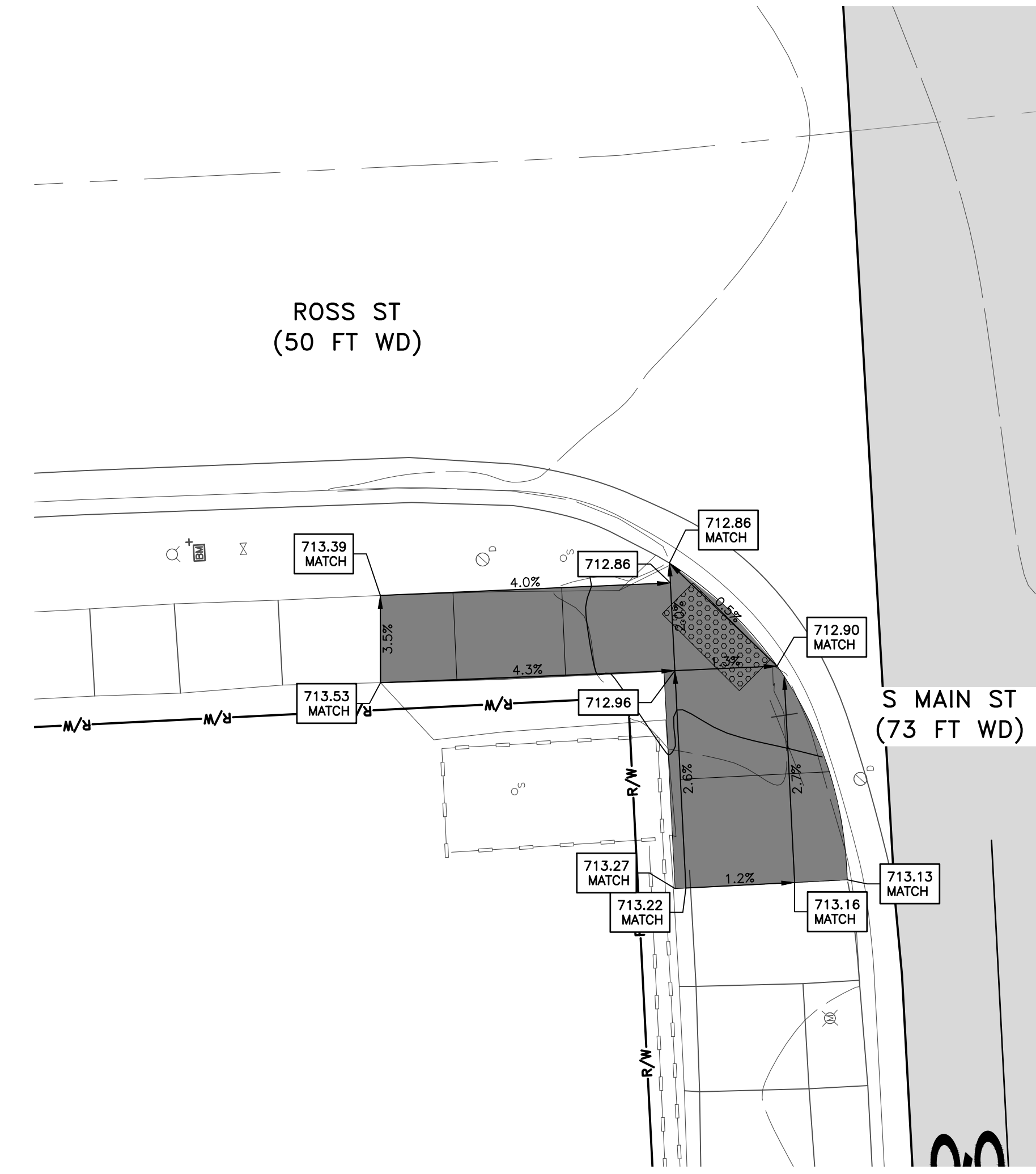
CITY OF PLYMOUTH 201 S MAIN ST WAYNE COUNTY, MICHIGAN 48170		 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM S MAIN STREET - PAVEMENT MARKING PLAN STA 14+50 TO STA 22+05	ISSUED FOR: BID	DATE: 3-25-24	BY: SWK
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM STA 14+50 TO STA 22+05			REV#	DATE	DESCRIPTION

JOB NO. PLY2129-01T
SHEET 37

PROJECT MANAGER: SHAWN KEOUGH
 C:\P_L\WORK\WILLAGRA\LD\426269\CAD-PLTS-S MAIN RESURFACE-ADA.DWG - ADA RAMPS 1 - PLOTTED 3/25/2024 12:55 PM BY: FLANAGAN, MARTIN



SIDEWALK RAMP
 S MAIN STREET AND SIMPSON STREET
 (WEST SIDE)



SIDEWALK RAMP
 S MAIN STREET AND ROSS STREET
 (WEST SIDE)

NOTES:

- SIDEWALK RAMPS SHALL BE INSTALLED PER ADA AND ACCESS PEDESTRAIN SIGNALS COMPLIANCE, WHICH INCLUDE, BUT IS NOT LIMITED TO 10-FOOT CLEARANCE BETWEEN PUSHBUTTONS AND LANDINGS WITHIN 2-FOOT OF PUSHBUTTONS. REFER TO MDOT DESIGN GUIDE SIG-DESIGN-120-A.
- IF THE CONSTRUCTED SIDEWALK IS FOUND TO EXCEED THE MAXIMUM TRANSVERSE SLOPE OF 2% OR LONGITUDINAL SLOPE AT RAMPS OF 8.3%, THE SIDEWALK SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL PROTECT ALL BRICK PAVER AREAS ADJACENT TO SIDEWALKS AND SIDEWALK RAMPS.

SUMMARY OF QUANTITIES THIS SHEET

100	SF	6-INCH CONCRETE SIDEWALK RAMP, ADA
500	SF	4-INCH CONCRETE SIDEWALK

REV#	DATE	DESCRIPTION	BY

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 www.wade-trim.com



CITY OF PLYMOUTH
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 WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 ADA RAMPS - S MAIN AT SIMPSON AND ROSS

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET 38

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PROJECT MANAGER: SHAWN KEOUGH
 C:\P_L\WORK\WELLAGRA\1422889\CRD-PLTS-S MAIN RESURFACE-ADA.DWG - ADA RAMPS 2 - PLOTTED 3/25/2024 12:55 PM BY FLANAGAN, MARTIN

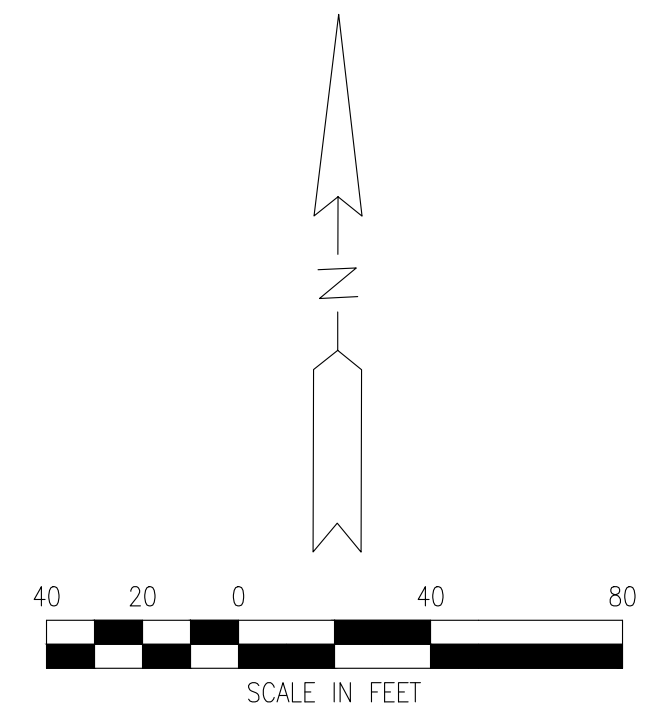


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SIDEWALK RAMP

S MAIN STREET AND PALMER STREET
 (WEST SIDE)



NOTES:

1. SIDEWALK RAMPS SHALL BE INSTALLED PER ADA AND ACCESS PEDESTRAIN SIGNALS COMPLIANCE, WHICH INCLUDE, BUT IS NOT LIMITED TO 10-FOOT CLEARANCE BETWEEN PUSHBUTTONS AND LANDINGS WITHIN 2-FOOT OF PUSHBUTTONS. REFER TO MDOT DESIGN GUIDE SIG-DESIGN-120-A.
2. IF THE CONSTRUCTED SIDEWALK IS FOUND TO EXCEED THE MAXIMUM TRANSVERSE SLOPE OF 2% OR LONGITUDINAL SLOPE AT RAMPS OF 8.3%, THE SIDEWALK SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL PROTECT ALL BRICK PAVER AREAS ADJACENT TO SIDEWALKS AND SIDEWALK RAMPS.

SUMMARY OF QUANTITIES THIS SHEET

150	SF	6-INCH CONCRETE SIDEWALK RAMP, ADA
600	SF	4-INCH CONCRETE SIDEWALK

REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
 201 S MAIN ST
 WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 S MAIN STREET
 ADA RAMPS - S MAIN AND PALMER

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET 39

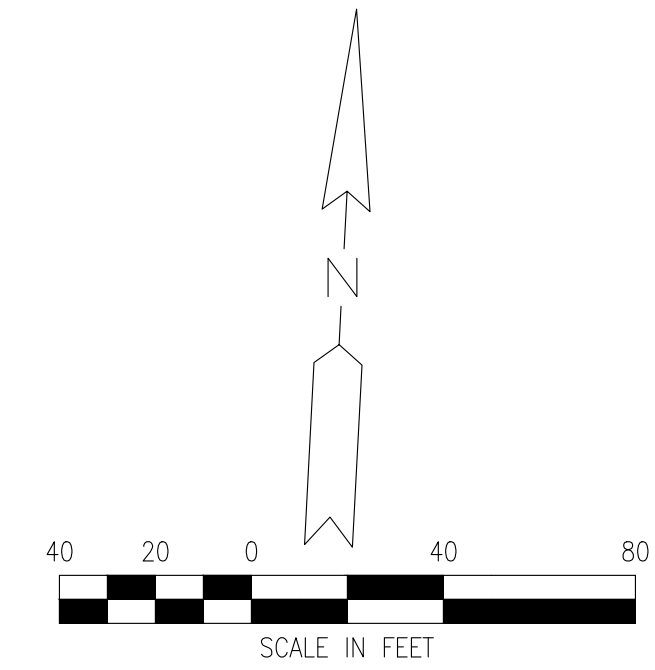
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BENCHMARK#11 ELEV 736.75

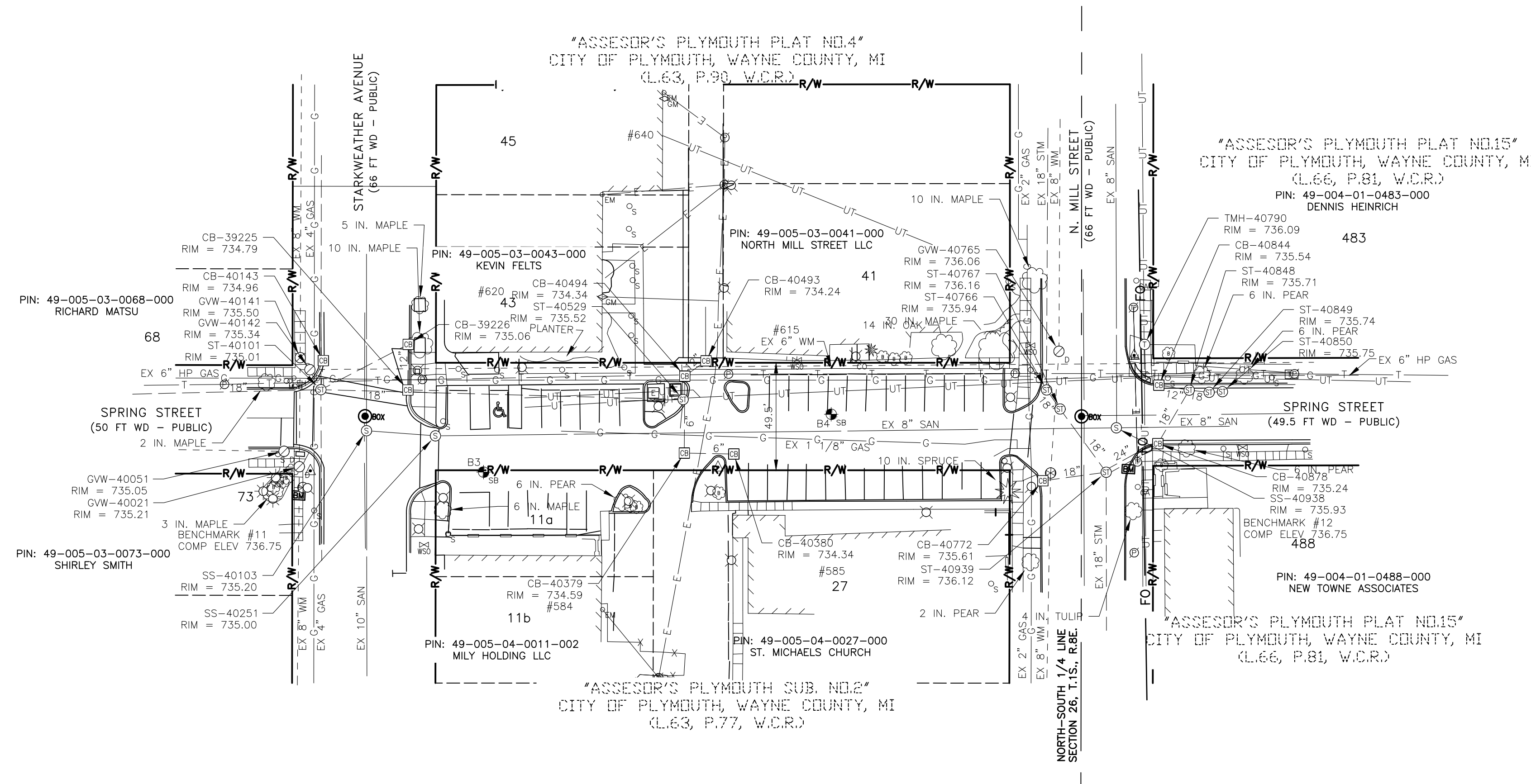
SET MAG. NAIL NORTH SIDE OF UTILITY POLE/LIGHT POLE
SOUTHEAST SIDE OF E. SPRING ST. AND N. MILL ST.

BENCHMARK#12 ELEV 737.60

ARROW ON HYDRANT, SOUTHWEST CORNER OF W. SPRING
ST. AND STARKWEATHER AVE.



STRUCTURE INVENTORY



CB-39225 RIM = 734.79 12" CONC NORTH INVERT = 728.04 12" CONC SOUTH INVERT = 728.04 4" PLASTIC EAST INVERT = 729.09	GVWD-40765 RIM = 736.06 8" STEEL EAST/WEST T/P = 732.06
CB-39226 RIM = 735.06 (NO VISIBLE PIPE)	ST-40766 RIM = 735.95 18" RCP SOUTHEAST INVERT = 727.35 18" RCP NORTHWEST INVERT = 727.35
GVWD-40021 RIM = 735.21 8" STEEL NORTH/SOUTH T/P = 730.21	ST-40767 RIM = 736.17 18" RCP SOUTH INVERT = 727.17 18" RCP NORTHWEST INVERT = 727.17
GVWD-40051 RIM = 735.05 8" STEEL EAST/WEST T/P = 730.05	CB-40772 RIM = 735.61 12" RCP EAST INVERT = 732.51
SS-40103 RIM = 735.20 (NOT MEASURED)	CB-40844 RIM = 735.54 12" RCP EAST INVERT = 732.04
GVWD-40141 RIM = 735.50 8" STEEL NORTH/SOUTH T/P = 729.50	ST-40848 RIM = 735.71 18" RCP EAST INVERT = 728.81 18" RCP SOUTHWEST INVERT = 728.71 12" RCP WEST INVERT = 730.81
GVWD-40142 RIM = 735.34 8" STEEL EAST/WEST T/P = 729.34	ST-40849 RIM = 735.74 18" RCP WEST INVERT = 728.84
CB-40143 RIM = 734.96 12" RCP SOUTH INVERT = 730.96	ST-40850 RIM = 735.75 (NOT MEASURED)
SS-40251 RIM = 735.00 10" CLAY WEST/NORTHWEST INVERT = 723.45 10" CLAY EAST INVERT = 723.43	CB-40878 RIM = 735.24 18" RCP NORTHEAST INVERT = 728.54 24" RCP SOUTHWEST INVERT = 728.24
CB-40379 RIM = 734.59 6" CLAY NORTH INVERT = 730.19 6" PVC EAST INVERT = 730.94	SS-40938 RIM = 735.93 8" CLAY EAST INVERT = 722.33 8" CLAY WEST INVERT = 722.38 8" CLAY NORTH INVERT = 723.93
CB-40380 RIM = 734.34 6" PVC WEST INVERT = 731.64	ST-40939 RIM = 736.12 18" RCP SOUTH INVERT = 727.12 18" RCP NORTHEAST INVERT = 728.22 12" RCP WEST INVERT = 731.92
CB-40493 RIM = 734.24 12" RCP SOUTHWEST INVERT = 731.24	
CB-40494 RIM = 734.34 8" CLAY SOUTH INVERT = 729.99 12" RCP NORTHEAST INVERT = 731.09	
ST-40529 RIM = 735.52 18" RCP WEST INVERT = 727.42 18" RCP EAST INVERT = 727.32 8" CLAY NORTH INVERT = 729.22 6" CLAY SOUTH INVERT = 729.12	

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELLAGRA\1402689\SP-PLTS-EX_CON_SPRING.DWG - LAYOUT1 - PLOTTED 9/25/2024 12:55 PM BY FLANAGAN, MARTIN



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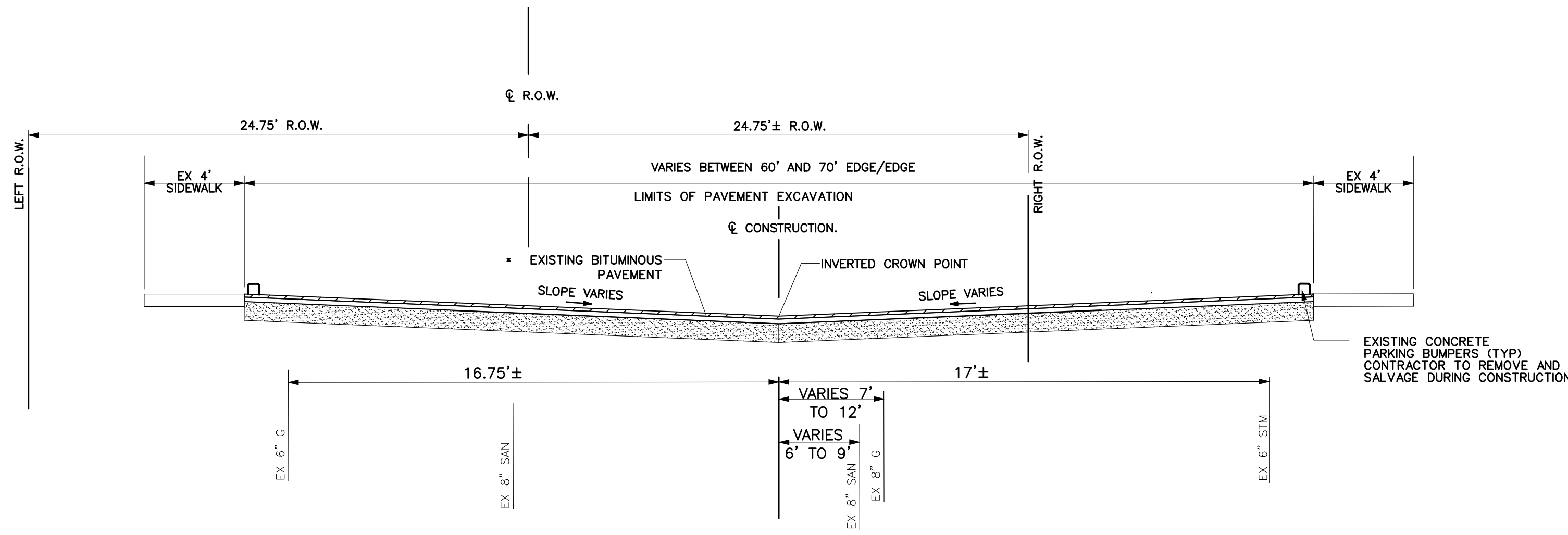
CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
SPRING STREET
EXISTING CONDITIONS

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
40

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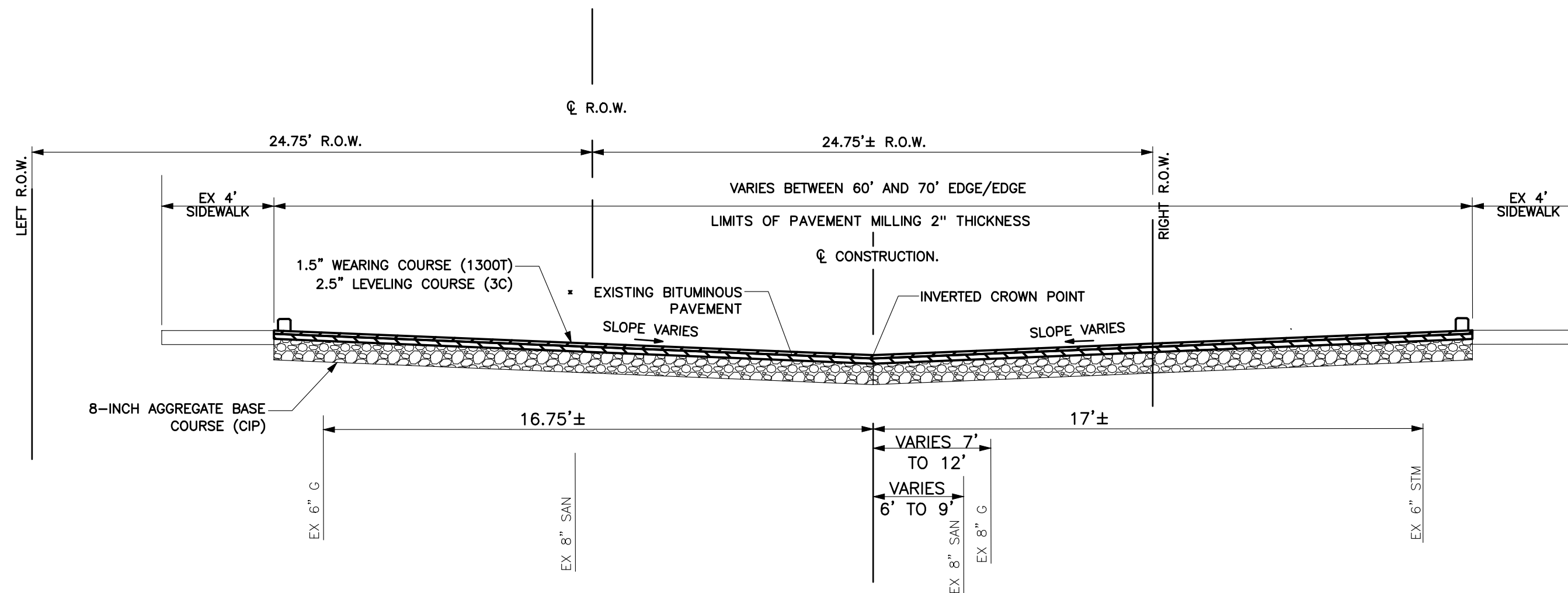
* PAVEMENT CORES INDICATE EXISTING AVERAGE BITUMINOUS PAVEMENT THICKNESS OF 4.125" AND EXISTING BASE OF 8.625". ONE CORE INDICATED 8" OF SAND AND THE OTHER CORE INDICATED 8.75" OF CRUSHED CONCRETE. PLEASE SEE PAVEMENT CORES FOR MORE DETAIL.

BORING	ROAD	ASPHALT	CONCRETE	BASE	BASE MATERIAL
B3	SPRING	5"	NOT ENCOUNTERED	NOT ENCOUNTERED	NOT ENCOUNTERED
B4	SPRING	3.25"	NOT ENCOUNTERED	8.75"	CRUSHED CONCRETE

INFORMATION IN THE ABOVE CHART IS TAKEN FROM THE SMC GEOTECHNICAL REPORT. FOR FURTHER DETAILS PLEASE SEE REPORT FOUND IN THE PROPOSAL

EXISTING TYPICAL CROSS SECTION SPRING STREET

P.O.B. STA 0+94.80 TO P.O.E. STA 3+72.52
NOT TO SCALE



PROPOSED TYPICAL CROSS SECTION SPRING STREET

P.O.B. STA 0+94.80 TO P.O.E. STA 3+72.52
NOT TO SCALE

HMA APPLICATION ESTIMATE

IDENTIFICATION NO.	RATE PER SYD	PERFORMANCE GRADE	REMARKS
1300T	165*	64-22	WEARING
3C	275*	64-22	LEVELING

* BOND COAT 0-0.10 GAL/SYD FOR INFORMATION ONLY

PROJECT MANAGER: SHAWN KEOUGH
C:\PLANS\WORK\WFLA\GARDN\LD\425889\CTP\PLS-TYPICALS.DWG - SPRING TYP - PLOTTED: 3/29/2024 12:55 PM BY: FLAMGAM, MARTIN



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CITY OF PLYMOUTH
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WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
SPRING STREET
EXISTING AND PROPOSED TYPICALS

ISSUED FOR: DATE: BY:
BY: 3-25-24 SWK

JOB NO.
PLY2129-01T

SHEET
41

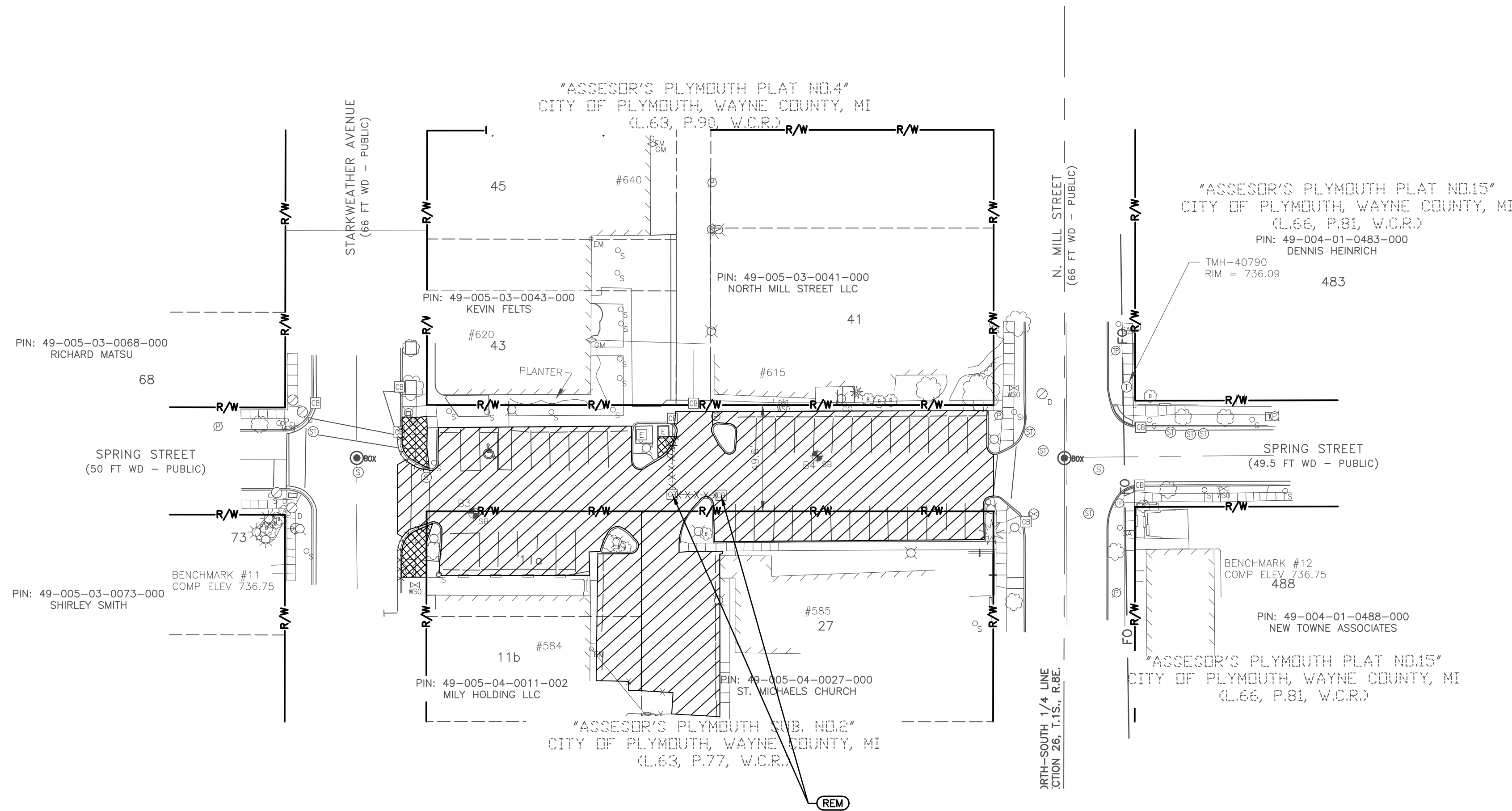
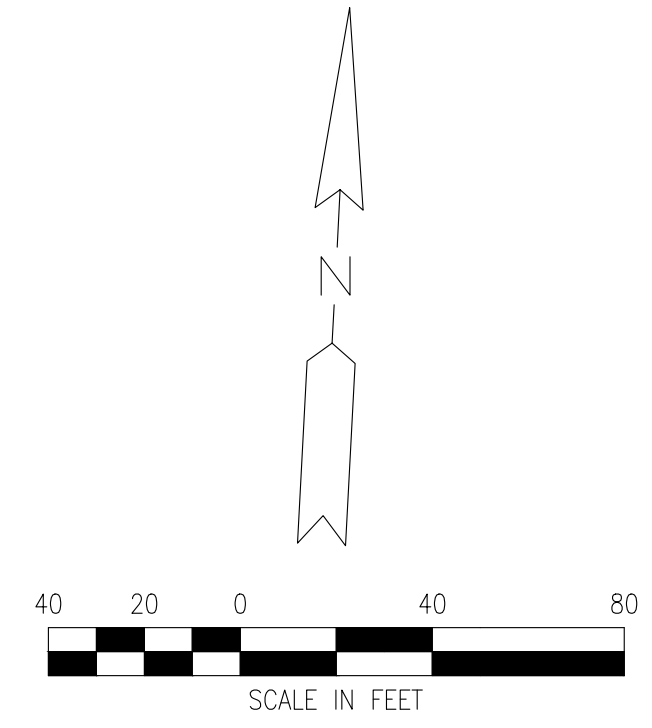
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BENCHMARK#11 ELEV 736.75

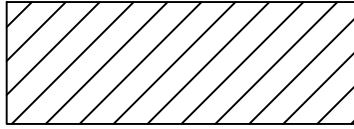
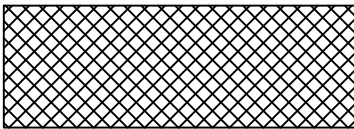
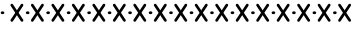
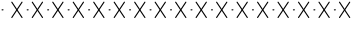
SET MAG. NAIL NORTH SIDE OF UTILITY POLE/LIGHT POLE
SOUTHEAST SIDE OF E. SPRING ST. AND N. MILL ST.

BENCHMARK#12 ELEV 737.60

ARROW ON HYDRANT, SOUTHWEST CORNER OF W. SPRING
ST. AND STARKWEATHER AVE.



LEGEND

-  PAVEMENT EXCAVATION
-  CONCRETE DRIVE AND SIDEWALK, REMOVE
-  REMOVE UTILITY
-  REMOVE CURB

SUMMARY OF QUANTITIES THIS SHEET

600	CY	PAVEMENT EXCAVATION
700	SF	CONCRETE DRIVES AND SIDEWALK, REMOVE
50	LF	STORM SEWER REMOVE
120	LF	CURB AND GUTTER, REMOVE
2	EA	REMOVE STRUCTURE

PROJECT MANAGER: SHAWN KEOUGH
C:\P\WORK\WELLAGAN\1402689\CRM-PLTS-SPRING REMOVAL.DWG - LAYOUT1 - PLOTTED 3/25/2024 12:56 PM BY ELANAGAN, MARTIN



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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
SPRING STREET
REMOVAL PLAN

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO.
PLY2129-01T

SHEET
42

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BENCHMARK#11 ELEV 736.75

SET MAG. NAIL NORTH SIDE OF UTILITY POLE/LIGHT POLE
SOUTHEAST SIDE OF E. SPRING ST. AND N. MILL ST.

BENCHMARK#12 ELEV 737.60

ARROW ON HYDRANT, SOUTHWEST CORNER OF W. SPRING
ST. AND STARKWEATHER AVE.

ADJUST RIM
12" INV S = 727.42
25 LF 12" CL IV CONC STORM SEWER, TRENCH B @ 0.5%

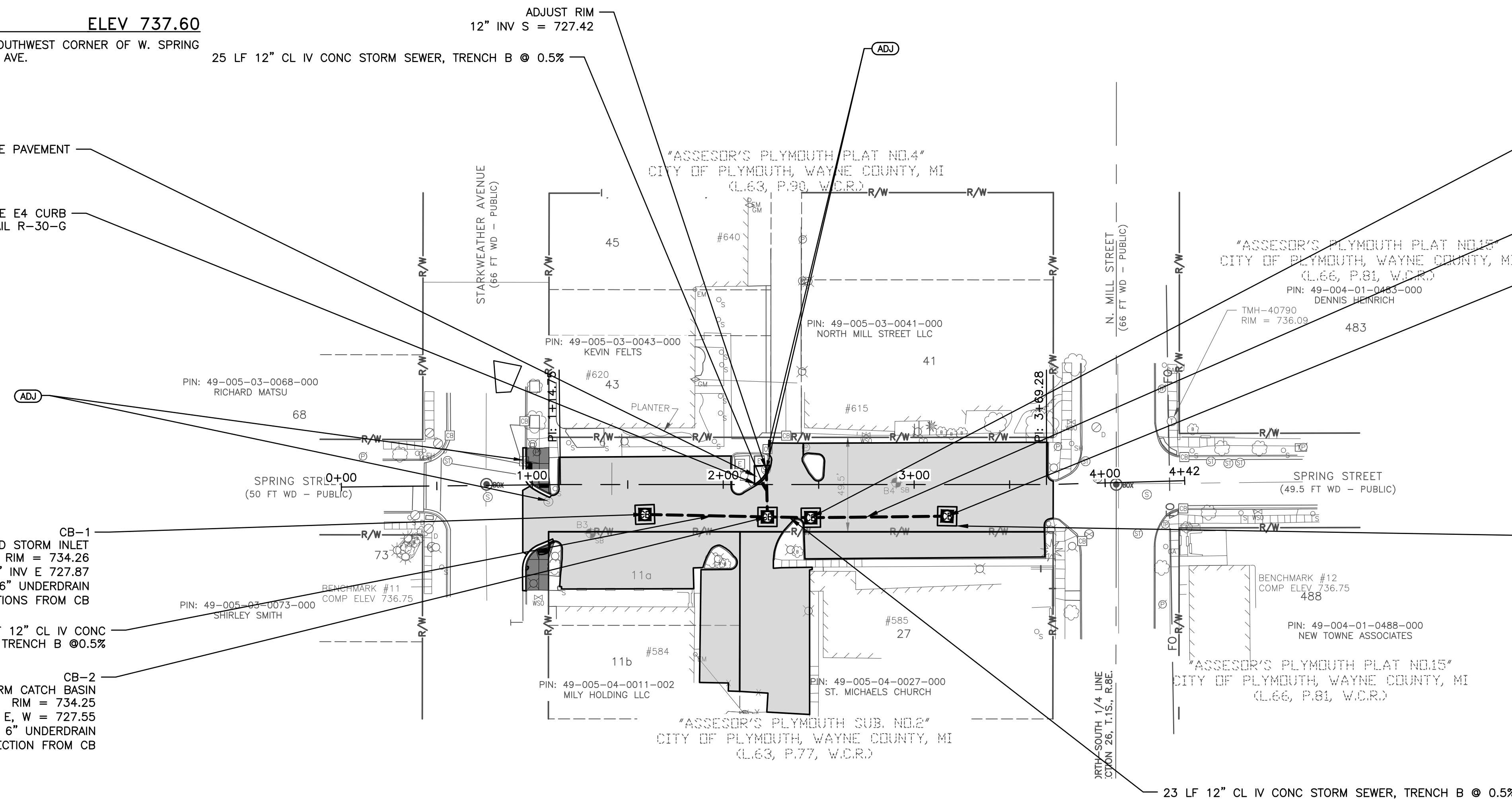
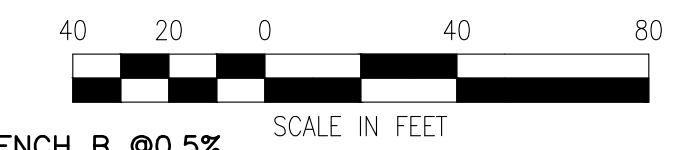
PROPOSED CONCRETE PAVEMENT

PROPOSED CONCRETE E4 CURB
PER MDT DETAIL R-30-G

CB-3
STANDARD STORM CATCH BASIN
RIM = 734.25
12" INV E, W = 727.67
PLACE 6" UNDERDRAIN
10' IN 2 DIRECTIONS FROM CB

72 LF 12" CL IV CONC STORM SEWER, TRENCH B @ 0.5%

CB-4
STANDARD STORM INLET
RIM = 734.32
12" INV W 728.03
PLACE 6" UNDERDRAIN
10' IN 3 DIRECTIONS FROM CB



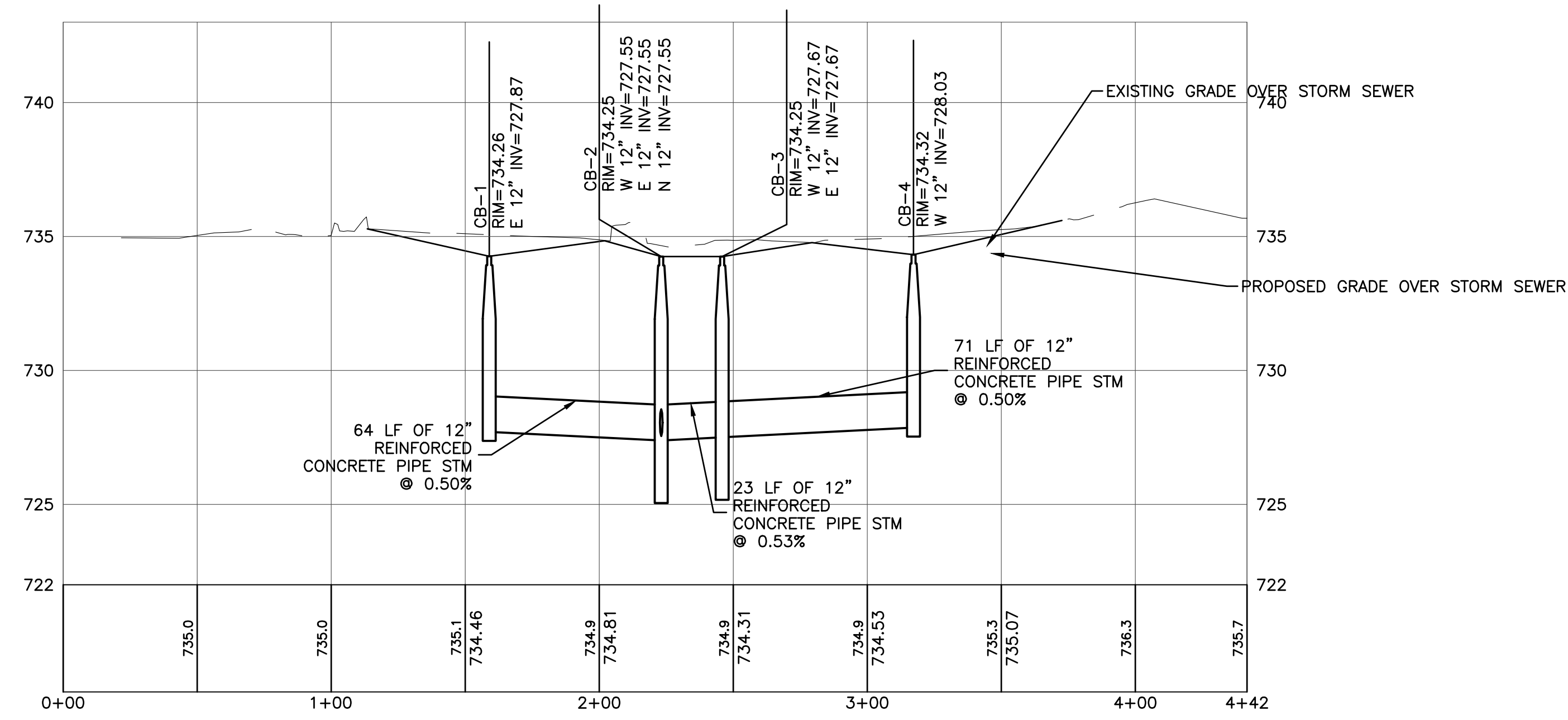
CB-1
STANDARD STORM INLET
RIM = 734.26
12" INV E 727.87
PLACE 6" UNDERDRAIN
10' IN 3 DIRECTIONS FROM CB

64 LF 12" CL IV CONC
STORM SEWER, TRENCH B @ 0.5%

CB-2
STANDARD STORM CATCH BASIN
RIM = 734.25
12" INV N, E, W = 727.55
PLACE 6" UNDERDRAIN
10' IN 1 DIRECTION FROM CB

23 LF 12" CL IV CONC STORM SEWER, TRENCH B @ 0.5%

10'X10' CONCRETE COLLAR (TYP)



SUMMARY OF QUANTITIES THIS SHEET

100	CY	SUBGRADE UNDERCUT AND 21AA AGGREGATE BACKFILL
8	VF	RECONSTRUCT STRUCTURE
525	TON	AGGREGATE BASE COURSE, 21AA
225	TON	BITUMINOUS PAVEMENT, WEARING COURSE, 1300T
350	TON	BITUMINOUS PAVEMENT, LEVELING COURSE, 3C
100	LF	CURB AND GUTTER, CONCRETE, DET F4
500	SF	SIDEWALK CONCRETE 4-INCH
150	SF	SIDEWALK RAMP, CONCRETE 6-INCH
4	EA	ADJUST STRUCTURE
1745	LB	REMOVE AND REPLACE FRAME AND COVER
90	LF	UNDERDRAIN, 6-INCH W/ GEOTEXTILE FABRIC WRAP
200	LF	12-INCH STORM SEWER, C76 CLIV, TRENCH B
2	EA	STANDARD STORM INLET
1	LS	PAVEMENT MARKING
6	EA	INLET FILTER
4	EA	REMOVE AND SALVAGE PARKING BUMPER
4	EA	CONCRETE COLLAR
2	EA	STANDARD STORM CATCH BASIN
6	EA	CONCRETE PARKING BUMPER
15	FT	CONCRETE CURB, MDT DET E4

FIELD BOOK INFORMATION: PROJECT MANAGER: SHAWN KEOUGH; C:\P\WORK\W\CARAGRA\142589\CD\PLS-SPRING_RESURFACE.DWG - LAYOUT - PLOTTED: 3/25/2024, 12:56 PM BY: FLAAGAN, MARTIN



Know what's below.
Call before you dig.

	DESCRIPTION
	DATE
	REV#

2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
RESURFACING AND STORM PLAN & PROFILE

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170

ISSUED FOR:	DATE:	BY:
BID	3-25-24	SWK

JOB NO.
PLY2129-01T

SHEET
43

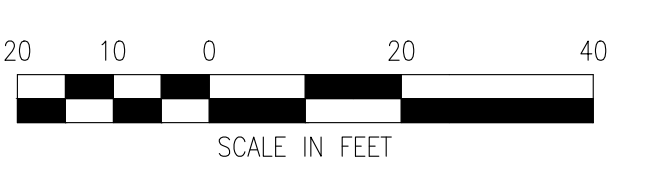
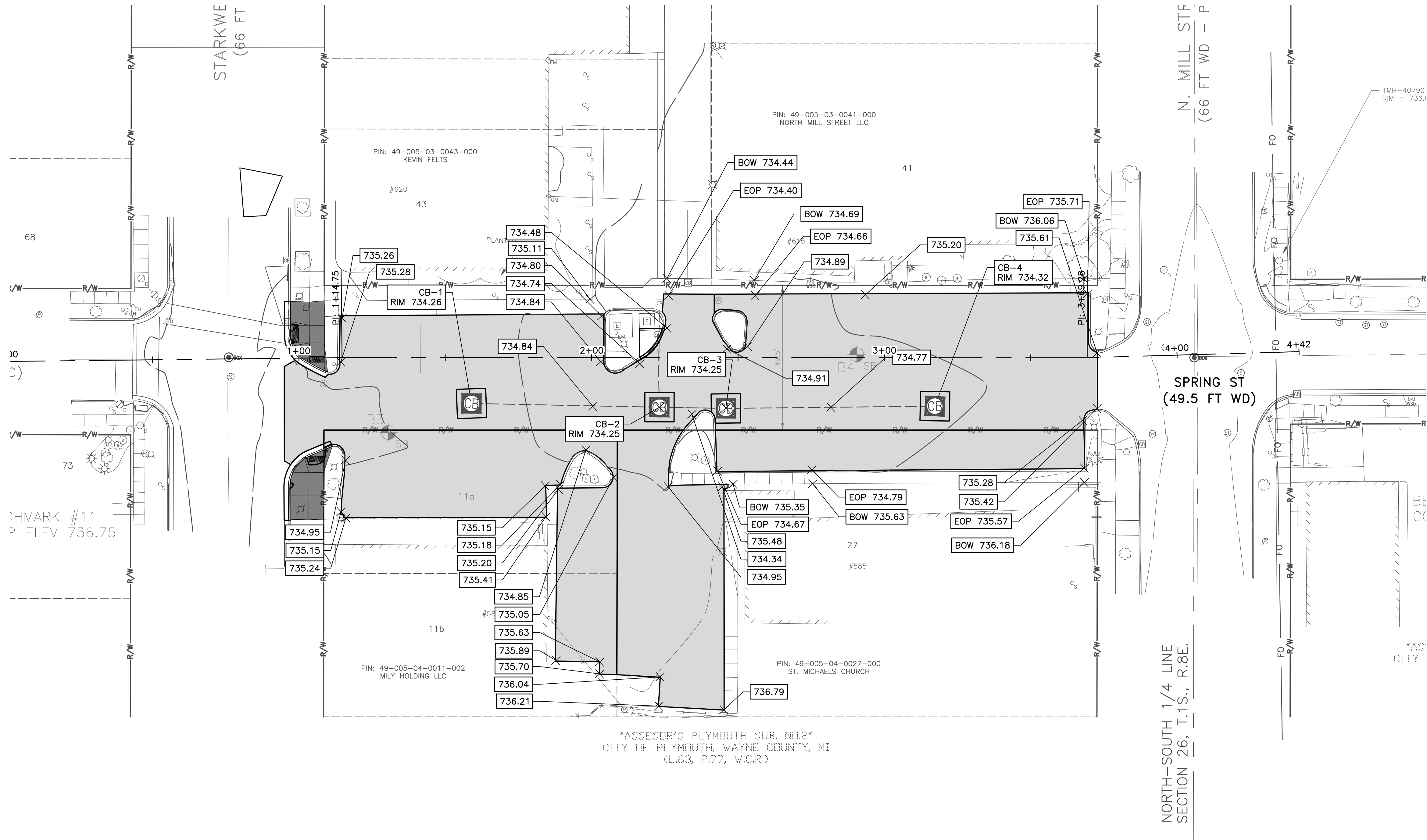
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BENCHMARK#11 ELEV 736.75

SET MAG. NAIL NORTH SIDE OF UTILITY POLE/LIGHT POLE
SOUTHEAST SIDE OF E. SPRING ST. AND N. MILL ST.

BENCHMARK#12 ELEV 737.60

ARROW ON HYDRANT, SOUTHWEST CORNER OF W. SPRING
ST. AND STARKWEATHER AVE.



PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\W\LAGRA\1422893\CAD-PLTS-SPRING RESURFACE-GRADING.DWG - GRADING - PLOTTED 3/25/2024 12:56 PM BY: EVANGELIN, MARTIN
 FIELD BOOK INFORMATION:
 811



REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 SPRING STREET
 GRADING PLAN

ISSUED FOR: DATE: BY:
 BID 3-25-24 SWK

JOB NO.
 PLY2129-01T

SHEET
44

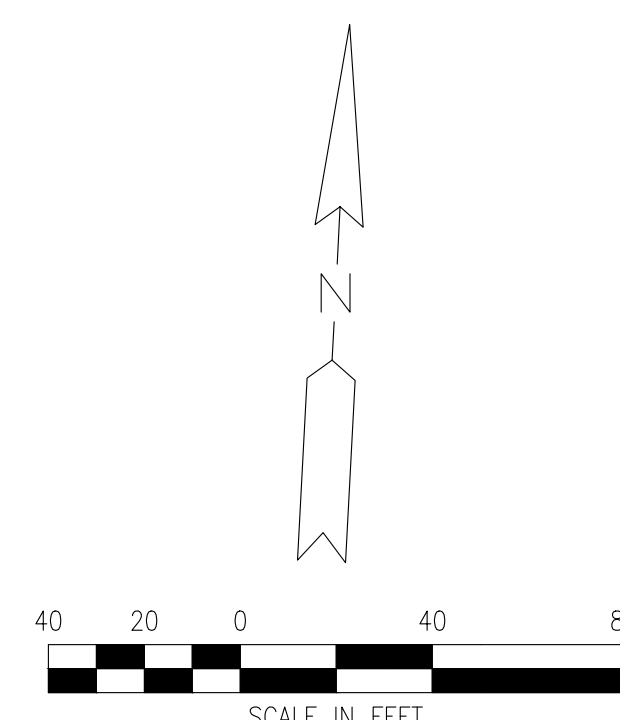
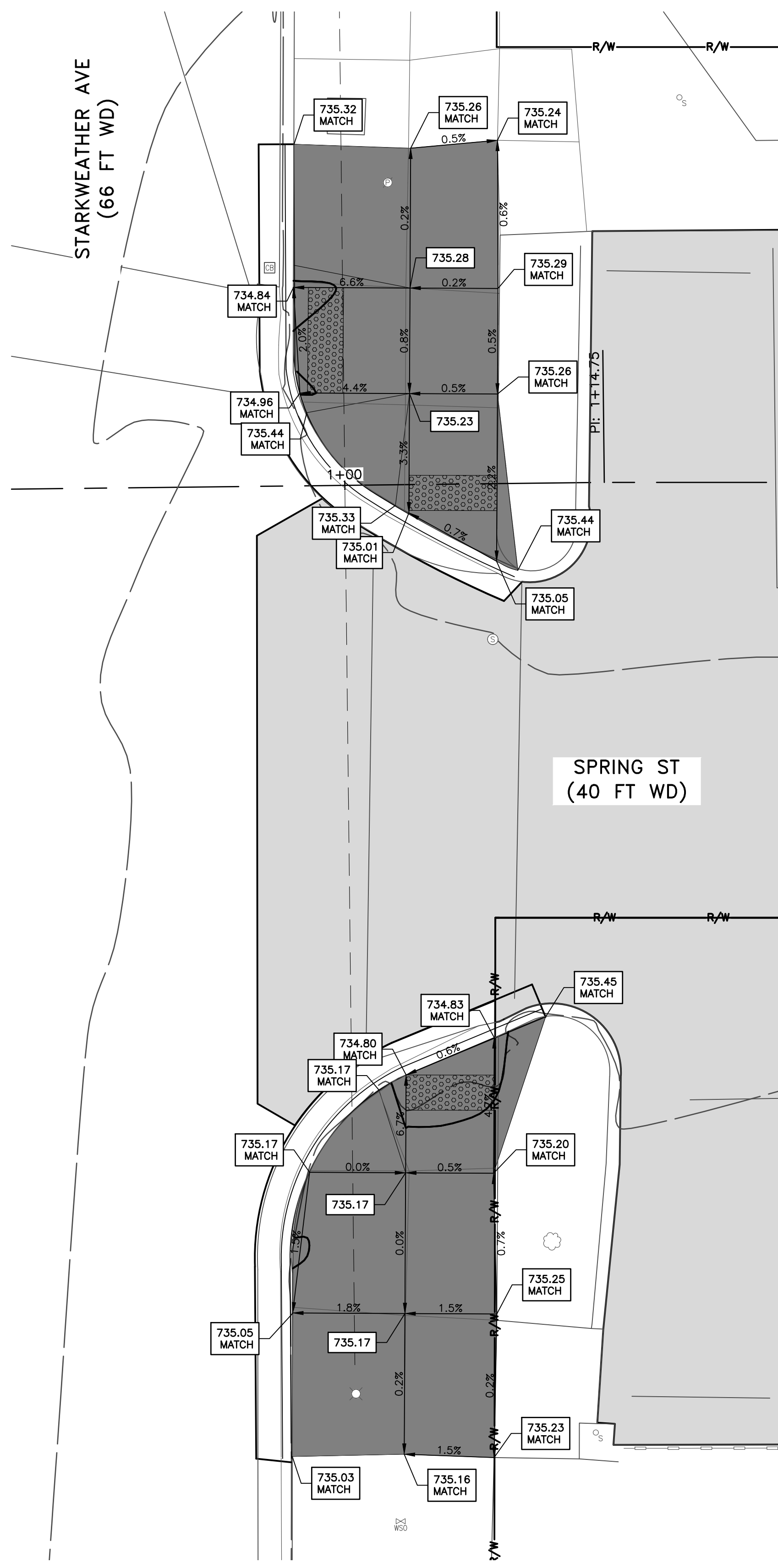
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BENCHMARK#11 ELEV 736.75

SET MAG. NAIL NORTH SIDE OF UTILITY POLE/LIGHT POLE
SOUTHEAST SIDE OF E. SPRING ST. AND N. MILL ST.

BENCHMARK#12 ELEV 737.60

ARROW ON HYDRANT, SOUTHWEST CORNER OF W. SPRING
ST. AND STARKWEATHER AVE.



PROJECT MANAGER: SHAWN KEOUGH
CITY OF PLYMOUTH, MICHIGAN (48170)
FILED: JUNE 14, 2024
PLANNING DEPARTMENT



**Know what's below.
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SUMMARY OF QUANTITIES THIS SHEET

150	SF	6-INCH CONCRETE SIDEWALK RAMP, ADA
500	SF	4-INCH CONCRETE SIDEWALK

REV#	DATE	DESCRIPTION	BY

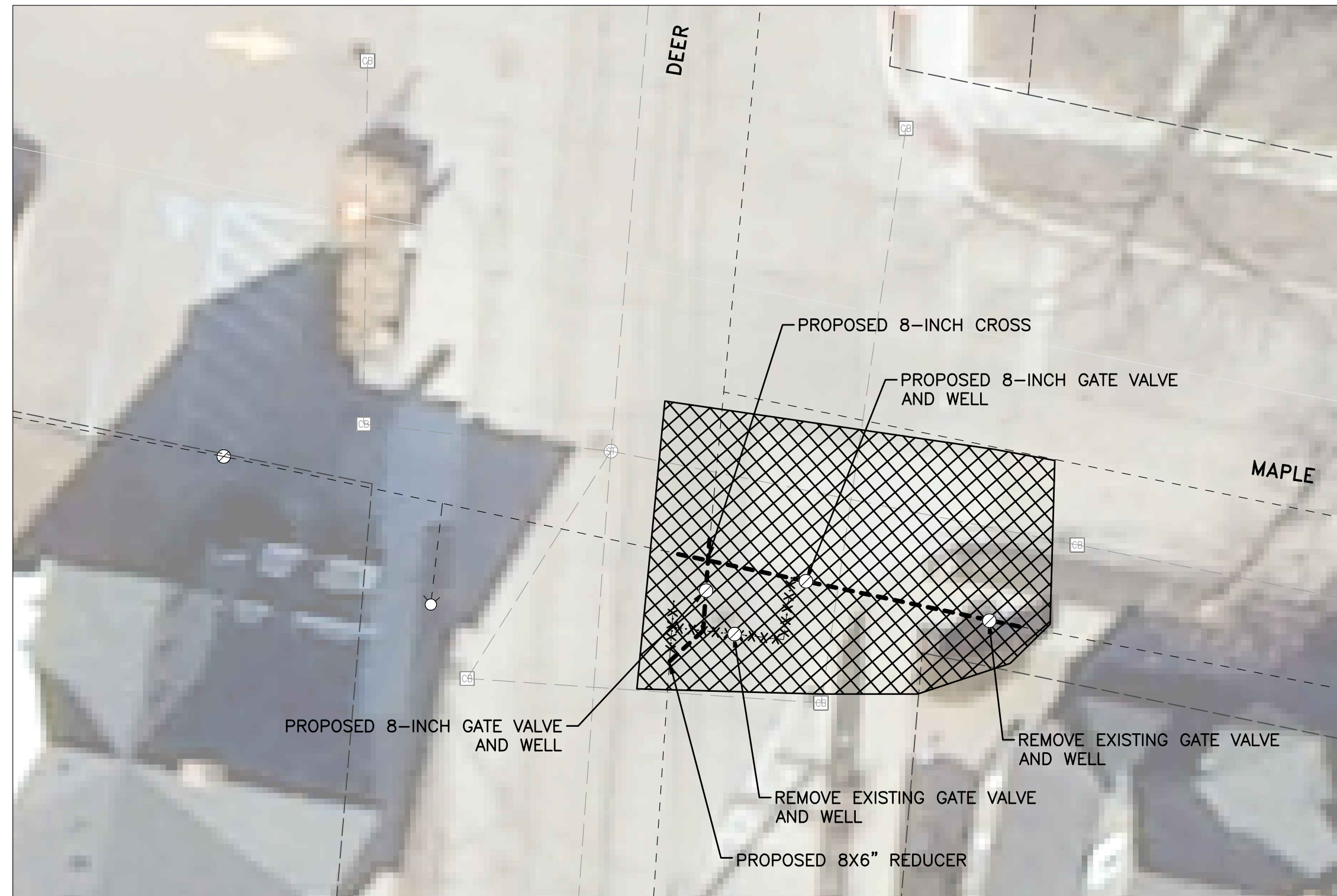
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Taylor, MI 48180
www.wadetrिम.com

CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
SPRING STREET
ADA RAMPS – SPRING AT STARKWEATHER

ISSUED FOR: DATE: BY:
BID 3-25-24 SWK

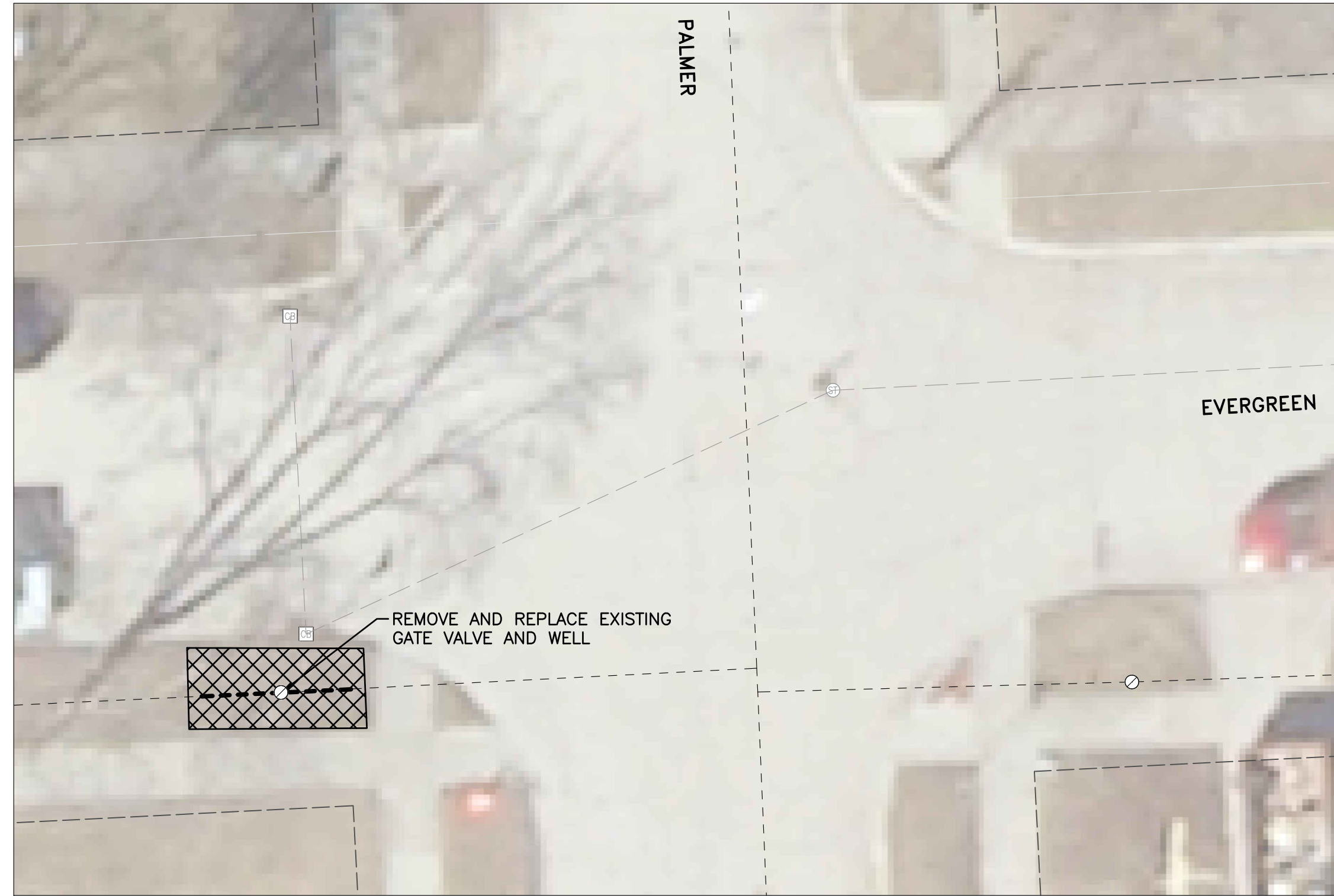
JOB NO:
PLY2129-01T

SHEET
45



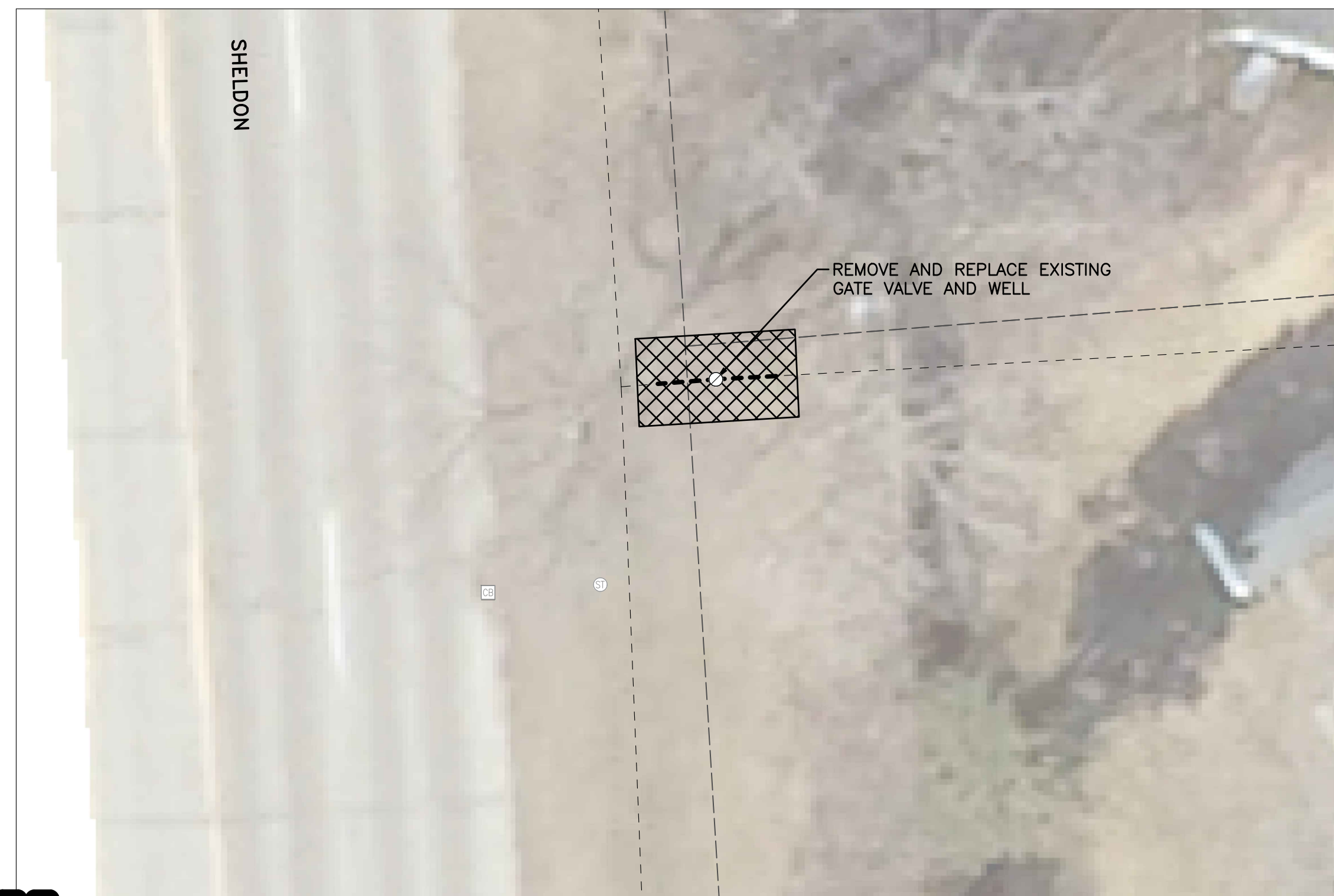
DEER AND MAPLE

- | | | | | | |
|-----|-----|--------------------------------------|----|----|---|
| 2 | EA | GATE VALVE AND WELL, 8-INCH | 60 | SY | 8-INCH PLAIN CONCRETE PAVEMENT |
| 7 | EA | INLET FILTER | 1 | EA | 8" X 6" REDUCER |
| 17 | TON | AGGREGATE BASE COURSE, 21AA | 50 | LF | WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B' |
| 100 | SFT | CONCRETE DRIVE AND SIDEWALK REMOVAL | 60 | SY | RESTORATION WITH 3-INCHES TOPSOIL & NURSERY SOD |
| 150 | SFT | CONCRETE SIDEWALK AND SIDEWALK RAMPS | | | |
| 30 | LFT | CURB & GUTTER REMOVAL | | | |
| 60 | SY | PAVEMENT REMOVAL | | | |
| 2 | EA | REMOVE EXISTING GATE VALVE AND WELL | | | |



PALMER AND EVERGREEN

- | | | |
|----|----|---|
| 1 | EA | GATE VALVE AND WELL, 8-INCH |
| 3 | EA | INLET FILTER |
| 1 | EA | REMOVE EXISTING GATE VALVE AND WELL |
| 2 | EA | 8" X 6" REDUCER |
| 10 | LF | WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B' |
| 12 | SY | RESTORATION WITH 3-INCHES TOPSOIL & NURSERY SOD |



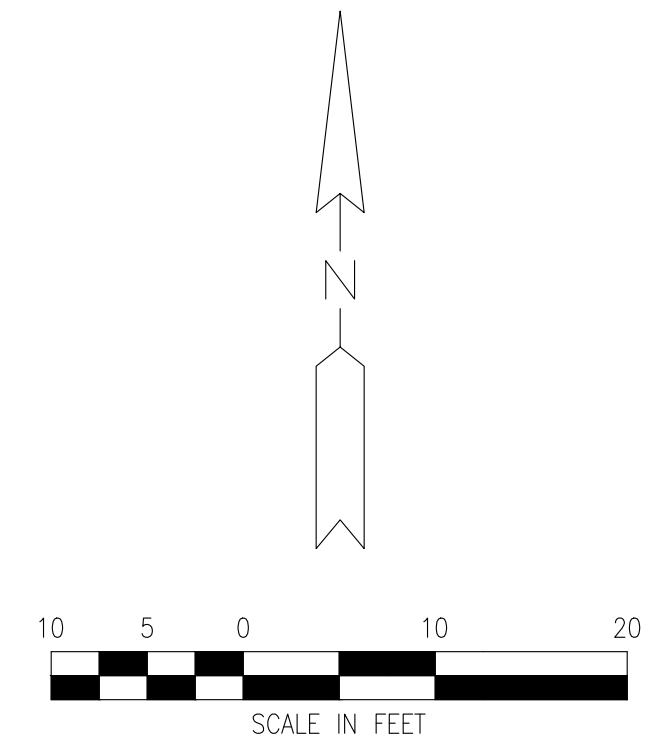
SHELDON AND PALMER

- | | | |
|----|----|---|
| 1 | EA | GATE VALVE AND WELL, 8-INCH |
| 2 | EA | INLET FILTER |
| 1 | EA | REMOVE EXISTING GATE VALVE AND WELL |
| 2 | EA | 8" X 6" REDUCER |
| 10 | LF | WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B' |
| 12 | SY | RESTORATION WITH 3-INCHES TOPSOIL & NURSERY SOD |



MCKINLEY AND PALMER

- | | | |
|----|-----|---|
| 1 | EA | GATE VALVE AND WELL, 8-INCH |
| 2 | EA | INLET FILTER |
| 12 | TON | AGGREGATE BASE COURSE, 21AA |
| 38 | SY | PAVEMENT REMOVAL |
| 1 | EA | REMOVE EXISTING GATE VALVE AND WELL |
| 38 | SY | 8-INCH PLAIN CONCRETE PAVEMENT |
| 2 | EA | 8" X 6" REDUCER |
| 10 | LF | WATER MAIN, 6-INCH, PC 350 D.1., TRENCH 'B' |



NOTES

REPLACE ALL PAVEMENT MARKINGS IN KIND

REV#	DATE	DESCRIPTION	BY

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CITY OF PLYMOUTH
 201 S MAIN ST
 WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 WATER VALVE REPLACEMENT

ISSUED FOR: BID
 DATE: 3-25-24
 BY: SWK

JOB NO:
 PLY2129-01T

SHEET
46

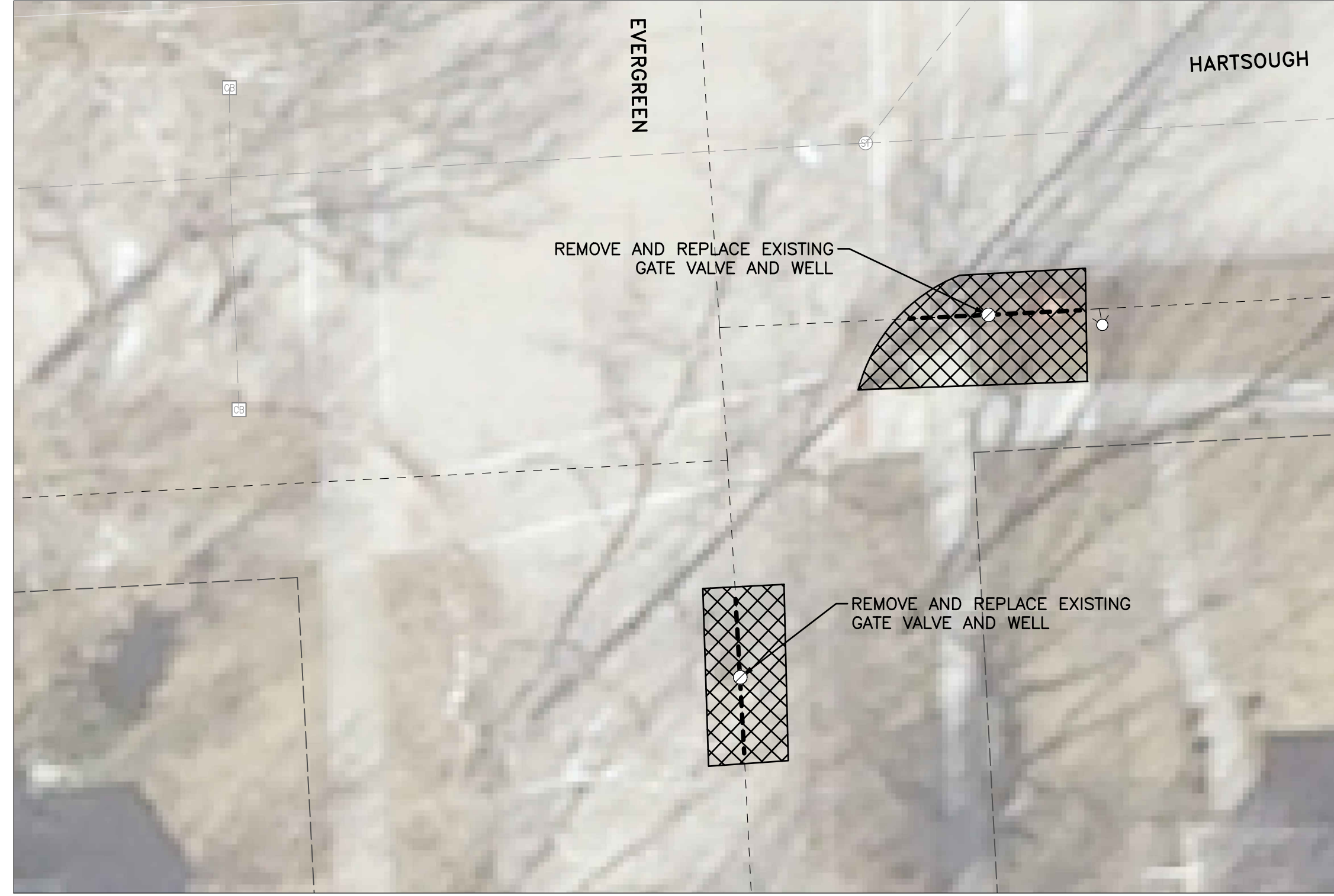


PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\WILKINSON\402689\CHM-PLTS-WM VALVE REPLACE.DWG - LAYOUT 1 - PLOTTED 3/25/2024 12:57 PM BY ELANAGAN, MARTIN



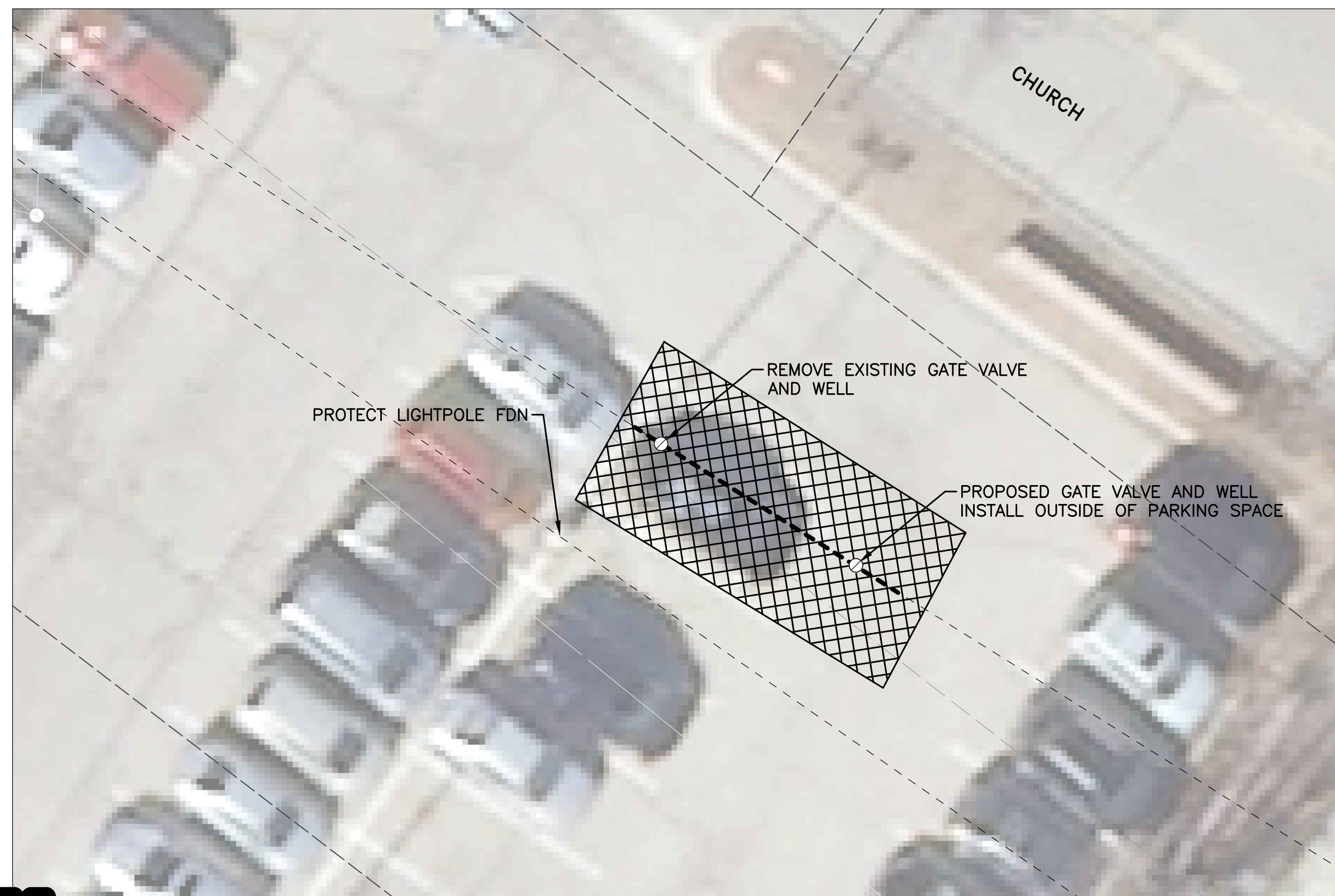
MCKINLEY AND HARTSOUGH

- 1 EA GATE VALVE AND WELL, 8-INCH
- 7 EA INLET FILTER
- 8 TON AGGREGATE BASE COURSE, 21AA
- 28 SY PAVEMENT REMOVAL
- 1 EA REMOVE EXISTING GATE VALVE AND WELL
- 28 SY 8-INCH PLAIN CONCRETE PAVEMENT
- 10 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'



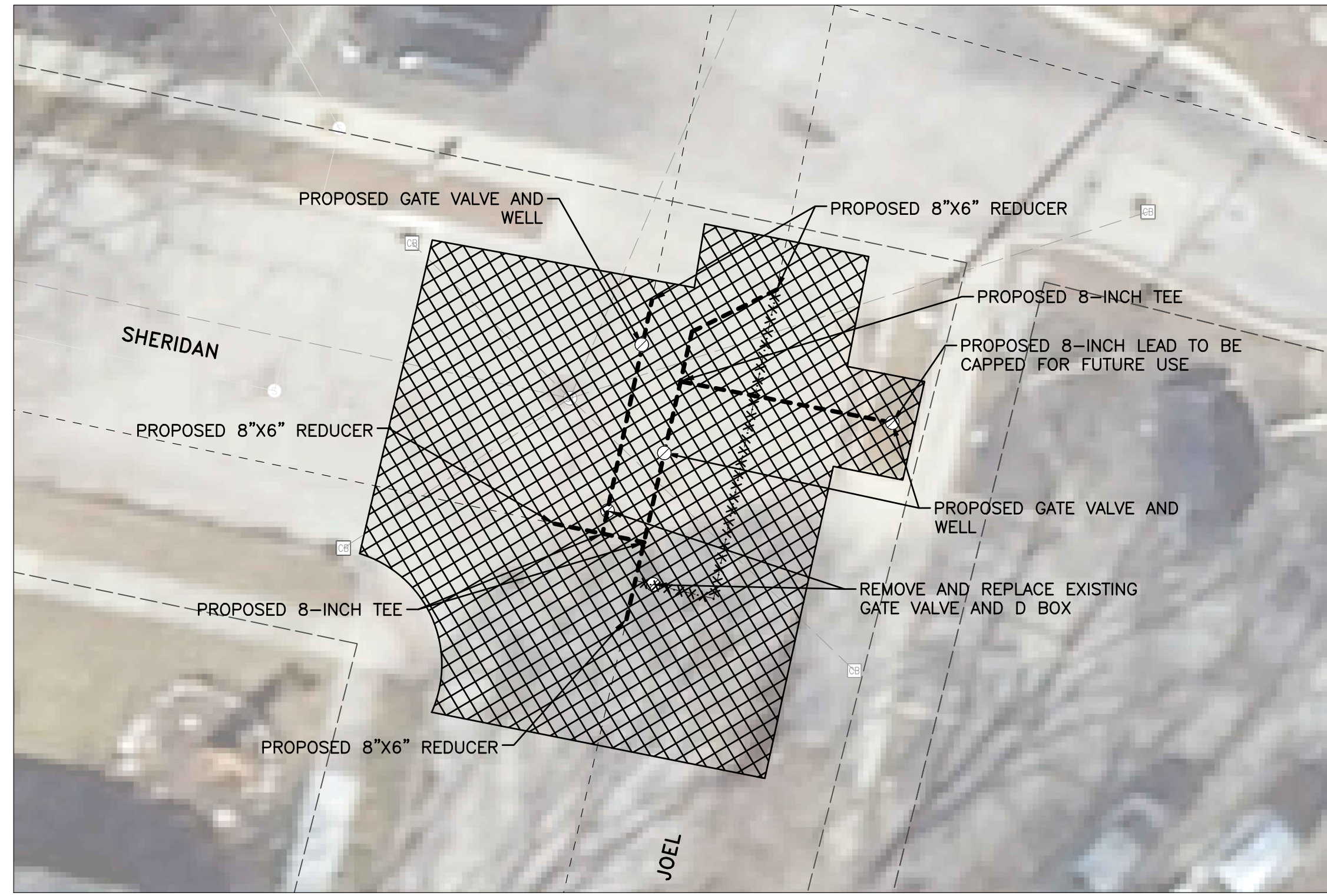
HARTSOUGH AND EVERGREEN

- 2 EA GATE VALVE AND WELL, 8-INCH
- 4 EA INLET FILTER
- 4 TON AGGREGATE BASE COURSE, 21AA
- 50 SFT CONCRETE DRIVE AND SIDEWALK REMOVAL
- 50 SFT CONCRETE SIDEWALK AND SIDEWALK RAMPS
- 12 SY PAVEMENT REMOVAL
- 2 EA REMOVE EXISTING GATE VALVE AND WELL
- 12 SY 8-INCH PLAIN CONCRETE PAVEMENT
- 4 EA 8" X 6" REDUCER
- 20 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'
- 12 SY RESTORATION WITH 3-INCHES TOPSOIL & NURSERY SOD



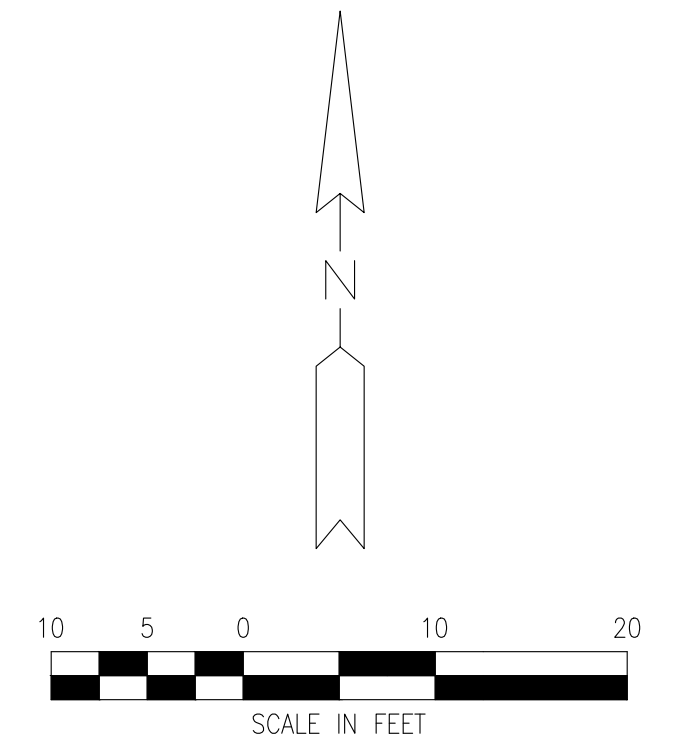
CHURCH AND UNION

- 1 EA GATE VALVE AND WELL, 8-INCH
- 16 TON AGGREGATE BASE COURSE, 21AA
- 55 SY PAVEMENT REMOVAL
- 1 EA REMOVE EXISTING GATE VALVE AND WELL
- 55 SY HMA HAND PATCH
- 2 EA 8" X 6" REDUCER
- 35 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'



JOEL AND SHERIDAN

- 3 EA GATE VALVE AND WELL, 8-INCH
- 4 EA INLET FILTER
- 15 TON AGGREGATE BASE COURSE, 21AA
- 180 SY PAVEMENT REMOVAL
- 12 LFT CURB & GUTTER REMOVAL
- 2 EA REMOVE EXISTING GATE VALVE AND D BOX
- 180 SY 8-INCH PLAIN CONCRETE PAVEMENT
- 3 EA 8" X 6" REDUCER
- 3 EA 8" X 8" X 8" TEE
- 85 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'
- 4 SY RESTORATION WITH 3-INCHES TOPSOIL & NURSERY SOD



NOTES

REPLACE ALL PAVEMENT MARKINGS IN KIND

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 WATER VALVE REPLACEMENT

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET 47

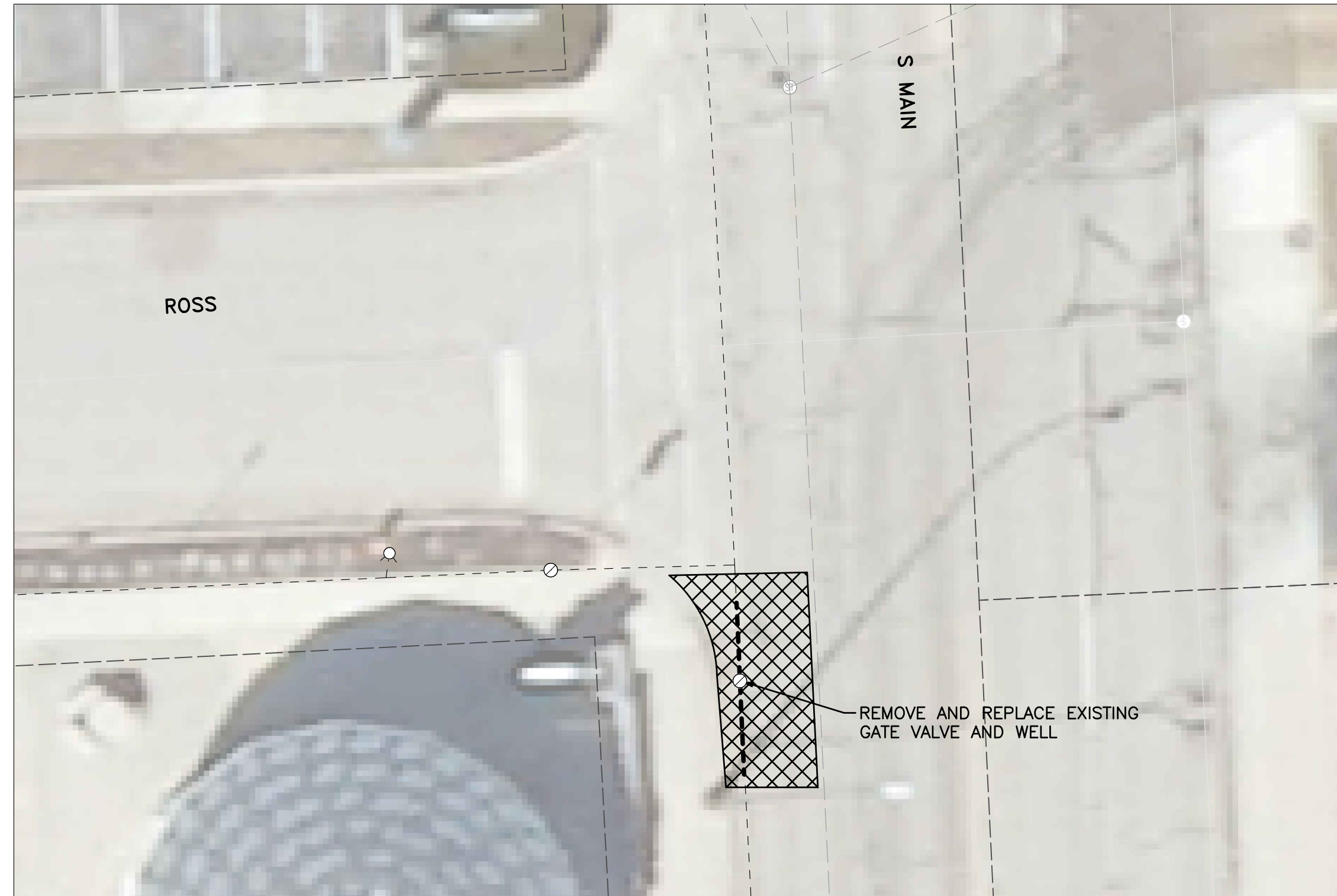


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PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\WELAGRA\1425889\CMM-PLTS-WM VALVE REPLACE.DWG - LAYOUTS - PLOTTED 3/25/2024 12:57 PM BY ELANAGAN, MARTIN

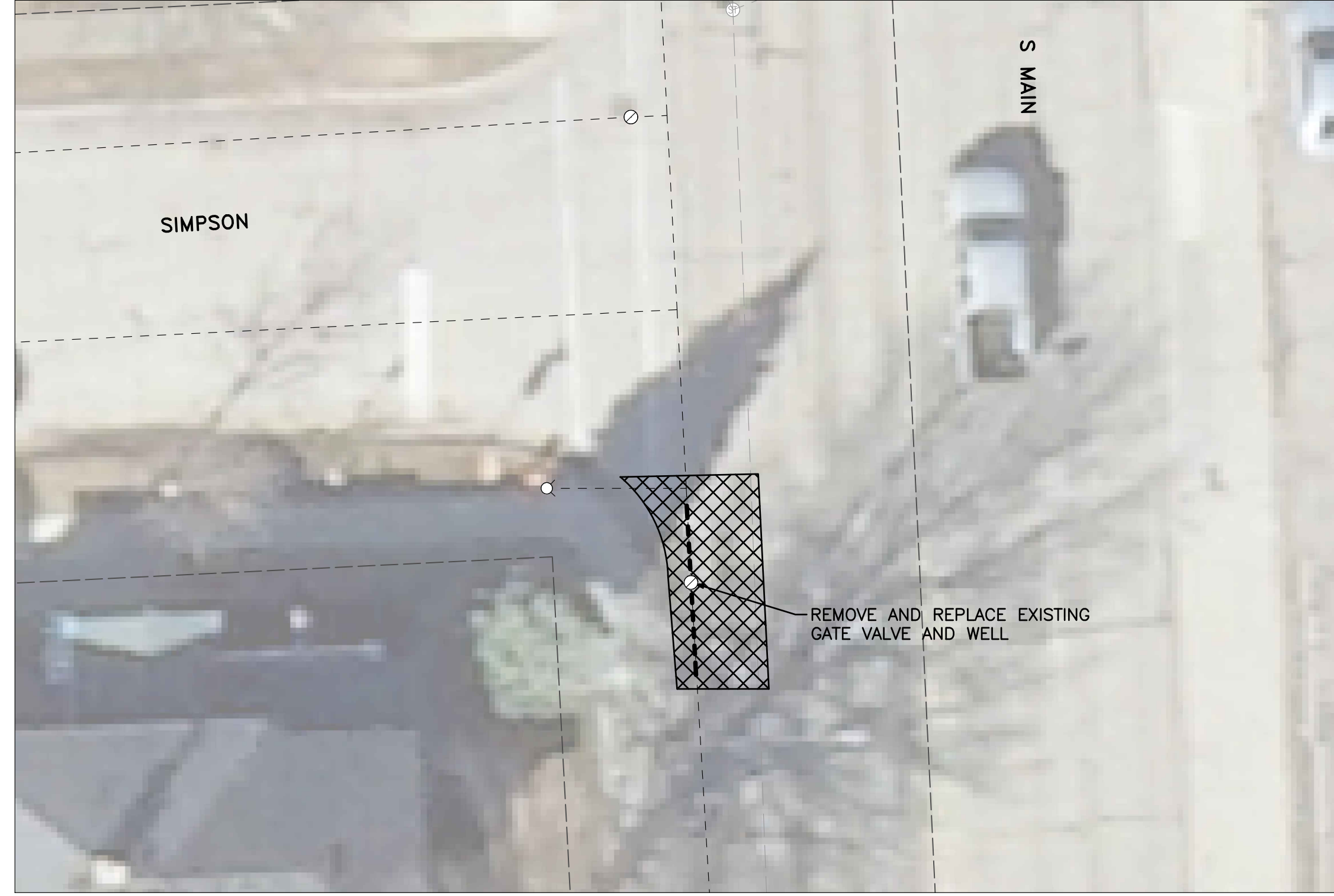


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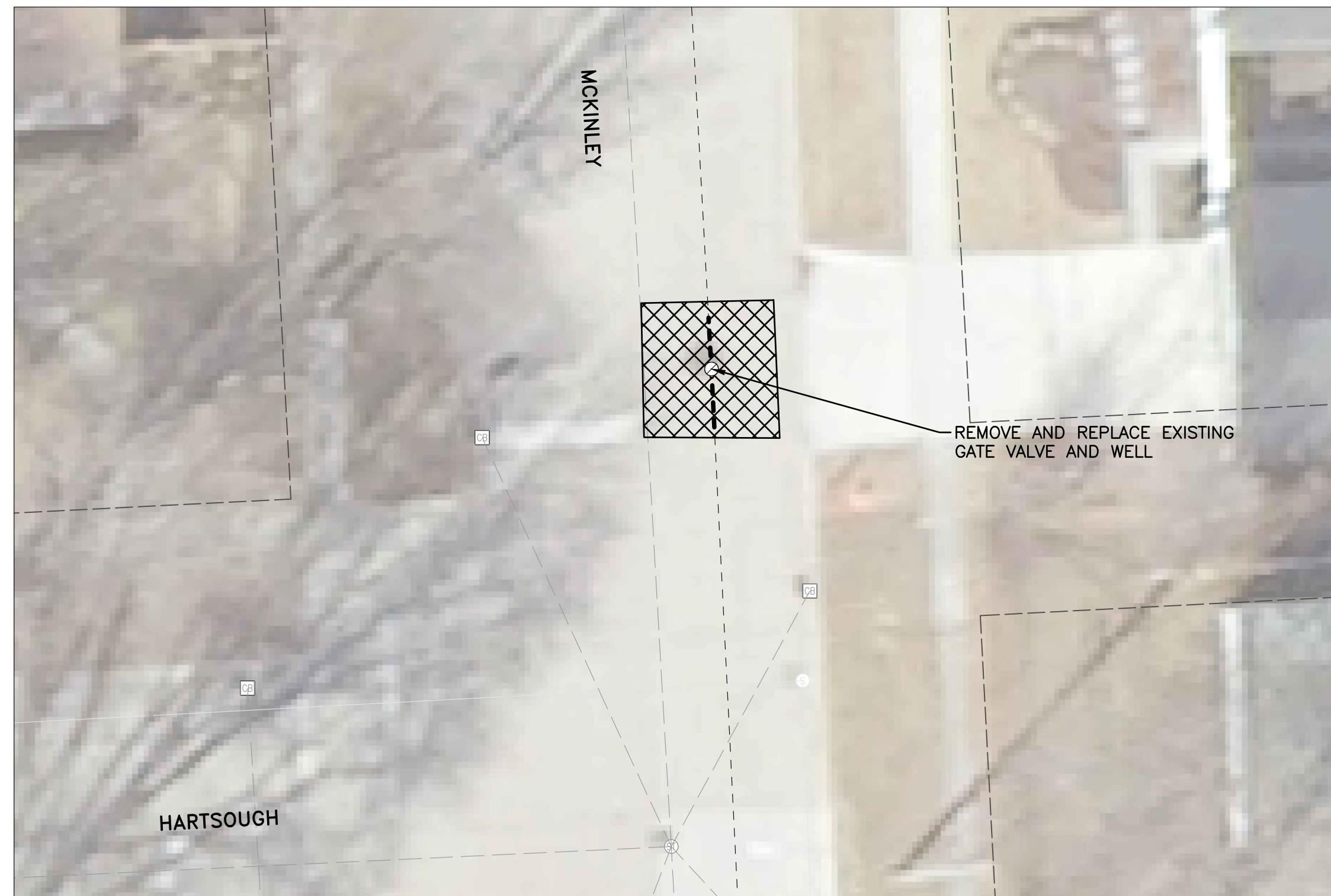
S MAIN AND ROSS

- 1 EA GATE VALVE AND WELL, 8-INCH
- 8 TON AGGREGATE BASE COURSE, 21AA
- 28 SY PAVEMENT REMOVAL
- 1 EA REMOVE EXISTING GATE VALVE AND WELL
- 28 SY HMA, HAND PATCH
- 10 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'



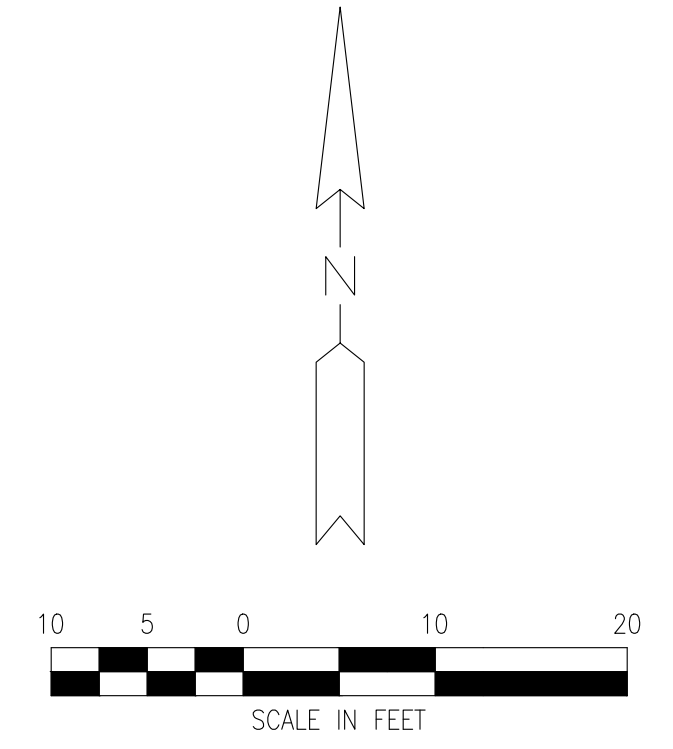
S MAIN AND SIMPSON

- 1 EA GATE VALVE AND WELL, 8-INCH
- 7 EA INLET FILTER
- 8 TON AGGREGATE BASE COURSE, 21AA
- 28 SY PAVEMENT REMOVAL
- 1 EA REMOVE EXISTING GATE VALVE AND WELL
- 28 SY HMA, HAND PATCH
- 10 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'



MCKINLEY BETWEEN HARTSOUGH & PALMER

- 1 EA GATE VALVE AND WELL, 8-INCH
- 4 TON AGGREGATE BASE COURSE, 21AA
- 17 SY PAVEMENT REMOVAL
- 1 EA REMOVE EXISTING GATE VALVE AND WELL
- 17 SY 8-INCH PLAIN CONCRETE PAVEMENT
- 10 LF WATER MAIN, 8-INCH, PC 350 D.1., TRENCH 'B'



NOTES

REPLACE ALL PAVEMENT MARKINGS IN KIND

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CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 WATER VALVE REPLACEMENT

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET 48

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PROJECT MANAGER: SHAWN KEOUGH
 C:\P\WORK\WELAGRA\142689\CBD-PLTS-BID ALTERNATE 1.DWG - BID ALTERNATE 1 - PLOTTED 3/25/2024 12:57 PM BY: FLANGAN, MARTIN



Know what's below.
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THE AREAS ON THIS MAP SHOW THE APPROXIMATE LIMITS FOR THE WORK ASSOCIATED WITH BID ALTERNATE 1. CONTRACTOR SHALL BID QUANTITIES SHOWN IN PROPOSAL FOR THIS WORK.

REV#	DATE	DESCRIPTION	BY

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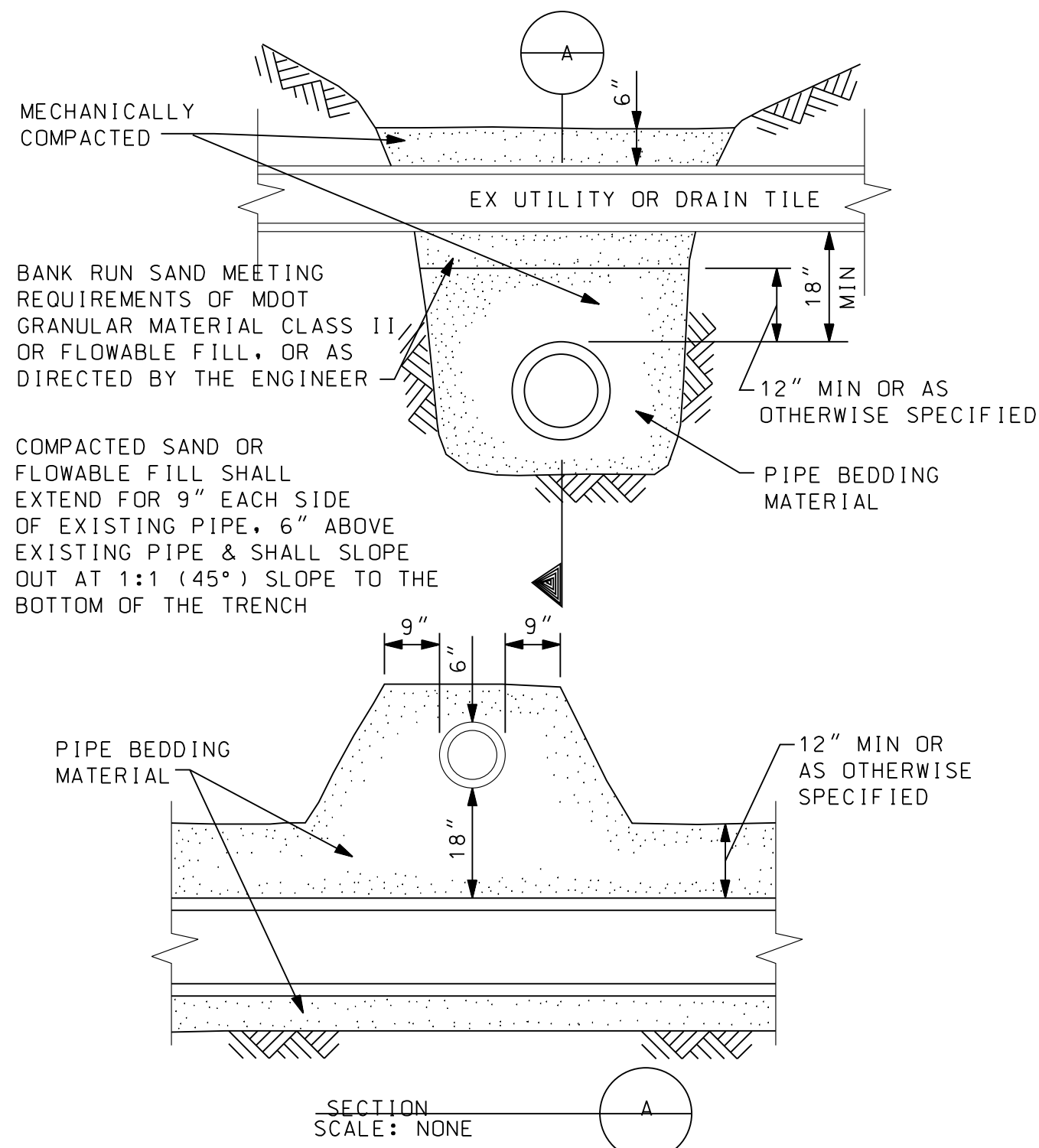
CITY OF PLYMOUTH
201 S MAIN ST
WAYNE COUNTY, MICHIGAN 48170
 2024 INFRASTRUCTURE IMPROVEMENT PROGRAM
 BID ALTERNATE 1

ISSUED FOR: BID DATE: 3-25-24 BY: SWK

JOB NO. PLY2129-01T

SHEET

NOTE:
WHERE CONCRETE ENCASEMENT IS SPECIFIED FOR NEW UTILITY A 6" MINIMUM LAYER OF MECHANICALLY COMPACTED SAND SHALL BE MAINTAINED BETWEEN EXISTING UTILITY & TOP OF CONCRETE ENCASEMENT.



STANDARD PIPE SUPPORT
N.T.S.

GENERAL NOTES

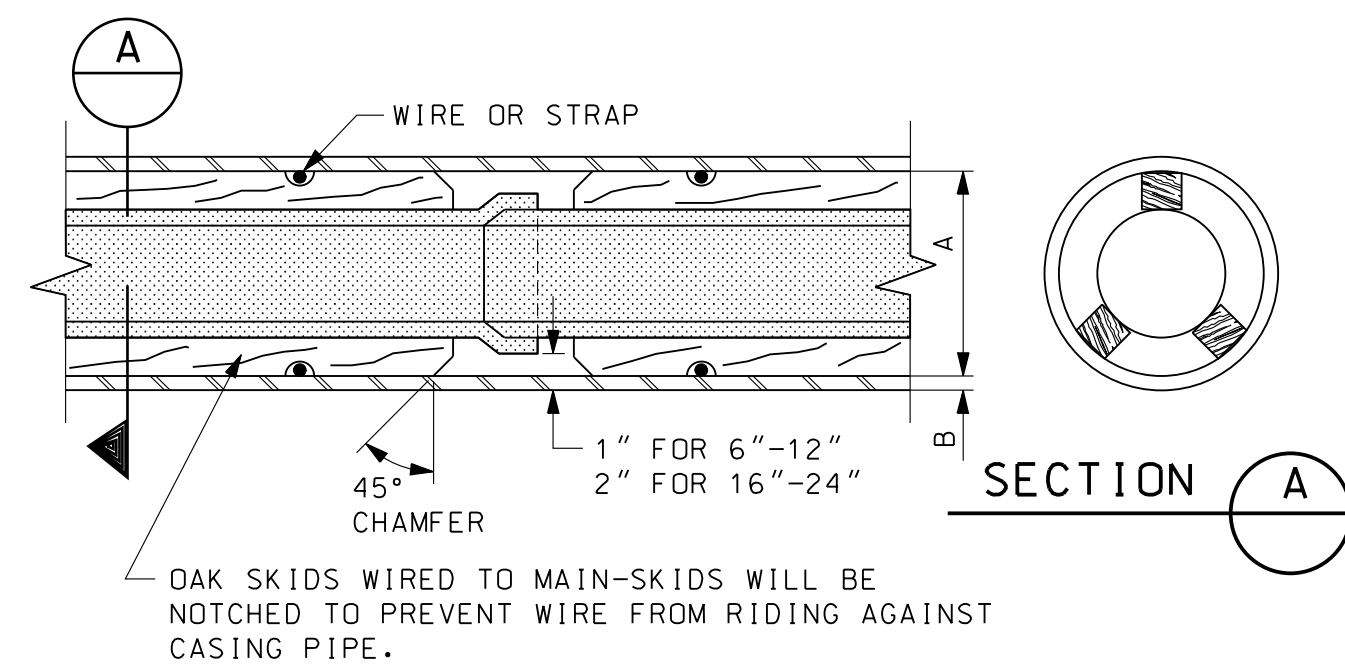
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A RECONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE COMMUNITY, IN WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF ALL PERMITS NECESSARY TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF, THE WATER SUPPLY, SANITARY SEWER, OR STORM SEWER SYSTEMS.
- THE CONTRACTOR SHALL MAINTAIN HIS CONSTRUCTION OPERATIONS WITHIN THE PRESENTLY EXISTING ROAD RIGHTS-OF-WAY AND EASEMENTS AS NOTED ON THE PLANS THROUGHOUT THE PROJECT. IN THE EVENT THAT THE CONTRACTOR DEEMS IT NECESSARY OR ADVISABLE TO OPERATE BEYOND THE LIMITS OF THE EXISTING RIGHTS-OF-WAY OR EASEMENTS, HE SHALL BE RESPONSIBLE FOR MAKING SPECIAL WRITTEN AGREEMENTS WITH THE PROPERTY OWNERS AND SHALL FURNISH SUCH COPIES OF AGREEMENTS TO THE COMMUNITY AND ENGINEER.
- THE CONTRACTOR SHALL NOTIFY "MISS DIG" (800-482-7171) 3 DAYS (NOT INCLUDING HOLIDAYS OR WEEKENDS) BEFORE STARTING CONSTRUCTION. HE SHALL MAKE ANY NECESSARY ARRANGEMENTS WITH UTILITY COMPANIES FOR RELOCATION OF EXISTING UTILITIES. THESE ARRANGEMENTS SHALL BE MADE IN SUFFICIENT TIME TO ALLOW THE RELOCATION WORK TO BE COMPLETED WITHOUT INTERFERING WITH OR DELAYING THE SEWER CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE ENGINEER 48 HOURS PRIOR TO UNCOVERING ANY EXISTING UTILITIES.
- ON ALL WORK WITHIN THE WAYNE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE COUNTY ENGINEER AND THE COMMUNITY 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN ALL TRAFFIC AT ALL TIMES AS PER THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL AT ALL TIMES PROVIDE EMERGENCY ACCESS TO PROPERTY IN THE VICINITY OF THE CONSTRUCTION FOR POLICE AND FIRE EQUIPMENT, AMBULANCES OR OTHER EMERGENCY VEHICLES TO PROTECT LIFE, HEALTH AND PROPERTY.
- THE CONTRACTOR SHALL MAINTAIN PUBLIC ROADS AFFECTED BY THE CONSTRUCTION OPERATIONS IN A PASSABLE CONDITION UNTIL SUCH TIME AS FINAL RESTORATION OF THESE IMPROVEMENTS CAN BE MADE. IF THE PUBLIC SAFETY IS IN DANGER OR THE NECESSITY EXISTS FOR MAINTAINING TRAFFIC, BACKFILLING MUST BE COMPLETED IMMEDIATELY. IN THE EVENT THAT THE NECESSARY BACKFILL MATERIAL AND EQUIPMENT ARE NOT AVAILABLE WHEN DIRECTION IS GIVEN FOR IMMEDIATE BACKFILL, THE TRENCH SHALL BE BACKFILLED WITH NATIVE MATERIAL TO PROVIDE FOR THE NECESSARY MAINTENANCE OF TRAFFIC AND SAFETY; HOWEVER, THE NATIVE MATERIAL SHALL BE REMOVED WITHIN 48 HOURS AND THE TRENCH PROPERLY BACKFILLED.

GENERAL NOTES CONTINUED

- NO STREET, ROAD OR SECTION THEREOF SHALL BE CLOSED TO THROUGH TRAFFIC UNLESS AUTHORIZED BY THE AGENCY WITH JURISDICTION OVER THE ROADS. PRIOR TO CLOSING A STREET, ROAD, OR SECTION THEREOF, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF A DETOUR PLAN APPROVED BY THE AGENCY HAVING JURISDICTION OVER THE ROADS.
- IN THE EVENT ROADS ARE TO BE CLOSED, THE CONTRACTOR SHALL NOTIFY THE LOCAL FIRE DEPARTMENT, POLICE DEPARTMENT, LOCAL ROAD AUTHORITY, AMBULANCE AND EMERGENCY SERVICES, DEPARTMENT OF PUBLIC WORKS, PUBLIC TRANSIT AUTHORITY, PUBLIC SCHOOL SYSTEM, LOCAL TRASH PICKUP AUTHORITY, AND PUBLIC AND PRIVATE UTILITIES DAILY AS TO WHAT STREETS WILL BE PARTLY BLOCKED OR CLOSED, THE LENGTH OF TIME THE STREETS WILL BE BLOCKED OR CLOSED AND WHEN THE STREETS WILL BE REOPENED TO TRAFFIC.
- PAVED STREETS AND DRIVEWAYS SHALL BE MAINTAINED IN A REASONABLE STATE OF CLEANLINESS AND THE CONTRACTOR SHALL REMOVE ACCUMULATIONS OF DEBRIS CAUSED BY HIS OPERATIONS. THE CONTRACTOR SHALL HAVE, AS A MINIMUM, AN OPERATING SWEEPER BROOM ON THE SITE AT ALL TIMES. THE PAVEMENT SHALL BE CLEANED AT THE CLOSE OF EACH DAYS OPERATION AND AS OFTEN AS NECESSARY BEFORE THAT TIME. FAILURE TO COMPLY SHALL BE CAUSE TO STOP CONSTRUCTION. CONTRACTOR SHALL ALSO COMPLY WITH THE LOCAL AIR POLLUTION CONTROL ORDINANCE.
- ALL GRAVEL AND DIRT ROADS, STREETS OR DRIVEWAYS USED SHALL BE MAINTAINED BY GRADING, PLACING DUST PALLIATIVES, AND MAINTENANCE GRAVEL IN SUFFICIENT QUANTITIES TO ELIMINATE DUST AND MAINTAIN TRAFFIC AS DIRECTED BY THE AGENCY.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SHEETING, SHORING, DEWATERING, BRACING, TRENCH BOXES, ETC., TO PERFORM WORK SAFELY AND PROTECT EXISTING UTILITIES AND IMPROVEMENTS.
- THE FLOW IN THE EXISTING SEWERS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. 16. CULVERTS, DITCHES, DRAIN TILES, TILE FIELD, DRAINAGE STRUCTURES, ETC., THAT ARE DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE IMMEDIATELY RESTORED.
- CULVERT, DITCHES, DRAIN TILES, TILE FIELDS, DRAINAGE STRUCTURES, ETC. THAT ARE DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE IMMEDIATELY RESTORED.
- ALL PROPERTY IRONS AND MONUMENTS, IF DISTURBED OR DESTROYED BY THE CONTRACTOR'S OPERATION, SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- AFTER ALL THE PIPE, STRUCTURES, ETC., HAVE BEEN LAID, CONSTRUCTED, AND BACKFILLED, THE SYSTEM SHALL BE TESTED AND FINAL INSPECTED. THE INSPECTION AND TESTING SHALL CONSIST OF A FIRST INSPECTION, TELEVISION INSPECTION (IF APPLICABLE) TESTING, AND FINAL INSPECTION AND MEASUREMENT. THE CONTRACTOR SHALL PROVIDE THE NECESSARY SUPERVISION, LABOR, TOOLS, EQUIPMENT, AND THE MATERIALS NECESSARY FOR THE TESTS WHICH SHALL BE CONDUCTED IN THE PRESENCE OF THE ENGINEER. HE ENGINEER SHALL BE NOTIFIED TWO (2) WORKING DAYS IN ADVANCE OF ALL TESTING.

GENERAL NOTES CONTINUED

- THE FIRST INSPECTION SHALL BE COMPLETED AND ALL REPAIRS MADE IN AMPLE TIME SO THAT THE TELEVISION INSPECTION OF THE UNDERGROUND PORTION OF THE SYSTEM CAN BE COMPLETED WITHIN FOUR (4) WEEKS OF THE COMPLETION OF THE CONSTRUCTION. WHEN RE-TELEVISION IS NECESSARY, AN ADDITIONAL TWO (2) WEEKS WILL BE ALLOWED FOR COMPLETION. TESTING OF THE SYSTEM AS HEREIN DESCRIBED SHALL IMMEDIATELY FOLLOW THE TELEVISION INSPECTION AND SHALL BE COMPLETED WITHIN A TWO (2) WEEK PERIOD.
- FAILURE TO MAINTAIN A SCHEDULE IN COMPLIANCE WITH THESE TERMS WILL AUTOMATICALLY CAUSE THE STOPPAGE OF OTHER WORK AT THE PARTICULAR SITE IN QUESTION UNTIL SUCH TIME AS THE FINAL INSPECTION OF THE COMPLETED UNDERGROUND PORTION OF THE SYSTEM HAS PROGRESSED TO ACCEPTABLE LIMITS.
- THE CONTRACTOR SHALL HAVE THE UNDERGROUND PORTION OF THE SEWER SYSTEM READY FOR THE FIRST INSPECTION WITHIN TWO (2) WEEKS AFTER THE COMPLETION OF UTILITY.
- THE FIRST INSPECTION SHALL CONSIST OF A VISIBLE AND AUDIBLE CHECK OF SEWERS, MANHOLES, GATE WELLS, AND OTHER STRUCTURES TO ASCERTAIN THAT THE STRUCTURE STEPS HAVE BEEN PLACED, ALL LIFT HOLES PLUGGED, THE CHANNELING OF THE MANHOLE BOTTOMS COMPLETED, ALL VISIBLE OR AUDIBLE LEAKS STOPPED, ALL PIPE HAS BEEN PLACED STRAIGHT AND TRUE TO THE PROPER GRADES AND ELEVATION, THE REQUIRED ADJUSTING RINGS AND FRAME AND COVER PROPERTY INSTALLED, ALL TRENCHES AND STRUCTURES BACKFILLED IN AN ACCEPTABLE MANNER AND THAT THE SYSTEM HAS BEEN THOROUGHLY CLEANED.
- THE FIRST INSPECTION SHALL BE CONSIDERED COMPLETED WHEN ALL TREE PAIRS HAVE BEEN MADE AND THE SYSTEM IS READY FOR A TELEVISION INSPECTION AND SUBSEQUENT TESTING.
- TRENCH BACKFILL UNDER ROAD SURFACES, PAVEMENTS, CURBS, DRIVEWAY, SIDEWALK AND WHERE THE TRENCH EDGE IS WITHIN 3- FEET OF THE PAVEMENT SHALL BE TRENCH B (SAND) PER SPECIFICATIONS SECTION 312333. TRENCHING AND BACKFILLING.
- AFTER ALL TESTING, TELEVISION INSPECTION, FINAL RESTORATION AND CLEAN-UP HAS BEEN COMPLETED, A FINAL INSPECTION AND MEASUREMENT WILL BE DONE. THE FINAL INSPECTION SHALL BE REQUESTED BY THE CONTRACTOR AND CONSIST OF, BUT IS NOT LIMITED TO, CHECKING FOR PROPER ALIGNMENT, PROPER GRADE, CLEANLINESS, LEAKS, CONFORMANCE TO THE PLANS AND SPECIFICATION, PROPER STRUCTURAL AND MECHANICAL ADJUSTMENTS, AND RESTORATION. FINAL MEASUREMENT INCLUDES STRUCTURE ELEVATIONS, DISTANCES BETWEEN STRUCTURES, AND CONFORMANCE UTILITIES ARE LOCATED WITHIN EASEMENT AND RIGHT-OF-WAY AREAS.
- SUCCESSFUL COMPLETION OF ANY TEST OR INSPECTION SHALL NOT RELIEVE THE CONTRACTOR FROM THEIR RESPONSIBILITY TO CORRECT ANY DEFICIENCY OR NONCONFORMANCE TO THE PLANS OR SPECIFICATIONS WHICH MAY THEREAFTER BECOME KNOWN.

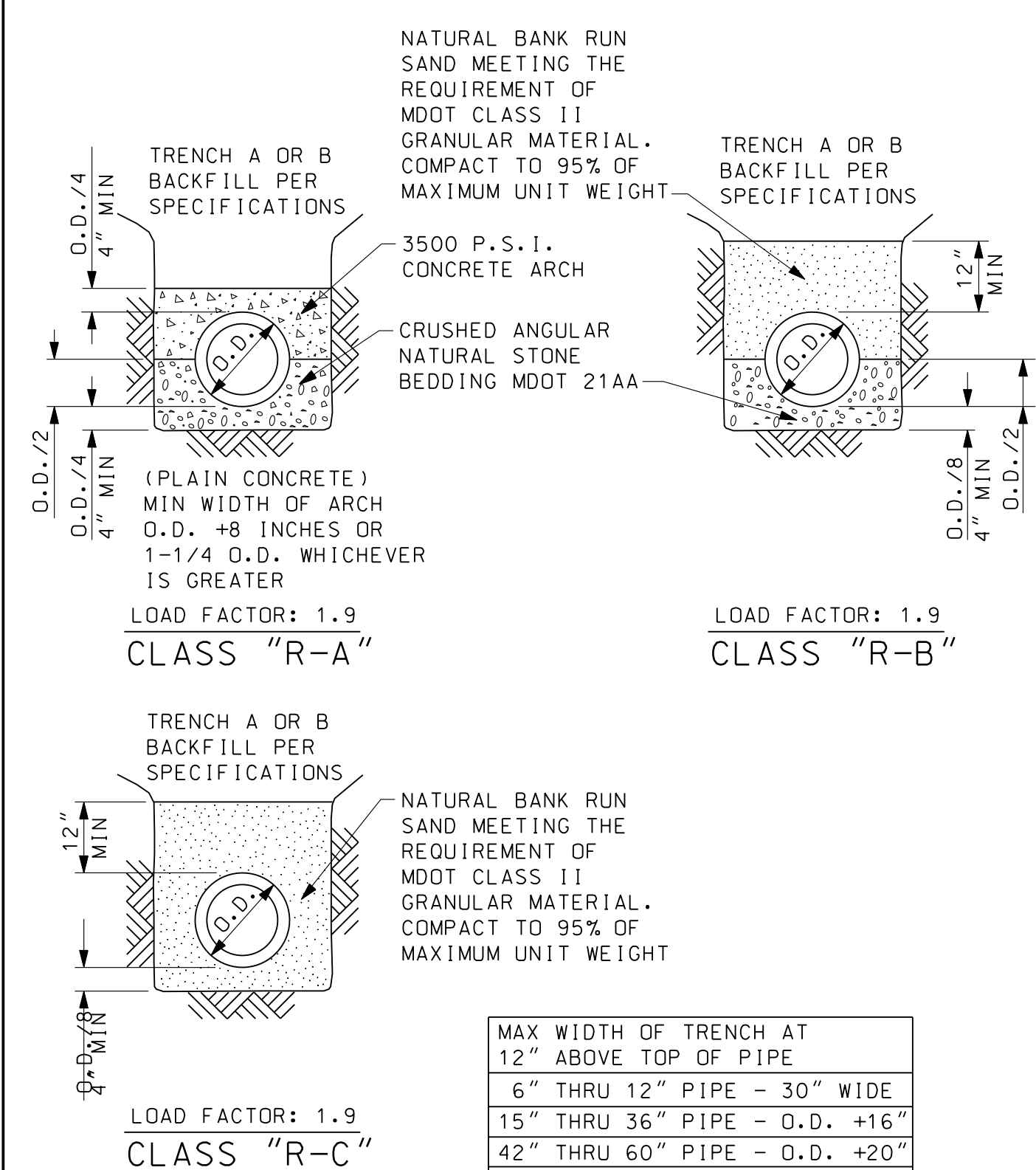


DIA OF SEWER	DIA OF MAIN	MIN "A"	ROAD CROSSING MIN "B"	RAILROAD CROSSING MIN "B"
6"	16"	.375	.375	.375
8"	16"	.375	.375	.375
12"	20"	.375	.438	.438
10"	16"	.375	.500	.500
12" & 15"	20"	.375	.500	.500
18"	24"	.375	.500	.500

CASING PIPE SHALL BE WELDED STEEL PIPE A.S.T.M. A-252, GR 2 UNLESS OTHERWISE SPECIFIED.

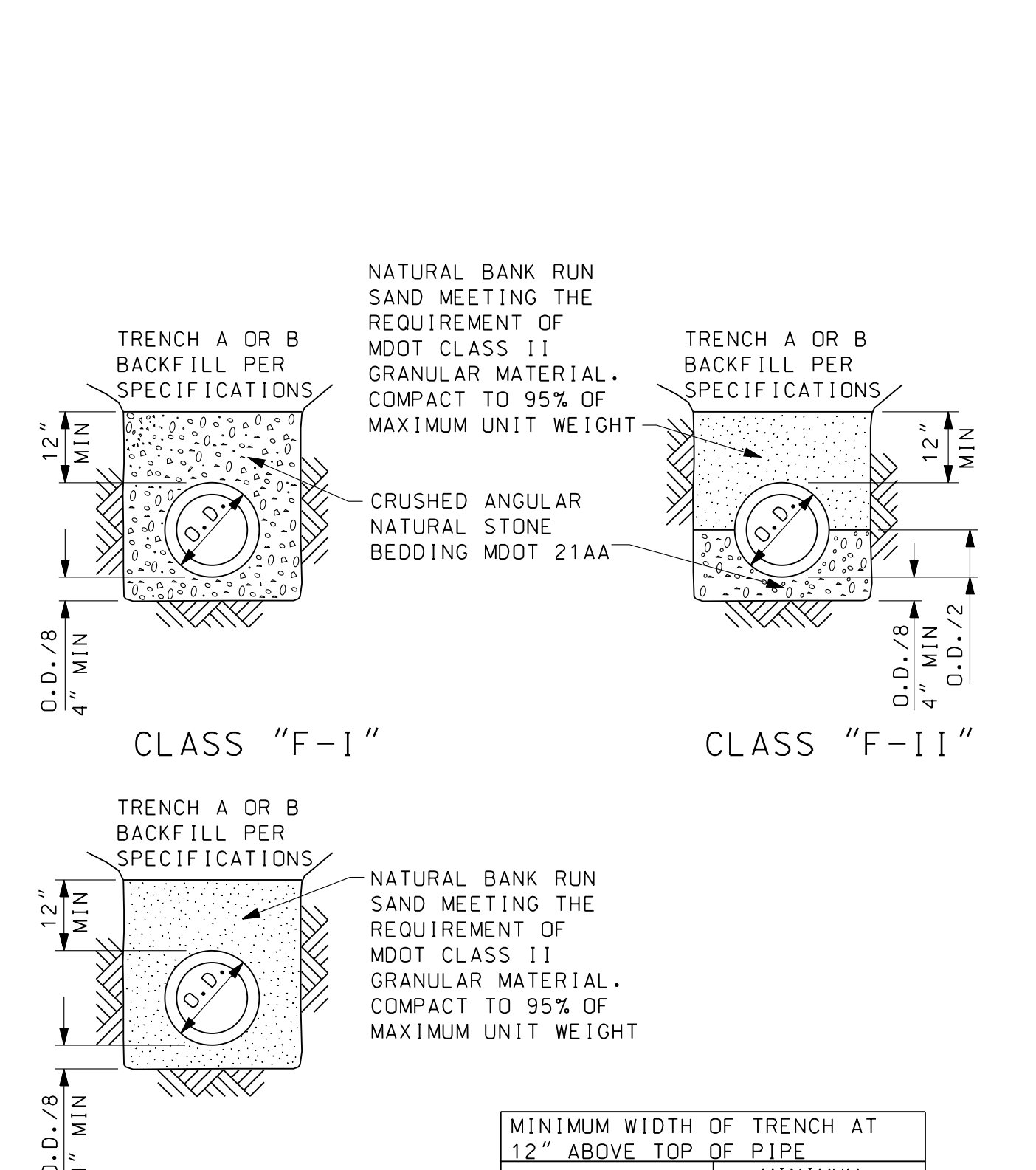
- NOTES:
- NO WATER SHALL BE USED IN BORING UNDER RAILROADS.
 - MAINTAIN MINIMUM OF 5'-6" OF COVER BETWEEN BASE OF RAIL AND TOP OF CASING.
 - THE ENDS OF THE CASING SHALL BE SUITABLY PROTECTED AGAINST THE ENTRANCE OF FOREIGN MATERIAL, BUT SHALL NOT BE TIGHTLY SEALED.
 - WHEN BORING ALL VOIDS OUTSIDE OF CASING PIPE SHALL BE FILLED BY MEANS OF PRESSURE GROUTING WITH 1:3 CEMENT-SAND MORTAR. THIS WORK MUST BE ACCOMPLISHED WITHIN 24 HOURS AFTER THE CROSSING HAS BEEN COMPLETED. BORING SHALL EXTEND A MINIMUM OF 10 FEET OUTSIDE THE EDGES OF THE PAVEMENT.
 - SKIDS ARE TO BE MINIMUM OF 80% OF PIPE LENGTH.
 - CASING SPACERS AS ALLOWED BY THE ENGINEER.

STANDARD CASING SECTION



MAX WIDTH OF TRENCH AT 12" ABOVE TOP OF PIPE
6" THRU 12" PIPE - 30" WIDE
15" THRU 36" PIPE - O.D. +16"
42" THRU 60" PIPE - O.D. +20"
OVER 60" PIPE - OUTSIDE DIAMETER OF PIPE +24"
MIN WIDTH OF TRENCH 12" ABOVE THE TOP OF PIPE SHALL BE 6" ON EACH SIDE OF PIPE

RIGID PIPE BEDDING DETAILS



MINIMUM WIDTH OF TRENCH AT 12" ABOVE TOP OF PIPE	
PIPE O.D.	MINIMUM TRENCH WIDTH
UP TO 16"	O.D. + 16"
GREATER THAN 16"	O.D. x 1.25 PLUS 12"

FLEXIBLE PIPE BEDDING DETAILS

PROJECT MANAGER: FIELD BOOK INFORMATION: PLYMOUTH COUNTY, MICHIGAN, 201 SOUTH MAIN STREET, PLYMOUTH, MICHIGAN 48170

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MISCELLANEOUS DETAILS (MD-1)

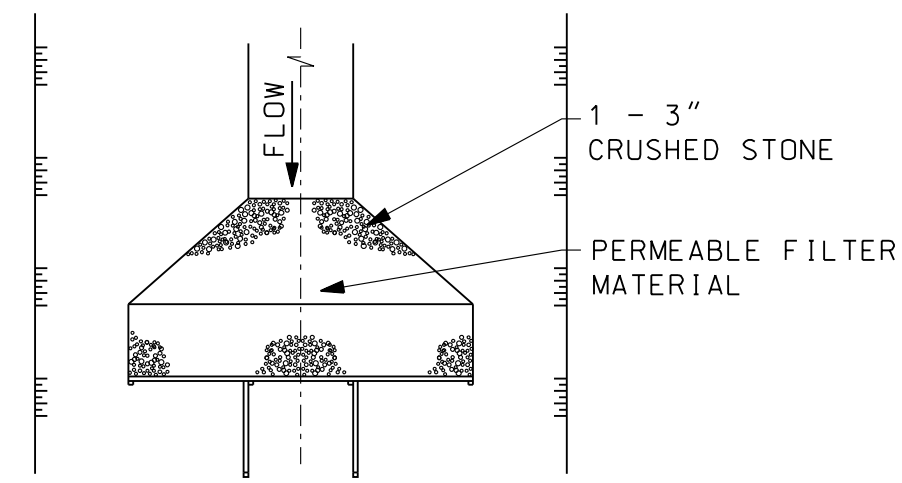
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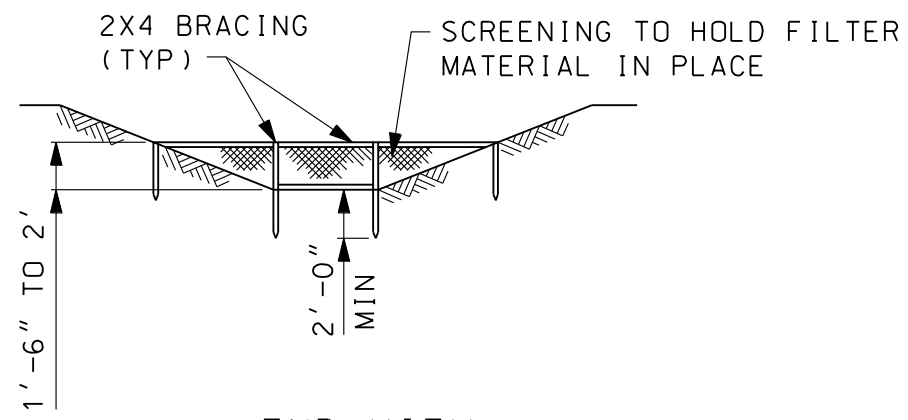
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MD-1

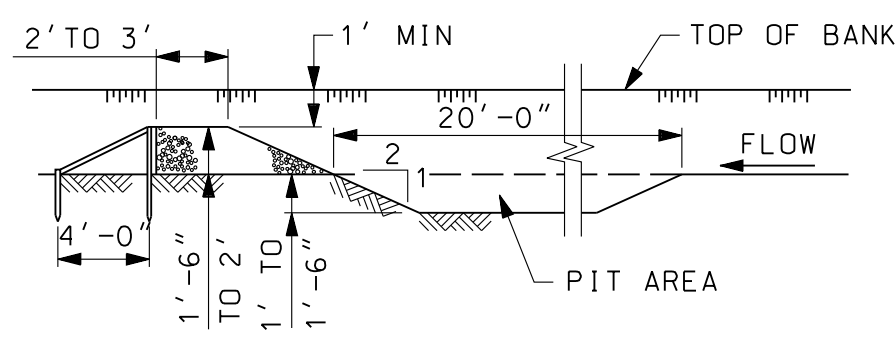
MISCELLANEOUS DETAILS (MD-1 OF 1)



PLAN VIEW



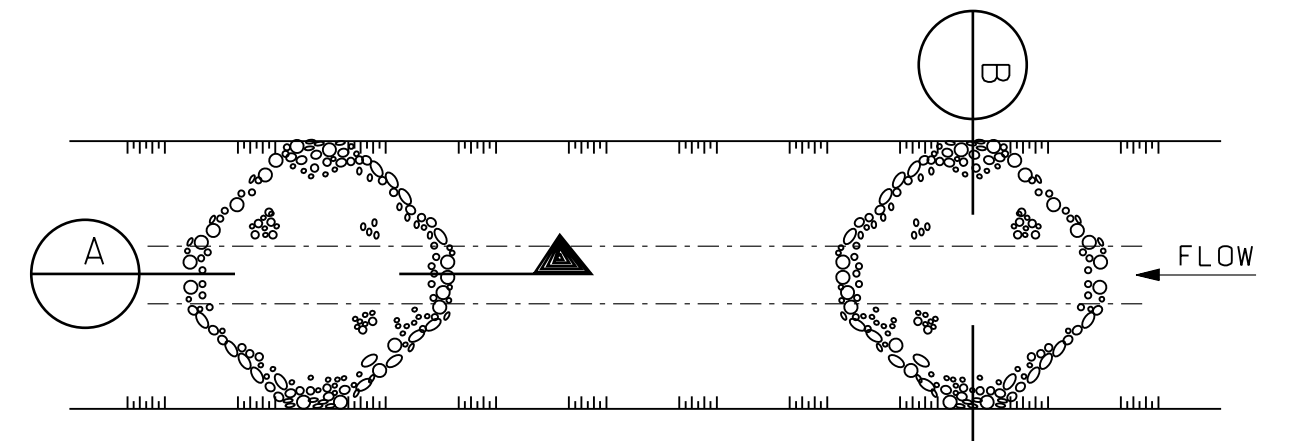
END VIEW



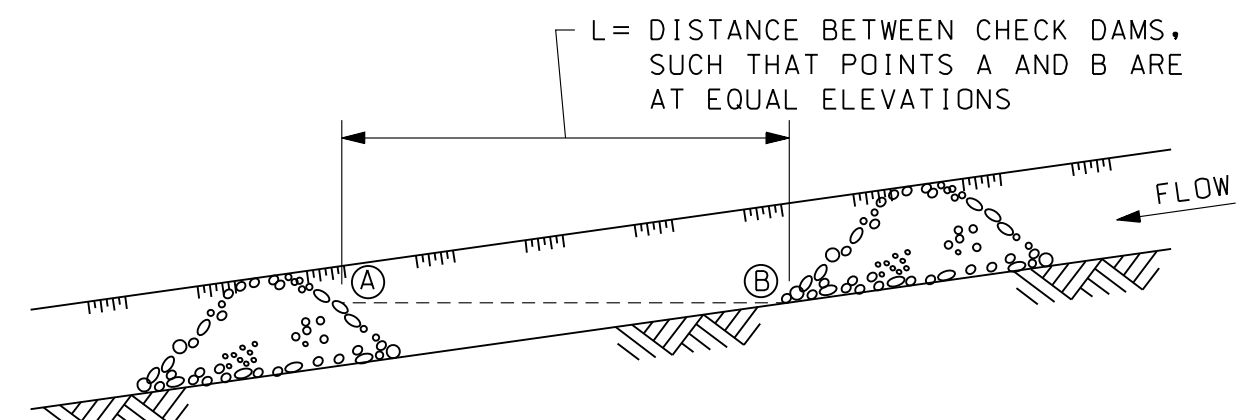
SECTION

- NOTES:
1. PLACE DITCH SEDIMENT TRAP PRIOR TO ON-SITE CONSTRUCTION WORK.
 2. MAINTAIN DITCH SEDIMENT TRAP IN GOOD OPERATION DURING PROJECT & REMOVE AT END OF PROJECT.
 3. CHANNEL TO BE RESTORED TO ORIGINAL CONDITION OR BETTER AS DIRECTED BY THE ENGINEER.
 4. CRUSHED STONE INCLUDED WITH DITCH SEDIMENT TRAP.

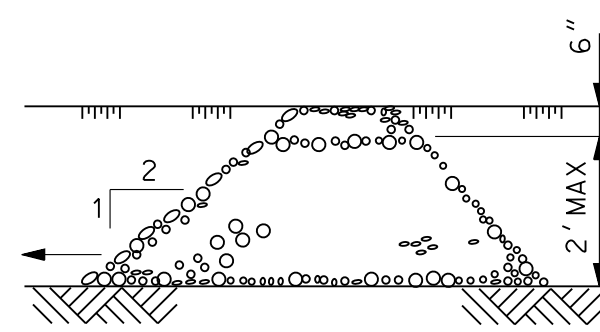
DITCH SEDIMENT TRAP
NOT TO SCALE



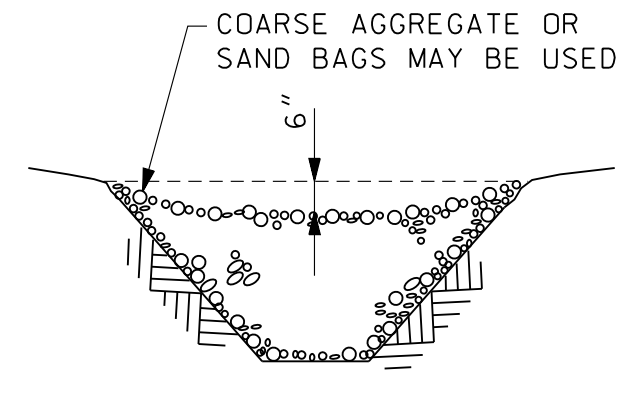
PLAN VIEW



CROSS-SECTION



SECTION A-A



SECTION B-B

- NOTE:
CHECK DAMS GREATER THAN TWO FEET IN DEPTH MAY SERIOUSLY IMPACT THE FLOW CHARACTERISTICS OF THE DITCH.

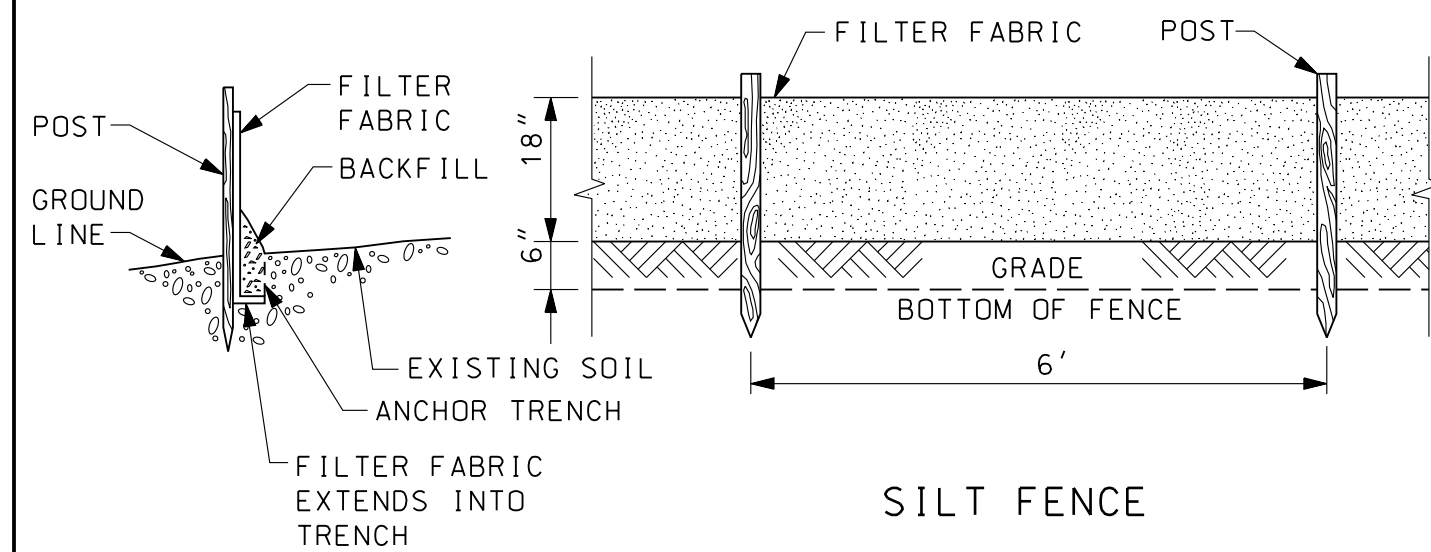
CHECK DAMS
NOT TO SCALE

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
2. ALL SOIL EROSION CONTROL MEASURES SHALL BE CHECKED A MINIMUM OF ONCE PER WEEK AND WITHIN A MINIMUM OF 24 HOURS AFTER EVERY RAINFALL. ANY SOIL EROSION CONTROL MEASURES DAMAGED OR RENDERED INEFFECTIVE SHALL BE IMMEDIATELY REPAIRED OR REMOVED AND REPLACED AT NO ADDITIONAL COST.
3. EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) DEVICES SHALL BE INSTALLED PRIOR TO CONTRACTOR BEGINNING ANY WORK. ALL SESC DEVICES SHALL BE MAINTAINED IN AN EFFECTIVE, FUNCTIONING CONDITION AT ALL TIMES DURING THE COURSE OF THE WORK. ALL TEMPORARY SESC DEVICES SHALL BE REMOVED AND THE AREA RESTORED AFTER THE PERMANENT SESC MEASURES ARE INSTALLED AND FUNCTIONING.
5. DEBRIS FROM THE PROJECT SHALL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME INEFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXITS.
6. EARTH EMBANKMENT BRIDGES PLACED OVER NEW PAVEMENT SHALL BE LOCATED ONLY AT PAVEMENT HIGH-POINTS AND SHALL HAVE STRAW BALES PLACED ALONG EACH SIDE OF THE BRIDGE FOR THE WIDTH OF THE PAVEMENT.
7. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDING AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY SPREAD UNIFORMLY AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE. ANCHOR MULCH WITH DISC-TYPE MULCH ANCHORING TOOL OR OTHER MEANS AS APPROVED BY THE AGENCY WITH JURISDICTION.
8. ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
9. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY EASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED. ALL DRAIN BANKS DISTURBED BY CONSTRUCTION SHALL BE RESTORED WITHIN FIVE CALENDAR DAYS AND SOD PEGGED IN PLACE.

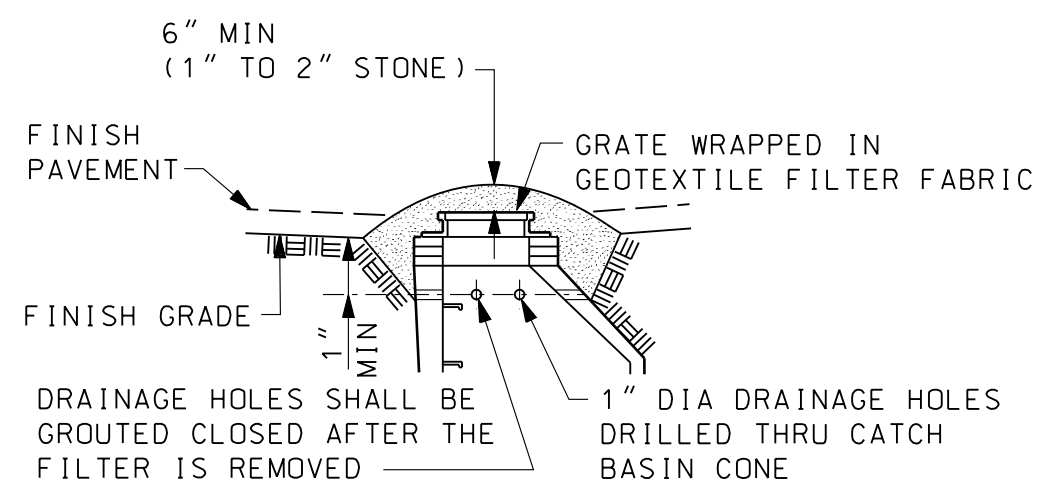
SOIL EROSION AND SEDIMENTATION CONTROL NOTES

10. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
11. SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO DEWATER THE GROUND IN THE COURSE OF CONSTRUCTING THE PROPOSED UTILITY, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY SOIL EROSION CONTROL DEVICE IN A MANNER THAT WILL FILTER ALL DISCHARGED WATER FROM THE DEWATERING OPERATION. IN NO INSTANCE SHALL THE DEWATERING DISCHARGE BE PERMITTED TO FLOW UNFILTERED FROM THE CONSTRUCTION SITE.
12. THE CONTRACTOR SHALL CONTROL THE DUST ON THE SITE DURING THE LIFE OF THE CONTRACT. IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE COMMUNITY THIS DUST CONTROL SHALL BE ACCOMPLISHED BY THE APPLICATION OF A POSITIVE DUST PICK-UP METHOD WITH WATER ON HARD SURFACES. SUCH DUST CONTROL MATERIALS SHALL BE APPLIED AS OFTEN AS IS NECESSARY IN THE OPINION OF THE COMMUNITY TO CONTROL THE DUST.
13. SHOULD THE SOIL EROSION CONTROL REQUIREMENTS BE NEGLECTED OR NOT ADEQUATELY FOLLOWED, THE COMMUNITY MAY REQUIRE THE CONTRACTOR TO CEASE CONSTRUCTION OPERATIONS AND TO APPLY HIS ENTIRE FORCE TO MEET THE REQUIREMENTS BEFORE PROCEEDING FURTHER WITH THE PROJECT.
14. SOIL EROSION AND SEDIMENTATION CONTROL SHALL BE IN ACCORDANCE WITH PART 91 SOIL EROSION AND SEDIMENTATION CONTROL (SESC), OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED (NREPA).
15. AS SOON AS POSSIBLE, COMPLETE FINAL GRADING AND PLACING OF PERMANENT SOIL EROSION CONTROL DEVICES. AFTER ESTABLISHMENT OF PERMANENT VEGETATION, REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES.
16. SOIL EROSION AND SEDIMENTATION CONTROL IS UNDER THE JURISDICTION OF THE CITY OF PLYMOUTH.

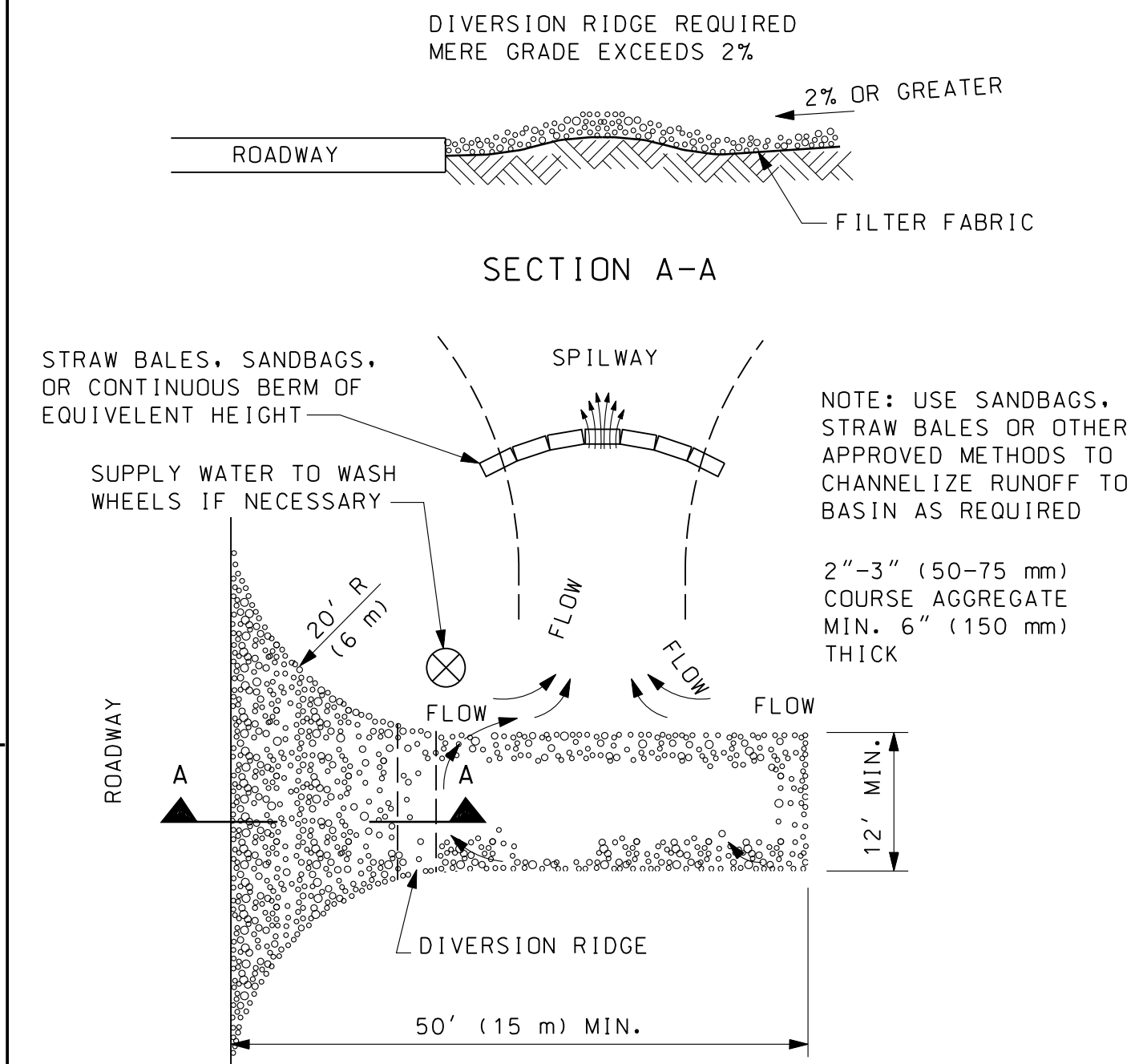


SILT FENCE

SILT FENCE
NOT TO SCALE



DRAINAGE STRUCTURE FILTER
NOT TO SCALE



- NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE

SEQUENCE OF CONSTRUCTION - SESC

1. INSTALL ALL TEMPORARY SOIL EROSION CONTROL MEASURES PRIOR TO DISTURBING ANY EARTH ON THE SITE.
2. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT DRIVE PRIOR TO DISTURBING ANY EARTH ON SITE. ALL TRUCKS LEAVING THE CONSTRUCTION SITE SHALL PASS THROUGH A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT DRIVE TO REMOVE DIRT AND SEDIMENT. ANY DIRT AND ACCUMULATED SEDIMENT ON ROADS AND STREETS IN THE VICINITY OF THE PROJECT SHALL BE SWEEPED CLEAN AT LEAST TWICE DAILY WITH A VACUUM TYPE PICKUP BROOM.
3. STABILIZE SLOPES STEEPER THAN 1 ON 4, CHANNELS AND SWALES WITHIN 7 DAYS OF EARTH DISTURBANCE. INSTALL PERMANENT STABILIZATION MEASURES WITHIN 5 DAYS OF FINAL GRADING.
4. DURING STORM SEWER INSTALLATION, ALL NEWLY CONSTRUCTED DRAINAGE STRUCTURES SHALL BE PROTECTED WITH A DRAINAGE STRUCTURE FILTER. THIS WORK WILL BE INCLUDED IN THE DRAINAGE COST.
5. INSTALL TOPSOIL, SEED AND MULCH / TOPSOIL AND SOD HYDROSEED ON DISTURBED RIGHT-OF-WAY WITHIN 5 DAYS OF COMPLETING UTILITY INSTALLATION.
6. PLACE RIPRAP WITHIN 24 HOURS OF PLACING CULVERTS, HEADWALLS OR OTHER DRAINAGE INLETS/OUTLETS.
7. CLEAN ALL ACCUMULATED SEDIMENT FROM CATCH BASINS, SEWERS AND PAVEMENT AREAS AS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION.
8. THE EXACT SCHEDULE OF SOIL EROSION AND SEDIMENTATION CONTROL EVENTS (WITH DAYS AND/OR DATES OF THE VARIOUS ACTIVITIES) SHALL BE SUBMITTED TO (WAYNE COUNTY DEPARTMENT OF ENVIRONMENT, AND LAND RESOURCE MANAGEMENT DIVISION) BY THE CONTRACTOR, FOR REVIEW AND APPROVAL, PRIOR TO OBTAINING A PERMIT.

NO.	REV.	DATE	DESCRIPTION	BY

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PLYMOUTH, MICHIGAN 48170

STANDARD SOIL EROSION AND SEDIMENTATION CONTROL DETAILS (SE-1)

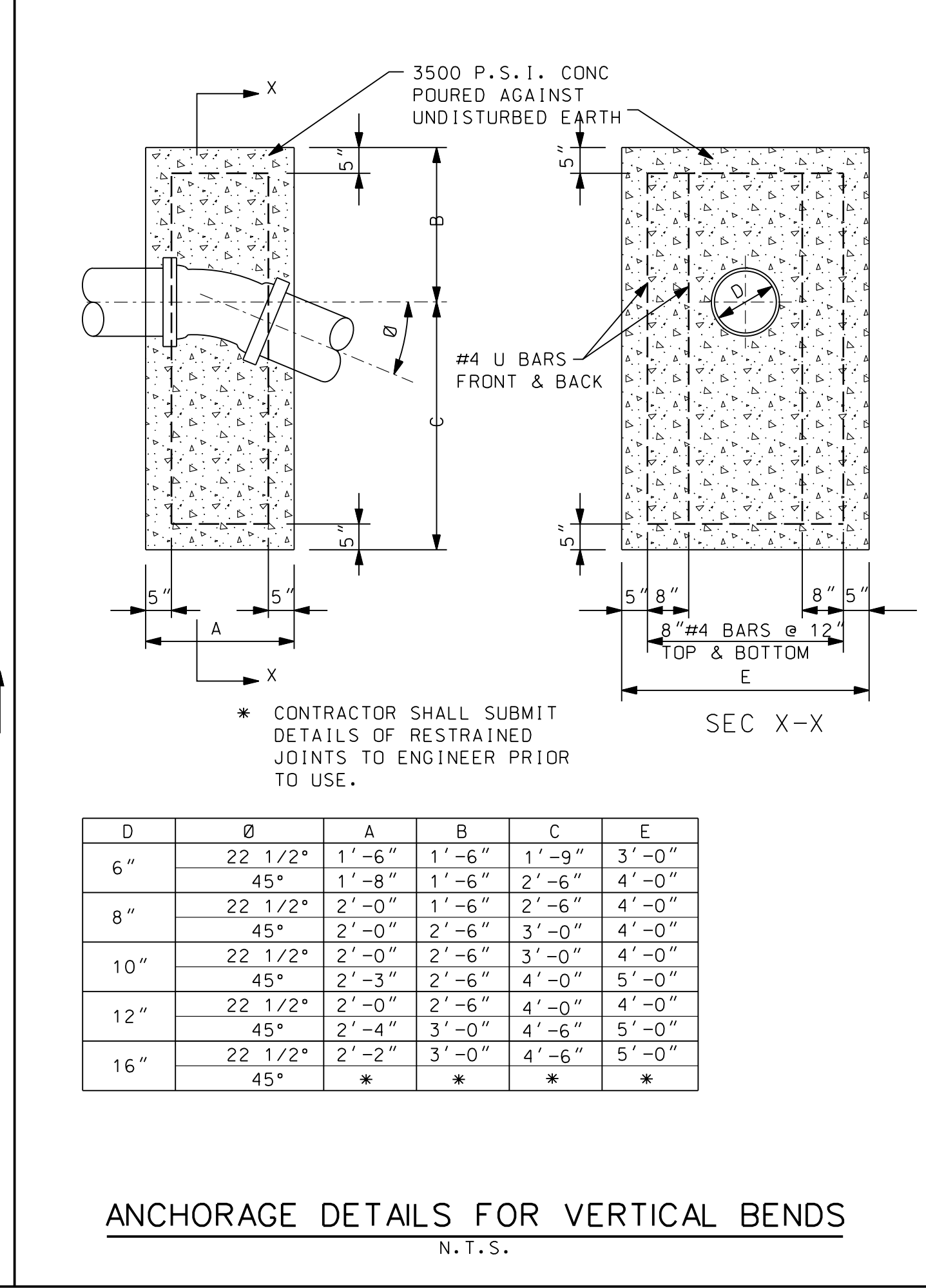
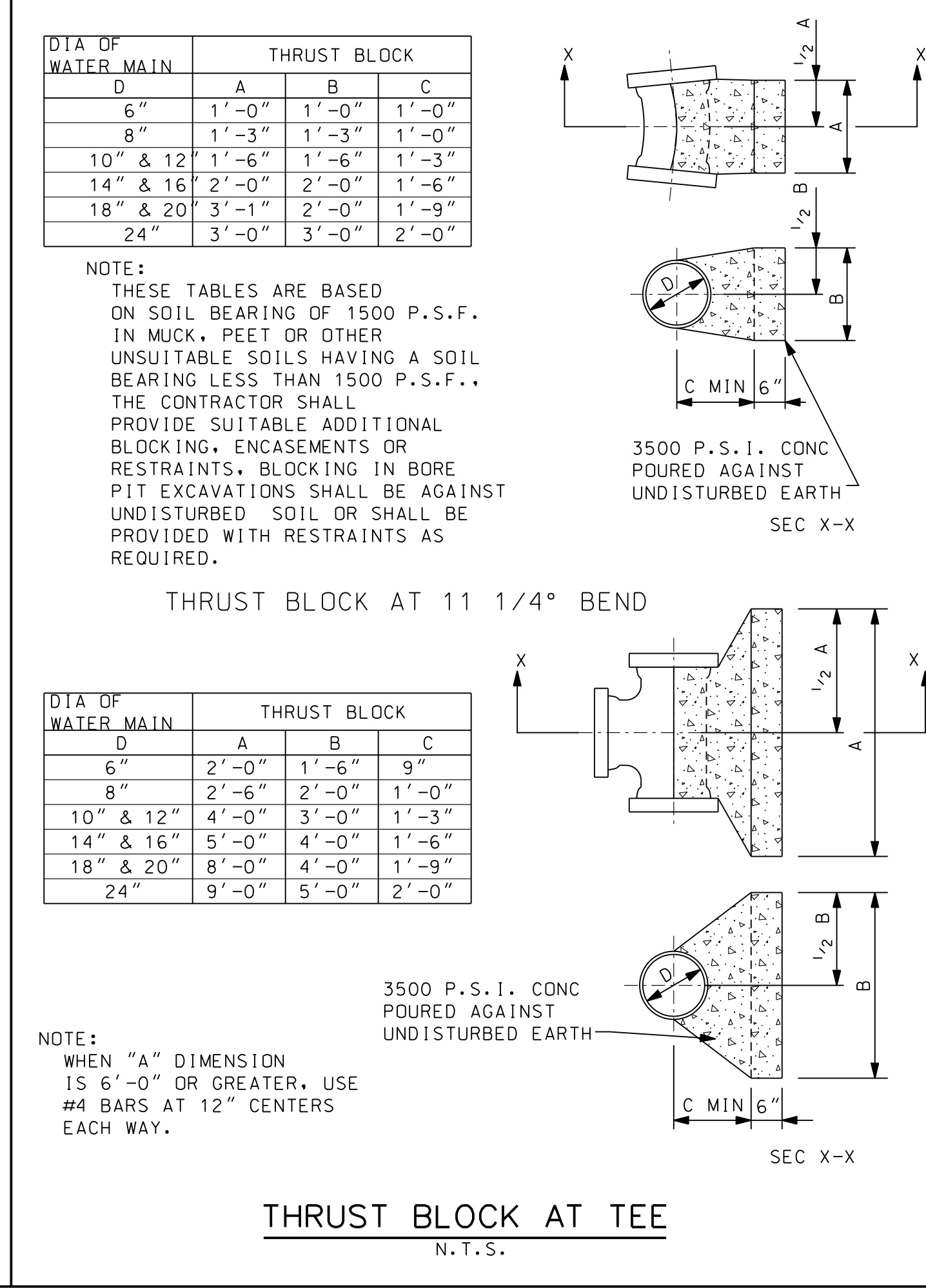
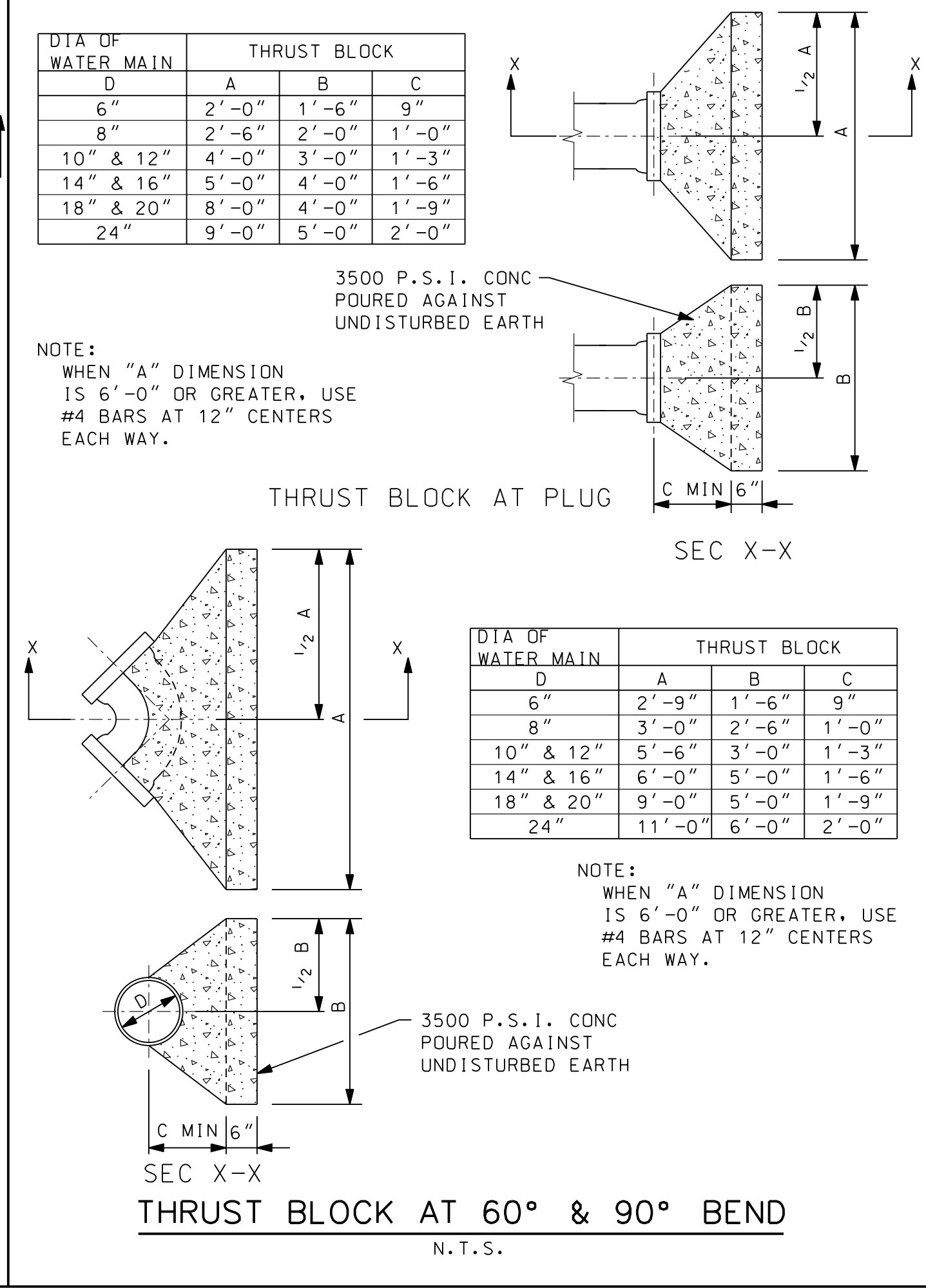
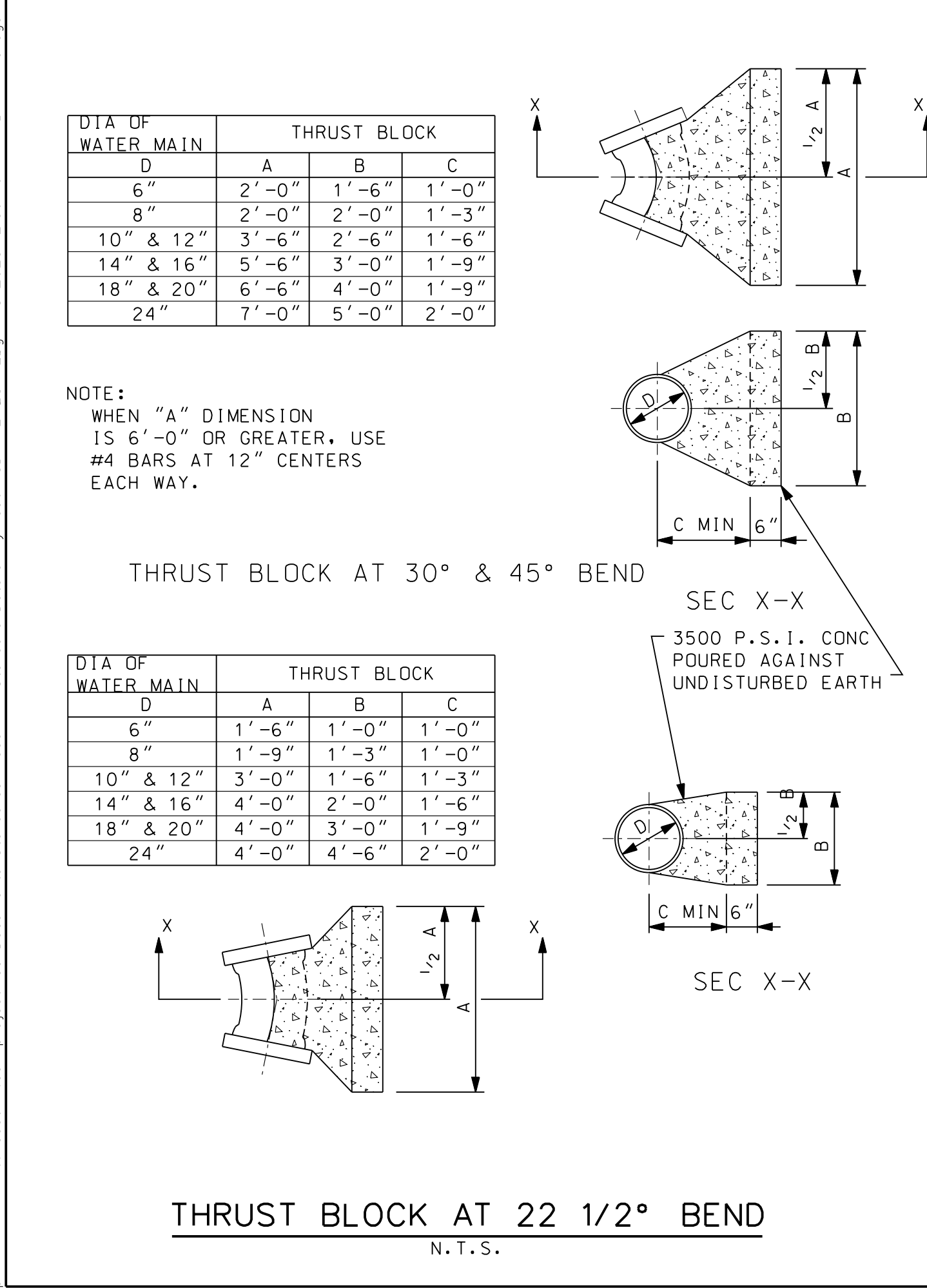
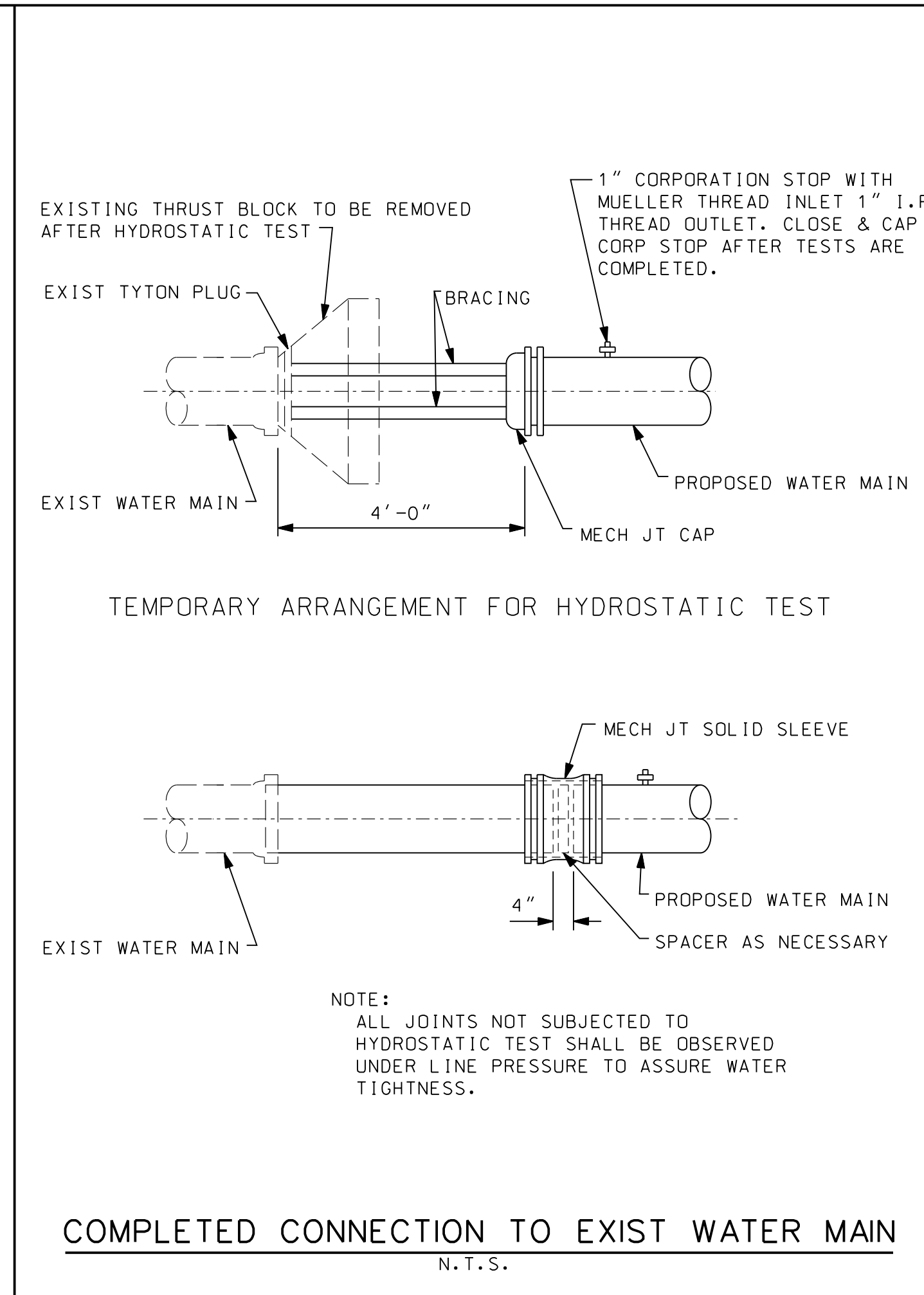
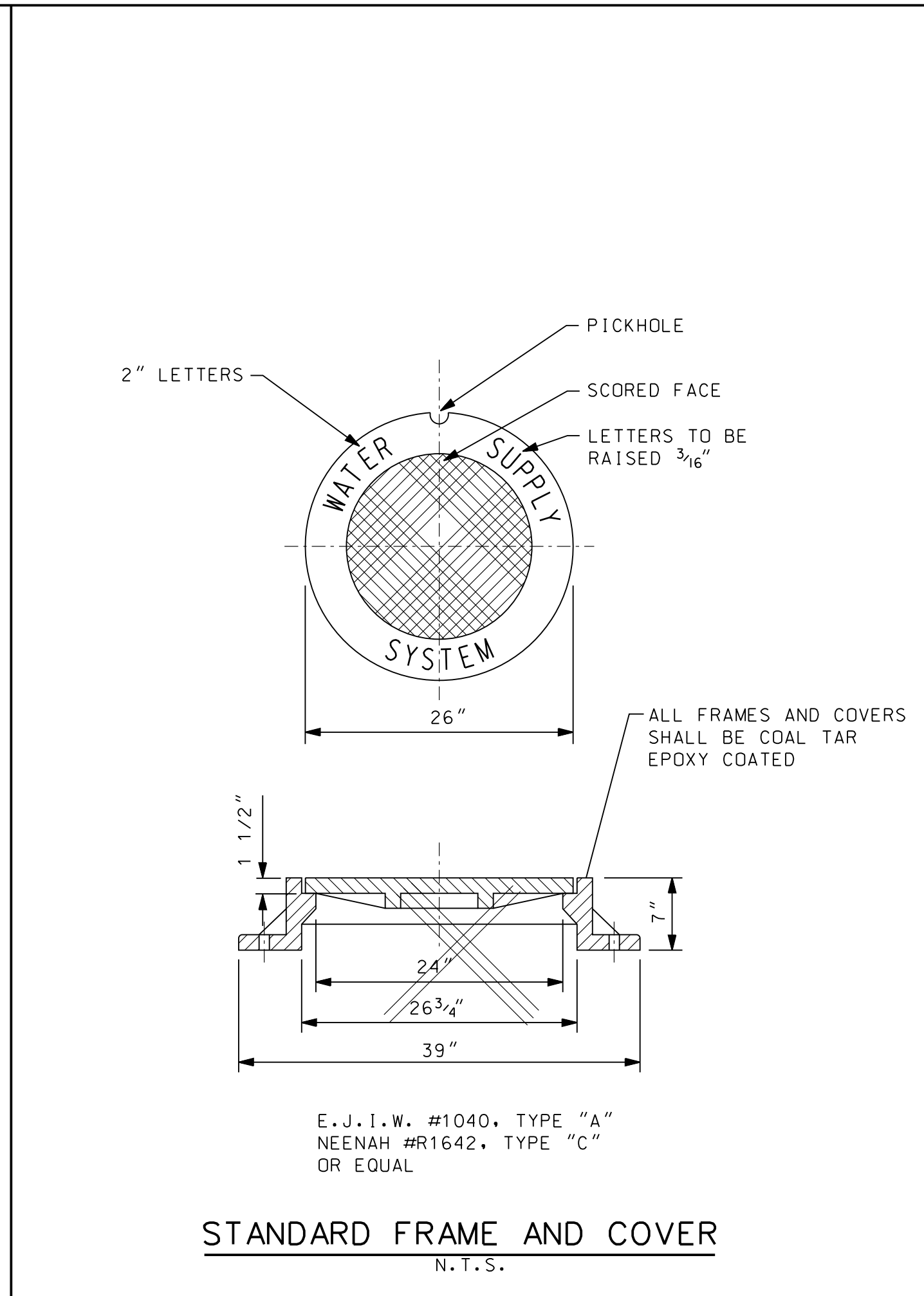
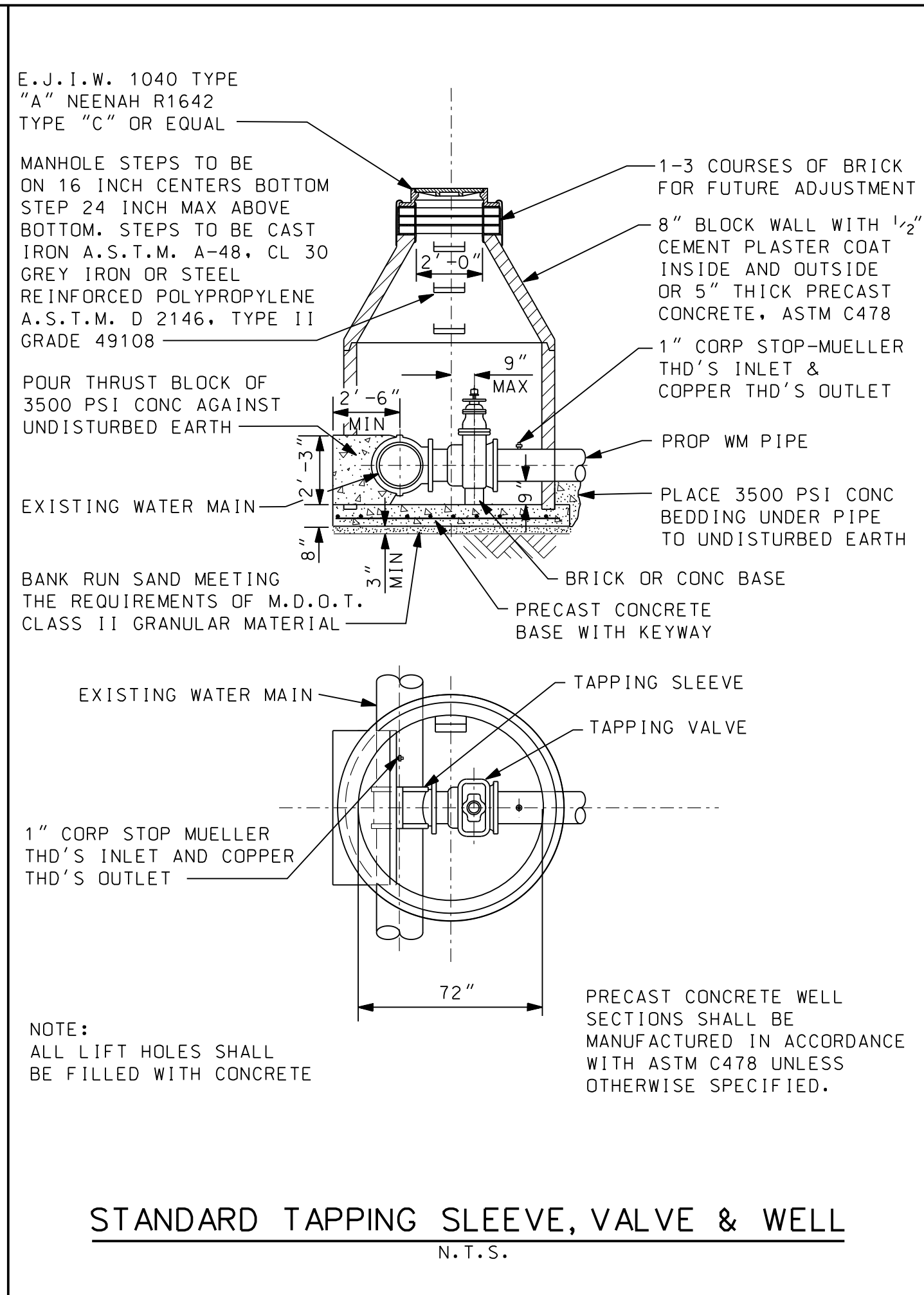
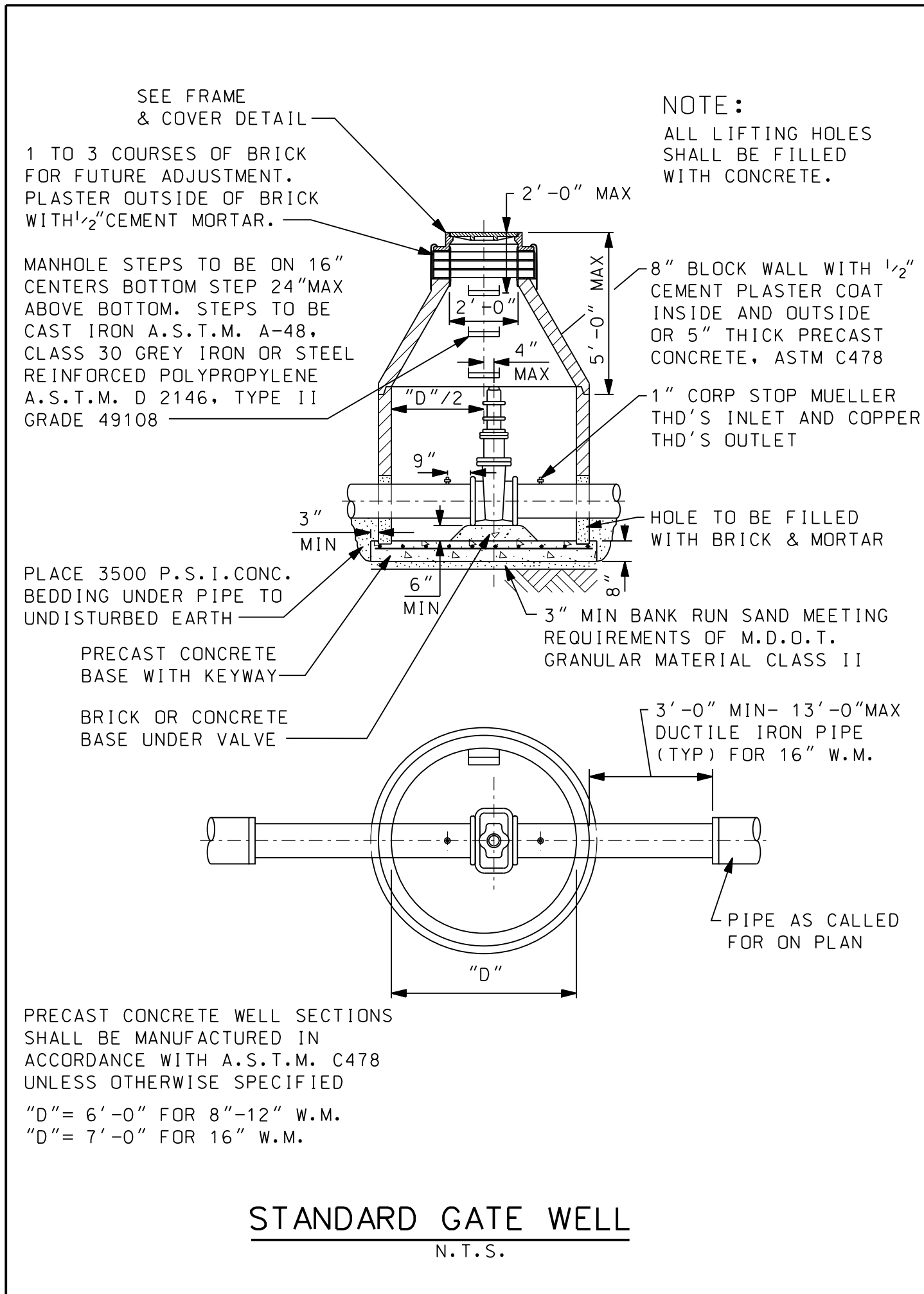
ISSUED FOR: DATE: BY:

JOB NO. -

SHEET SE-1

© Waste Trim Group, Inc. STANDARD SOIL EROSION AND SEDIMENTATION CONTROL DETAILS (SE-1) OF 1

PROJECT MANAGER: [redacted] FIELD BOOK INFORMATION: [redacted] STANDARD WATER MAIN DETAILS (WM-1) OF 2
 PROJECT MANAGER: [redacted] FIELD BOOK INFORMATION: [redacted] STANDARD WATER MAIN DETAILS (WM-1) OF 2
 PROJECT MANAGER: [redacted] FIELD BOOK INFORMATION: [redacted] STANDARD WATER MAIN DETAILS (WM-1) OF 2



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 STANDARD WATER MAIN DETAILS (WM-1)

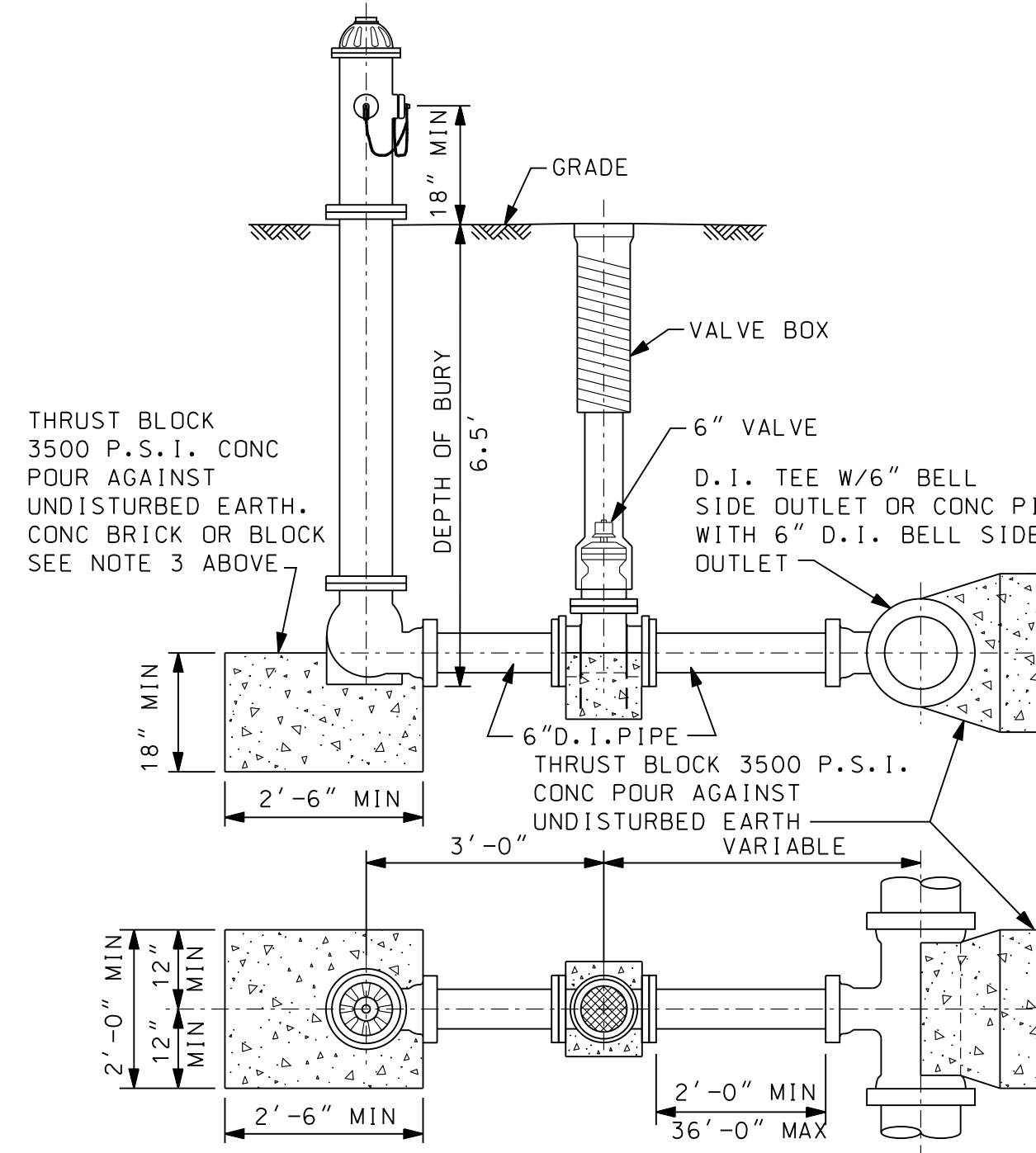
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JOB NO. [redacted]

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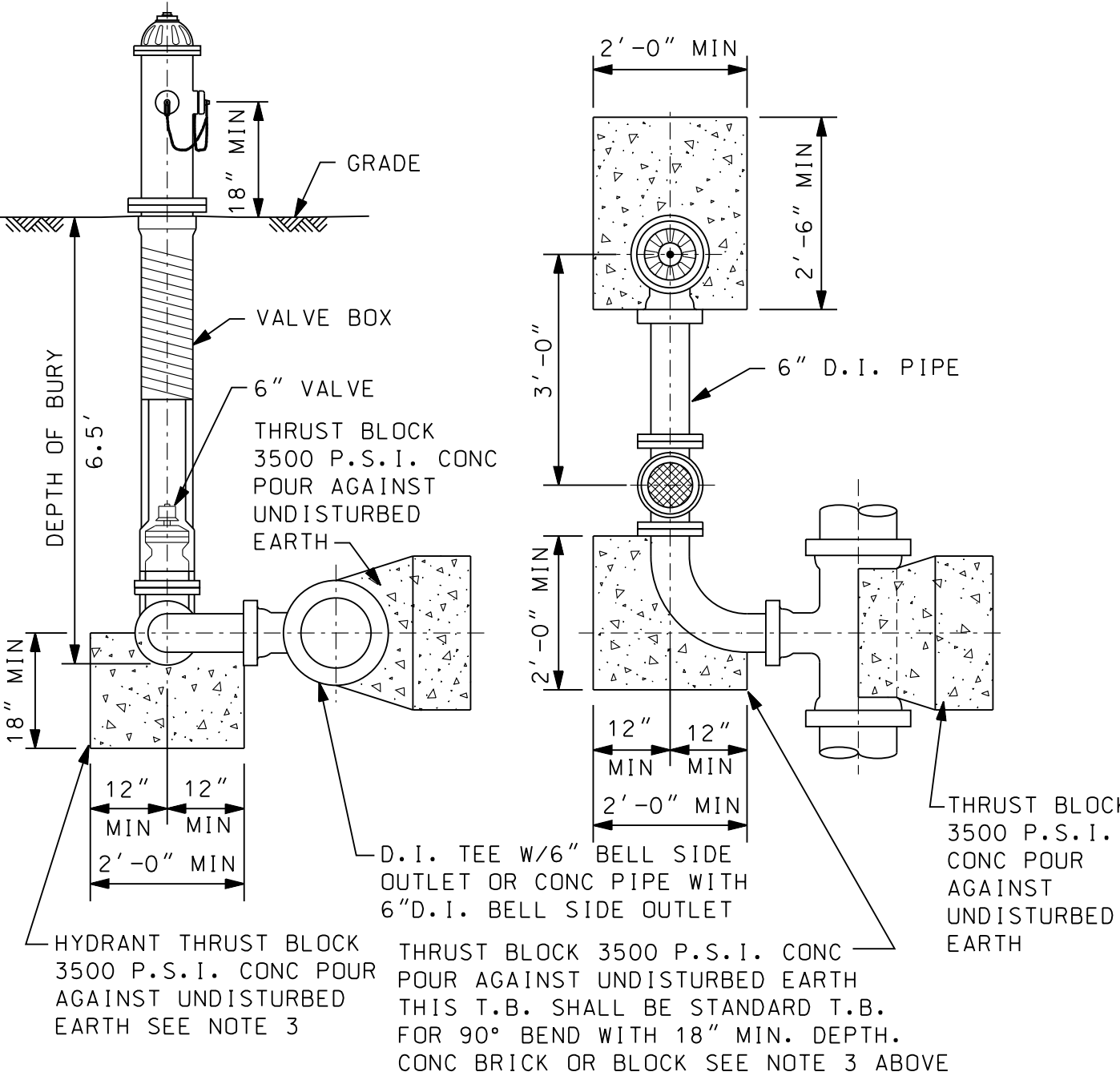
WM-1

- NOTES:
1. INSTALL ADDITIONAL FITTINGS, BENDS & SPIGOT PIPE AS NECESSARY BETWEEN WATER MAIN & VALVE BOX TO ADJUST FOR PROPER LOCATION AND GRADE OF HYDRANT.
 2. VERTICAL ANCHORAGES WILL BE REQUIRED ON ALL VERTICAL HYDRANT BENDS IN EXCESS OF 1 1/4°.
 3. WHERE HYDRANTS ARE INSTALLED ON EXISTING MAINS THAT ARE TO BE PLACED BACK INTO SERVICE IMMEDIATELY, PLACE CONCRETE BRICK OR BLOCK TO UNDISTURBED EARTH AND ENCASE WITH CONCRETE OR USE RESTRAINING GLANDS.



STANDARD FIRE HYDRANT ASSEMBLY "T" TYPE
N.T.S.

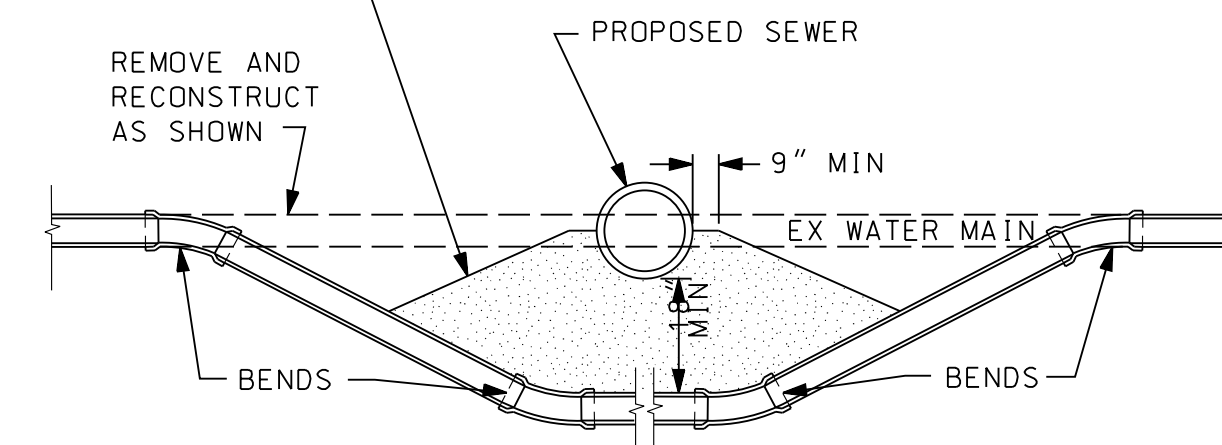
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**STANDARD FIRE HYDRANT ASSEMBLY
CLOSE COUPLE TYPE**
N.T.S.

COMPACTED SAND OR FLOWABLE FILL SHALL EXTEND FOR 9" EACH SIDE OF PROPOSED PIPE AND SHALL SLOPE OUT AT 1 ON 4 SLOPE TO BOTTOM OF TRENCH, OR AS DIRECTED BY ENGINEER

NOTE:
FOR ANCHORAGE DETAILS AT BENDS SEE WATER DETAIL SHT-WM 2



NOTE:
FOR BEDDING OF WATER MAIN SEE STANDARD SAND ENCASEMENT CLASS "F-III" THIS SHT.

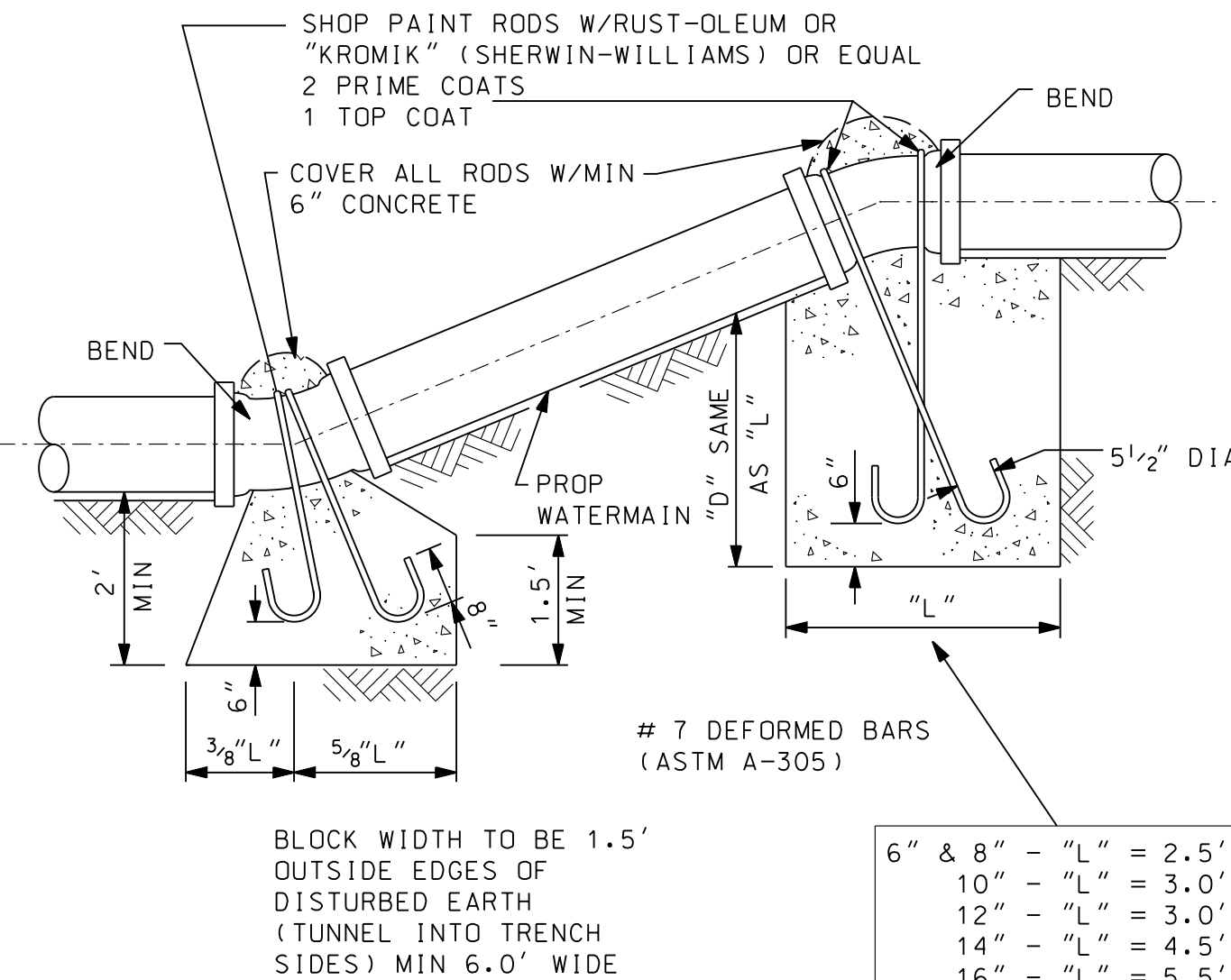
RELOCATION OF WATER MAIN
N.T.S.

WATER MAIN NOTES

1. ALL WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND GENERAL SPECIFICATION OF THE AGENCY OR AGENCIES HAVING JURISDICTION OF THE WATER SUPPLY SYSTEM AND CONSTRUCTION AREA.
2. WATER MAINS SHALL NOT BE CONSTRUCTED UNDER SIDEWALKS OR ROAD PAVEMENT AREAS.
3. ALL SURFACE STRUCTURES, SUCH AS HYDRANTS, GATE WELLS AND VALVE BOXES SHALL BE SET TO GRADE OR AS INDICATED ON THE PLANS.
4. FIRE HYDRANTS ARE TO BE INSTALLED PLUMB AND HAVE THEIR NOZZLES AS DETERMINED BY THE ENGINEER.
5. ALL FITTINGS SHALL BE DUCTILE IRON, PRESSURE RATING 350 P.S.I., CONFORMING TO ANSI/AWWA C 153/A21.53 COMPACT FITTINGS WITH DOUBLE THICKNESS CEMENT MORTAR LINING AND COAL TAR ENAMEL COATING INSIDE AND OUTSIDE.
6. GATE WELLS AND OTHER WATER MAIN STRUCTURES SHALL NOT BE CONSTRUCTED IN DRIVEWAYS, DRIVE APPROACHES, OR SIDEWALKS.
7. PROVIDE 7-FOOT MINIMUM COVER BELOW EXISTING PAVEMENT CENTERLINE OR GROUND AT WATER MAIN LOCATION, WHICHEVER IS LOWEST, WHEN PROPOSED WATER MAIN IS WITHIN 32 FEET OF CENTERLINE ON SECTION LINE ROADS, OR WITHIN 19 FEET OF CENTERLINE ON 1/4 LINE ROADS. SEVEN FEET COVER SHALL ALSO BE REQUIRED AT OTHER LOCATIONS AS NOTED ON THE PLAN. PROVIDE 6-FOOT MINIMUM COVER BELOW EXISTING ROAD CENTERLINE OR GROUND AT WATER MAIN LOCATION, WHICHEVER IS LOWEST, AT ALL OTHER LOCATIONS UNLESS OTHERWISE NOTED.
8. PLACE NATURAL BANK RUN SAND BACKFILL WITHIN THREE FEET OF ALL STRUCTURES, INCLUDING VALVE WELLS, FIRE HYDRANTS, ETC.
9. ALL WATER MAIN PIPE SHALL HAVE CLASS III BEDDING UNLESS OTHERWISE NOTED ON THE PLANS. SEE SHEET MD-1.
10. ALL PRECAST PRODUCTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
11. CONTRACTOR SHALL BAG ALL NEW FIRE HYDRANTS UNTIL THE WATER MAIN IS ACCEPTED FOR SERVICE.
12. WHEN THE FIRE HYDRANT IS BEING INSTALLED, THE 6-INCH DIAMETER FIRE HYDRANT VALVE SHALL BE INSTALLED IN THE FULL OPEN POSITION.
13. WATER MAIN TO BE PLACED LEVEL THROUGH ALL GATE WELLS.
14. ALL WATER SYSTEM BOLTS ARE TO BE COR-BLUE, MASTIC COATED, OR SPRAY PAINTED WITH UNDER COATING.
15. A FIRE HYDRANT SHOULD BE PLACED AT THE END OF ALL DEAD END WATER MAIN.

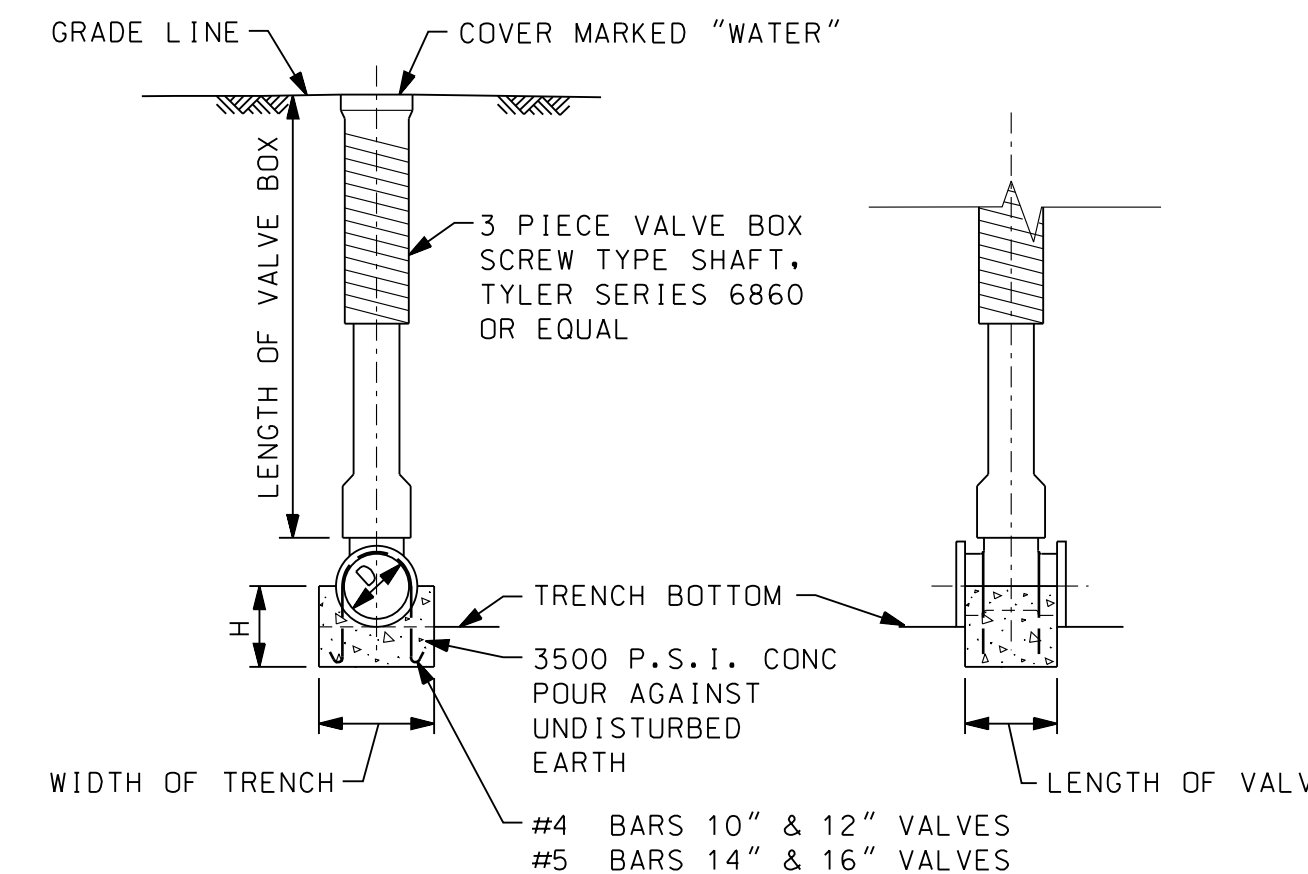
PLYMOUTH NOTES

1. THE TYPE OF PIPE FOR WATER MAIN THREE (3) INCHES IN DIAMETER AND LARGER IS TO BE CLASS 54 DUCTILE IRON PIPE. ONE (1) AND TWO (2) INCH SERVICE LEADS SHALL BE TYPE "K" COPPER.
2. ALL HORIZONTAL FITTINGS SHALL BE PUSH ON TYPE O-RING JOINTS. VERTICAL FITTINGS ARE TO BE MECHANICAL JOINT. BOLTS ARE TO BE COR-BLUE T-BOLT TYPE.
3. ALL VALVES ARE TO ROTATE CLOCKWISE TO OPEN. SIX (6) INCH THROUGH TWELVE (12) INCH DIAMETER GATE VALVES SHALL BE EAST JORDAN - RESILIENT SEAT WEDGE.
4. HYDRANTS SHALL BE EAST JORDAN IRON WORKS 5BR250 TRAFFIC MODEL, DRY BARREL COMPRESSION TYPE CONFORMING TO AWWA C502. UNIT SHALL HAVE A SEAT VALVE AND DOUBLE OPERATING STEM "O" RING SEALS. HYDRANTS SHALL BE 6-FOOT BURY, HAVE A 5-1/4 INCH DIAMETER VALVE OPENING AND 6-INCH MECHANICAL JOINT CONNECTION. TWO, 4-INCH DIAMETER PUMPER NOZZLES SHALL BE PROVIDED. NOZZLE THREADS SHALL BE TO CITY OF DETROIT FIRE DEPARTMENT STANDARDS. HYDRANT SHALL HAVE A 1-1/8-INCH PENTAGON OPERATING NUT AND BE DESIGNED TO OPEN IN A COUNTERCLOCKWISE DIRECTION WITH AN ARROW CAST INTO THE TOP OF THE HYDRANT IN A CLEARLY VISIBLE LOCATION INDICATING THE OPENING DIRECTION.
5. THE CITY'S WATER DEPARTMENT WILL BE THE ONLY AUTHORIZED PERSONNEL TO OPERATE THE VALVES ON THE MAIN LINE.
6. ANY ANGLE POINTS OR BENDS ARE TO BE MARKED AT GRADE LEVEL WITH A 2"x2" BOARD FOR LOCATION PURPOSES.
7. ALL WATER MAIN IS TO BE PLACED LEVEL THROUGH ALL GATE VALVES.
8. WHEN JACKING OR BORING ALL VOIDS SHALL BE FILLED BY MEANS OF PRESSURE GROUTING WITH 1:3 CEMENT SAND MORTAR. WATER MAIN JACKING OR BORING SHALL EXTEND A MINIMUM OF 10-FEET OUTSIDE THE EDGES OF PAVEMENT.
9. HYDRANT LEADS GREATER THAN 10-FEET IN LENGTH FROM THE TRANSMISSION LINE SHALL BE CONSTRUCTED WITH 8-INCH DIAMETER PIPE.
10. NO HYDRANTS SHALL BE LOCATED WITHIN 10-FEET OF ANY ROADWAY OR DRIVEWAY.
11. WATER MAIN SHOWN TAPPING ANY EXISTING LINE UTILIZING AN EQUIVALENT PIPE DIAMETER SHALL BE DONE BY USING A TAPPING SLEEVE WITH THE NEXT SMALLEST DIAMETER AND THEN ENLARGED TO THE REQUIRED SIZE.



NOTE:
4' MIN COVER ON ALL DITCH CROSSINGS, BENDS IF REQUIRED TO BE PLACED PER VERTICAL CONCRETE TO BE 3500 P.S.I.

VERTICAL REACTION BLOCKING
N.T.S.



SIZE OF PIPE	H
6"	6"
8"	8"
10"	10"
12"	12"

VALVE BLOCK AND BOX DETAIL
N.T.S.

NO.	DATE	DESCRIPTION	BY

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STANDARD WATER MAIN DETAILS (WM-2)

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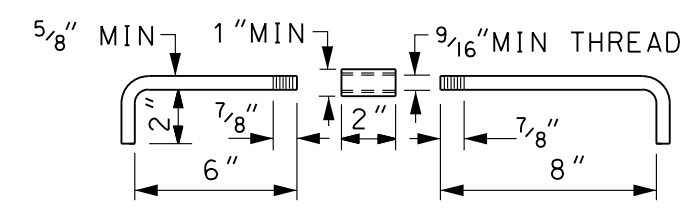
JOB NO. _____

SHEET

WM-2

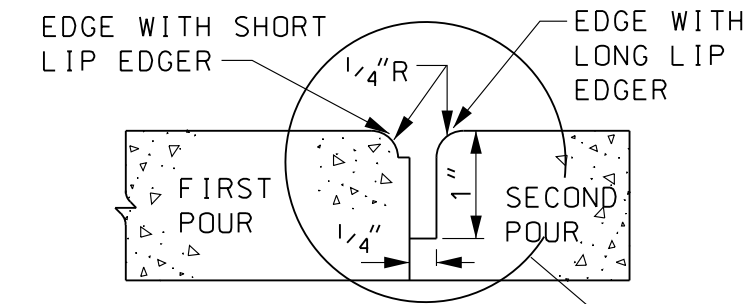
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FOR FUTURE PAVEMENT WIDENING THIS JOINT SHALL BE CONSTRUCTED ACCORDING TO THE DETAIL SHOWN EXCEPT THAT THE "SECOND POUR" AND THE "SECOND HALF" OF THE JOINT DOWEL HOOK BOLT SHALL BE OMITTED. THE THREADED HOLE IN THE HOOK BOLT COUPLING SHALL BE FILLED WITH A RUST PREVENTIVE OIL AND PLUGGED WITH A PLASTIC OR NEOPRENE PLUG. THE PLUG SHALL BE OF PROPER DIMENSION TO COMPLETELY SEAL THE HOLE AND SHALL NOT PROJECT MORE THAN 3/8" AFTER INSERTION.

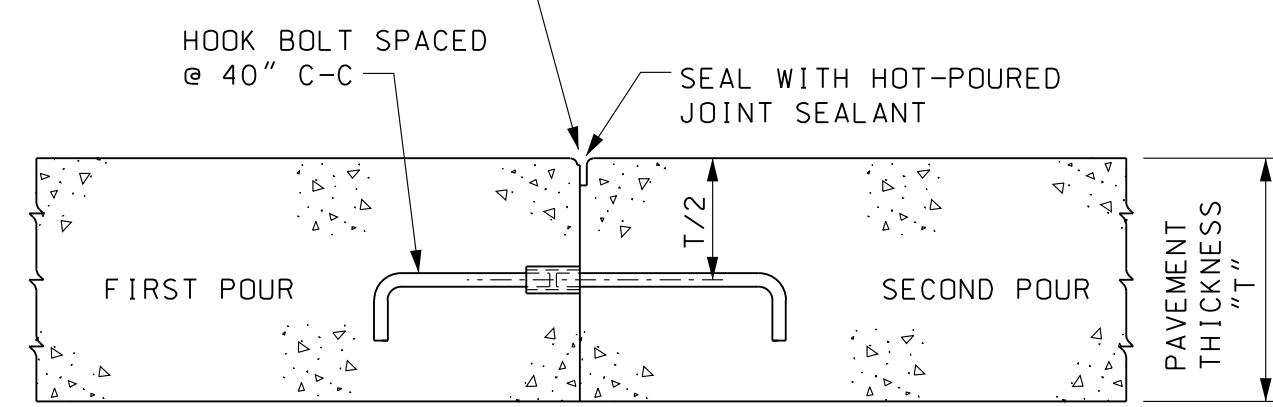


HOOK BOLT DETAIL

THE SEALING OF THIS JOINT WILL NOT BE REQUIRED WHEN IT IS USED IN BASE COURSE CONSTRUCTION

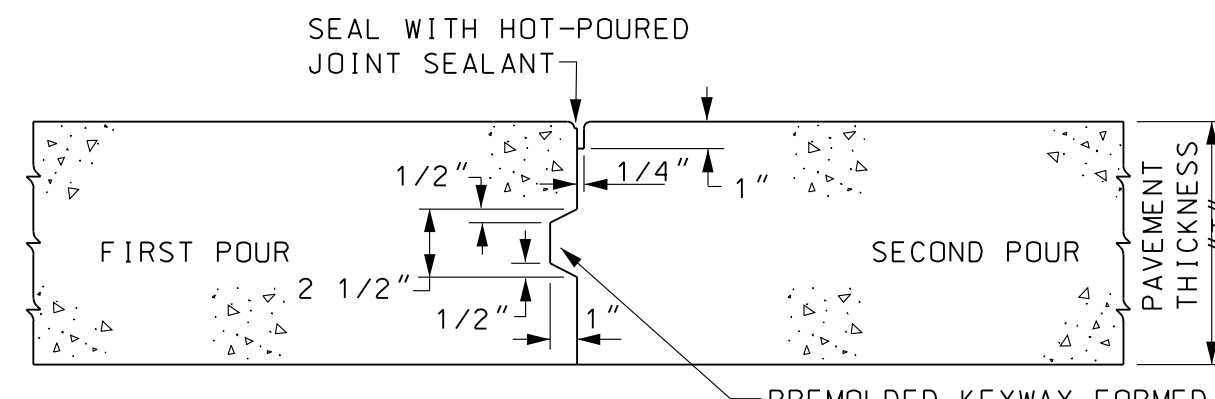


TYPICAL



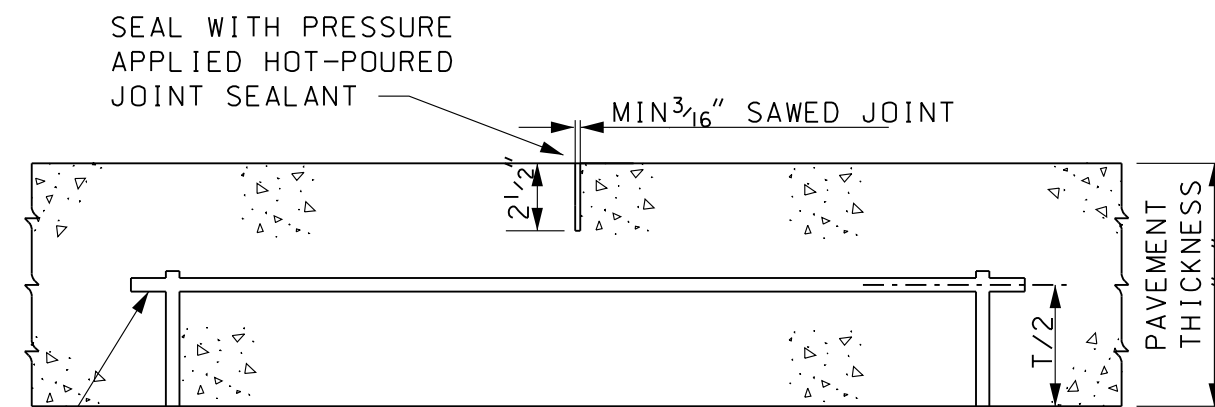
(JOINT SYMBOL "B")

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT "B"
N.T.S.



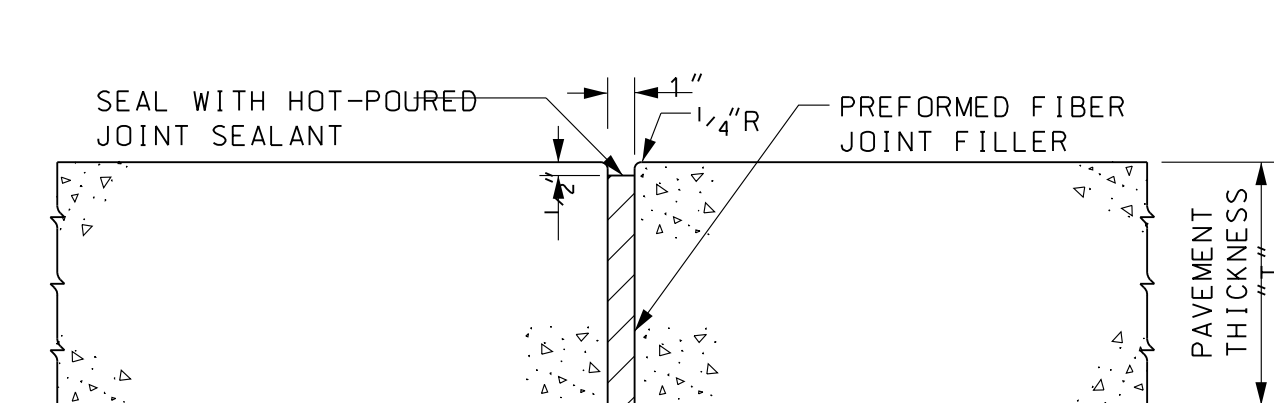
(JOINT SYMBOL "B")

LONG BULKHEAD CONSTR. JT. W. KEY-W/O HOOK-BOLT ASSY "B"
N.T.S.



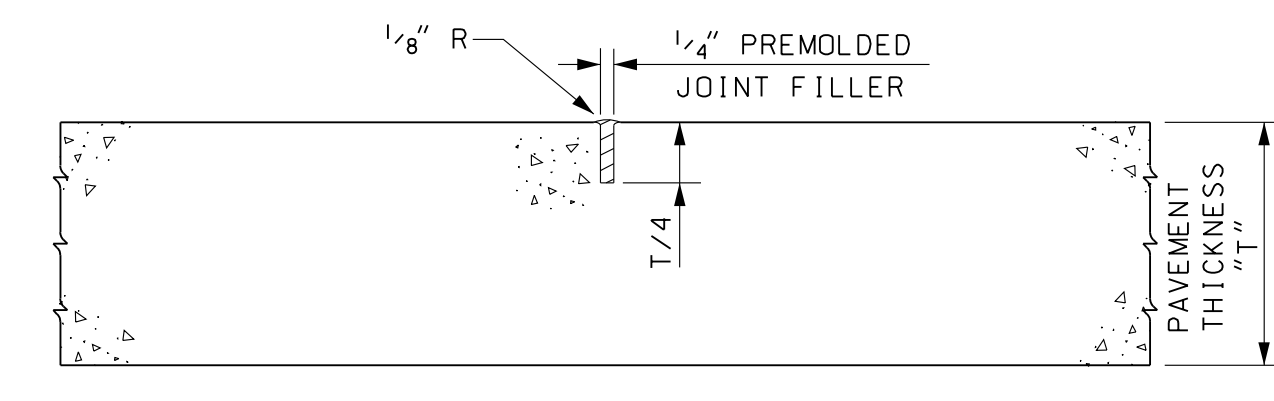
(JOINT SYMBOL "D")

LONGITUDINAL LANE TIE JOINT "D"
N.T.S.



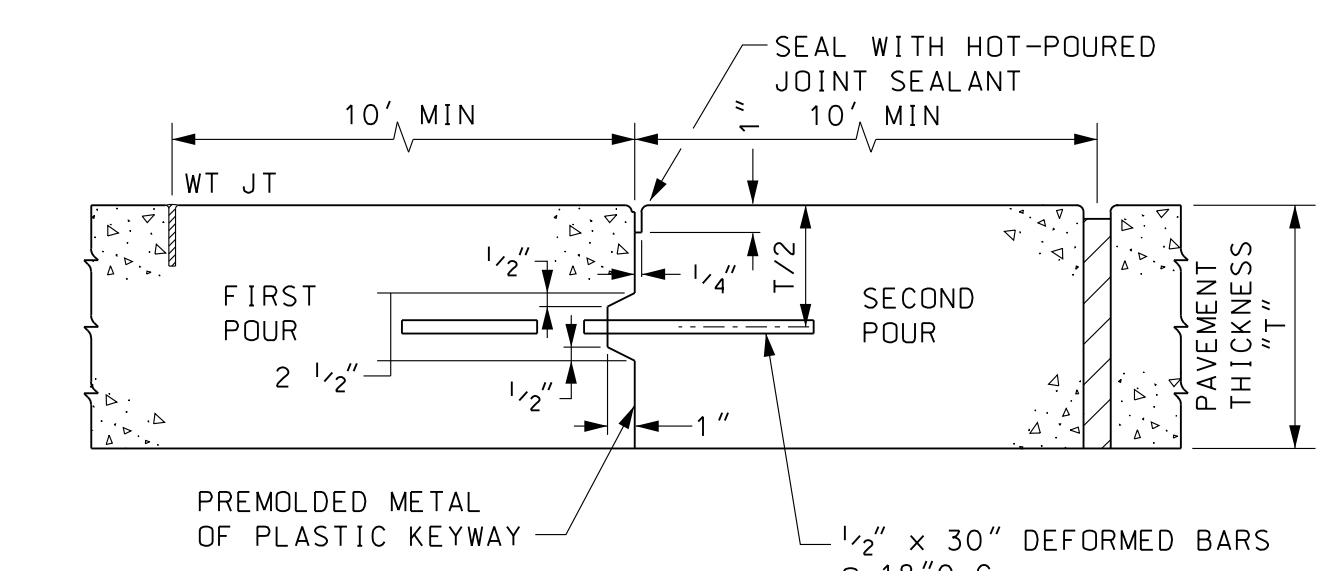
(JOINT SYMBOL "E")

TRANSVERSE EXPANSION JOINT "E"
N.T.S.



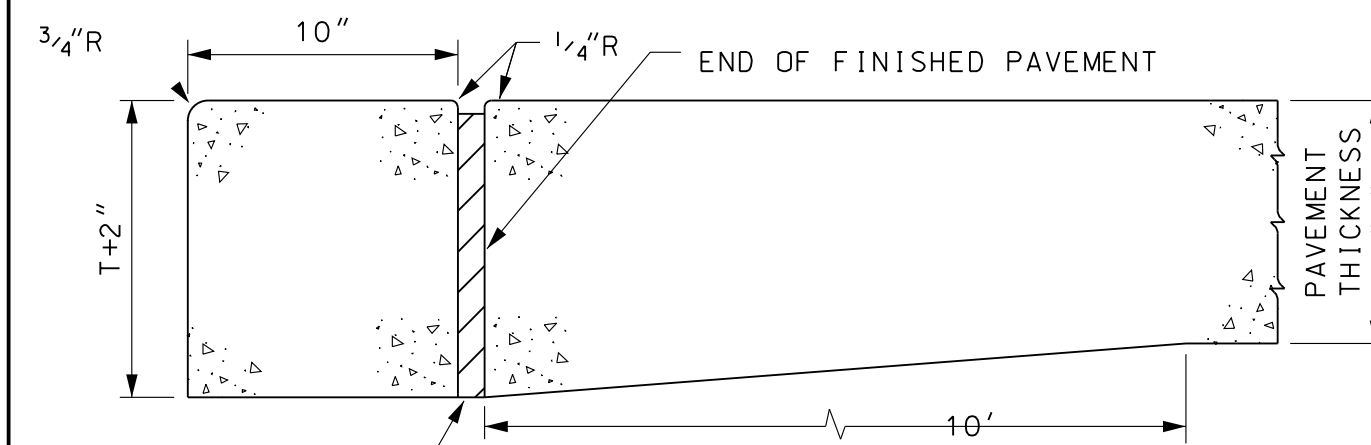
(JOINT SYMBOL "WT")

TRANSVERSE WEAKENED PLANE JOINT "WT"
N.T.S.



TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED AT ENDS OF ALL POURS AND WHERE PAVING OPERATIONS ARE DISCONTINUED FOR A PERIOD OF MORE THAN 20 MINUTES.

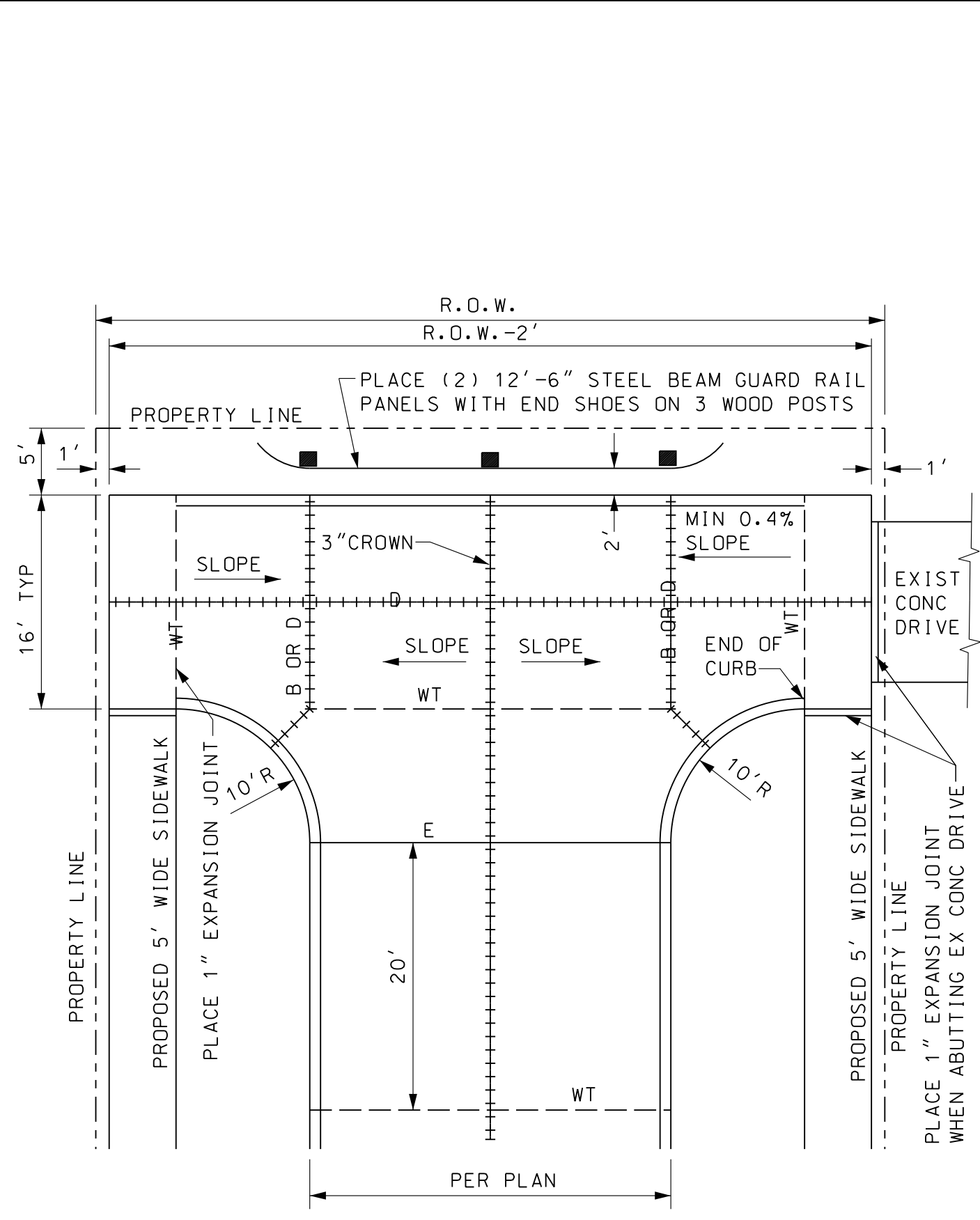
TRANSVERSE CONSTRUCTION JOINT
N.T.S.



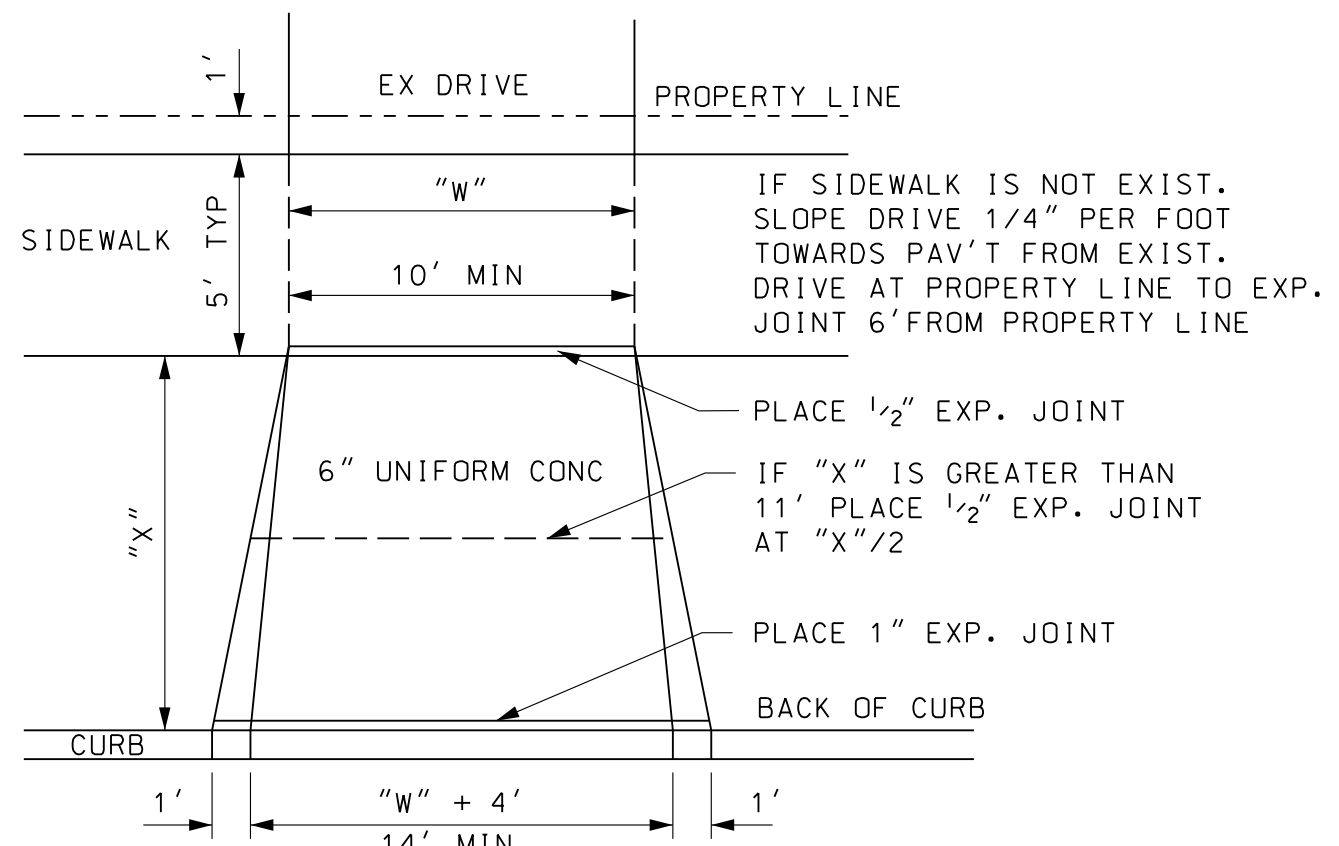
CONCRETE END HEADERS SHALL BE PLACED AT ALL ENDS OF PAVEMENT UNLESS OTHERWISE INDICATED ON THE PLANS

END HEADERS WILL BE MEASURED BY AREA IN SQUARE YARDS AND WILL BE PAID FOR AT THE SAME UNIT PRICE BID PER SQUARE YARD AS FOR ADJACENT PAVEMENT

CONCRETE END HEADER
N.T.S.



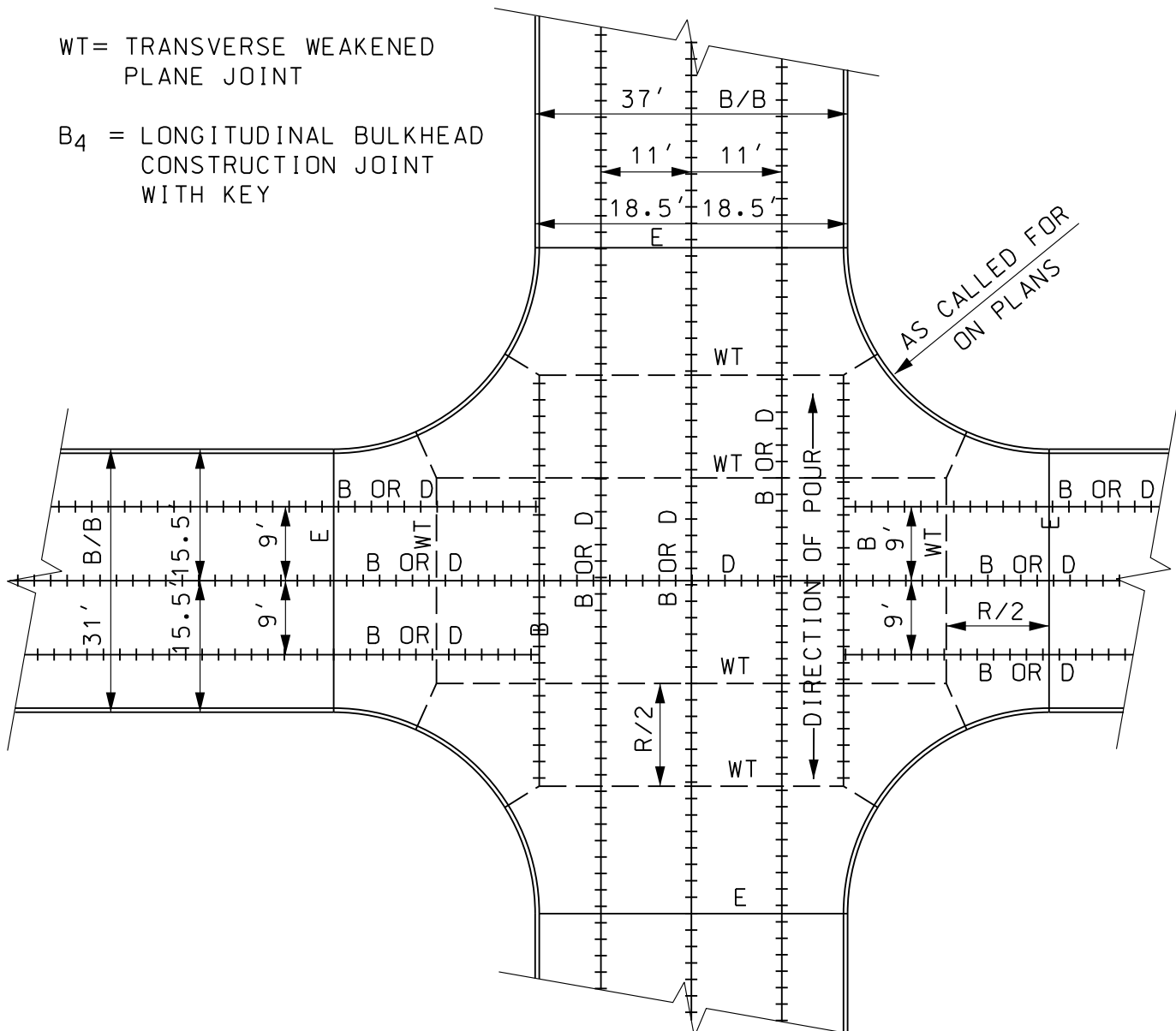
TYPICAL "T" TURNAROUND
N.T.S.



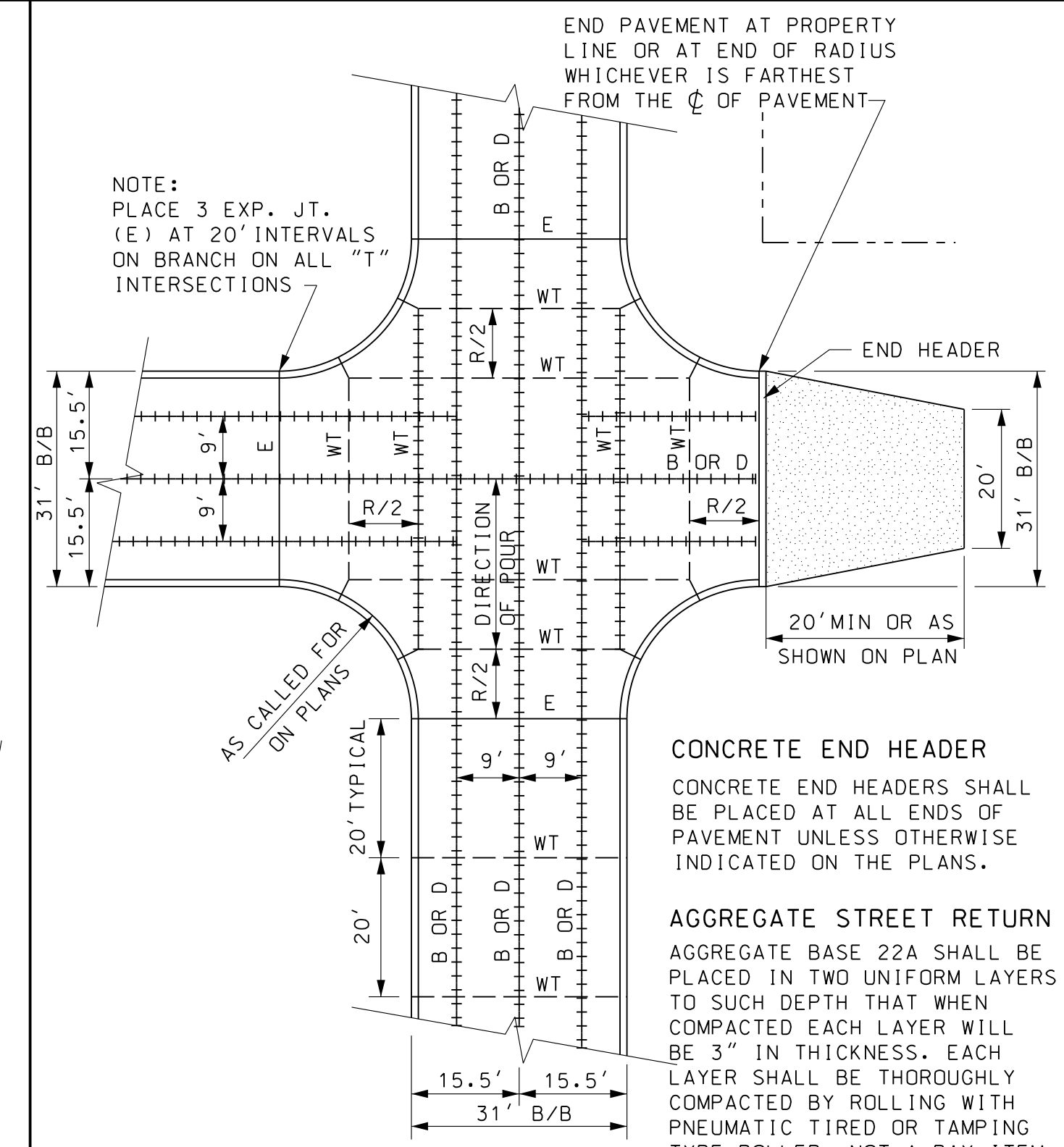
NOTE: ALL DRIVES APPROACHES SHALL HAVE AT LEAST TWO JOINTS ONE PARALLEL TO, AND ONE PERPENDICULAR TO THE CURB LINE. DOUBLE DRIVES SHALL HAVE TWO PERPENDICULAR JOINTS.

DRIVE APPROACH DETAIL
N.T.S.

- JOINT SYMBOL
- B= LONGITUDINAL BULKHEAD CONSTRUCTION JOINT
- E= EXPANSION JOINT
- D= LONGITUDINAL LANE TIE JOINT
- WT= TRANSVERSE WEAKENED PLANE JOINT
- B4 = LONGITUDINAL BULKHEAD CONSTRUCTION JOINT WITH KEY



INTERSECTION DETAIL
N.T.S.



NOTE: PLACE 3 EXP. JT. (E) AT 20' INTERVALS ON BRANCH ON ALL "T" INTERSECTIONS

CONCRETE END HEADER
CONCRETE END HEADERS SHALL BE PLACED AT ALL ENDS OF PAVEMENT UNLESS OTHERWISE INDICATED ON THE PLANS.

AGGREGATE STREET RETURN
AGGREGATE BASE 22A SHALL BE PLACED IN TWO UNIFORM LAYERS TO SUCH DEPTH THAT WHEN COMPACTED EACH LAYER WILL BE 3" IN THICKNESS. EACH LAYER SHALL BE THOROUGHLY COMPACTED BY ROLLING WITH PNEUMATIC TIERED OR TAMPING TYPE ROLLER. NOT A PAY ITEM.

THE DITCHES AT STREET INTERSECTIONS SHALL BE CLEANED OUT AND RESHAPED AS DIRECTED BY THE ENGINEER TO PROVIDE PROPER DRAINAGE. THIS WORK WILL NOT BE A PAY ITEM.

INTERSECTION DETAIL-SHOWING UNPAVED STREET APPROACH
SCALE = NONE

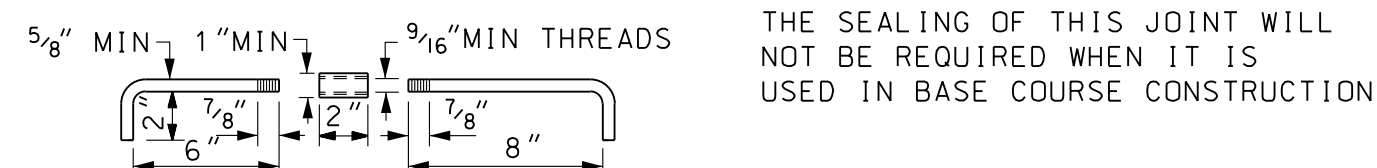
PROJECT MANAGER: FIELD BOOK INFORMATION: PROJECT: WASTE TRIM CONSTRUCTION STANDARDS

Table with columns: REVISION, DATE, DESCRIPTION, BY

WASTE TRIM logo and contact information: 26251 Northline Rd, PO Box 10, Taylor, MI 48180

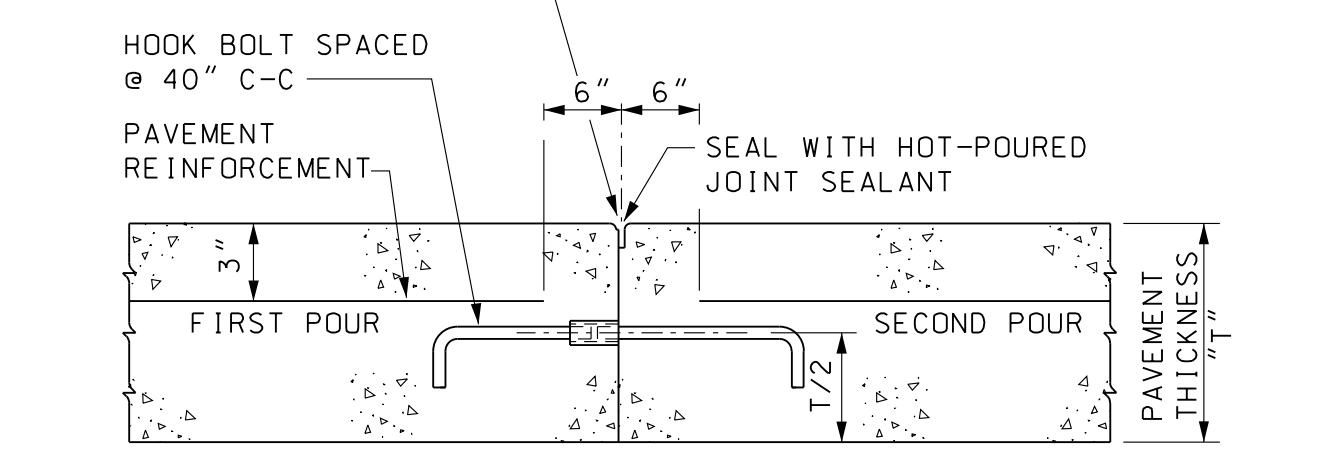
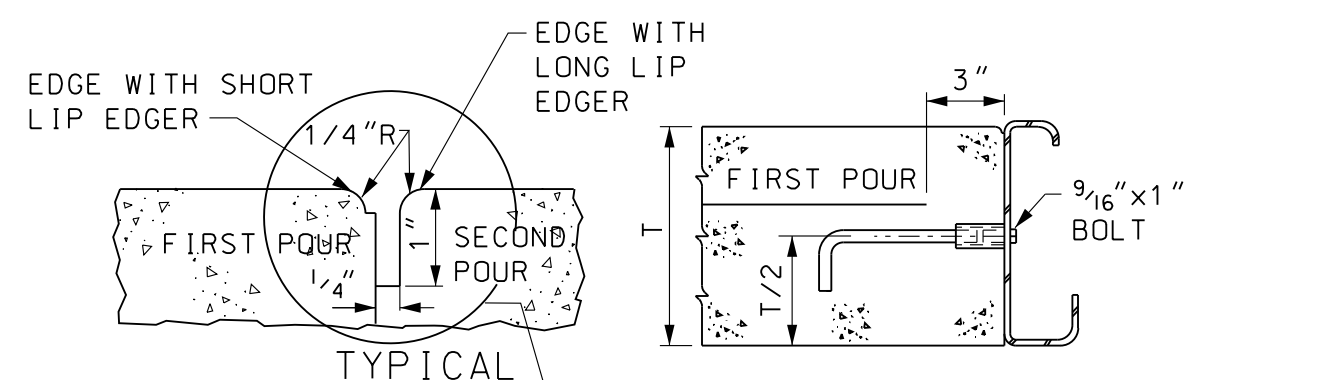
CITY OF PLYMOUTH
201 SOUTH MAIN STREET
PLYMOUTH, MICHIGAN 48170
STANDARD PAVING DETAILS (PD-1)

Table with columns: ISSUED FOR, DATE, BY, JOB NO., SHEET, and PD-1



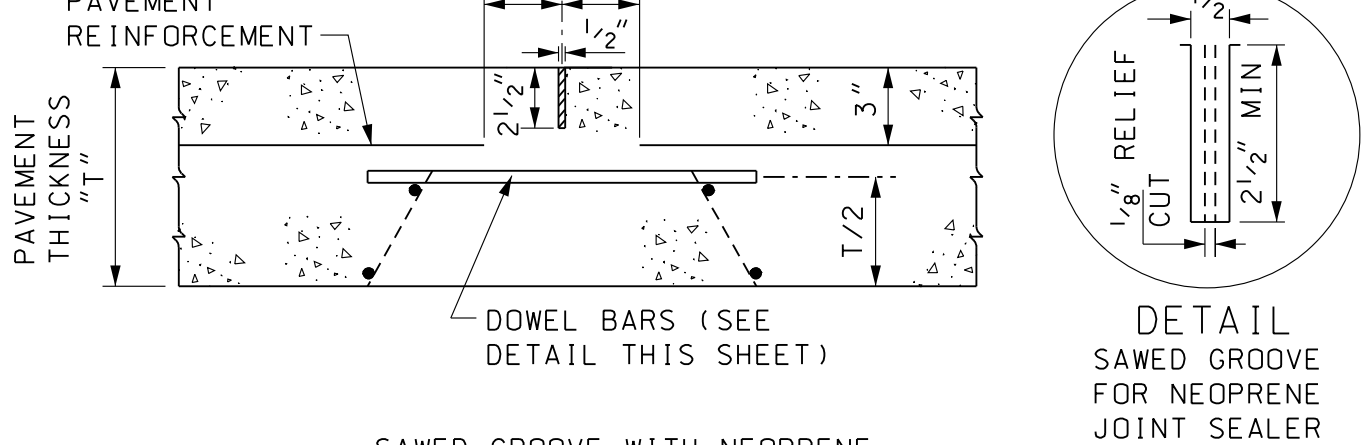
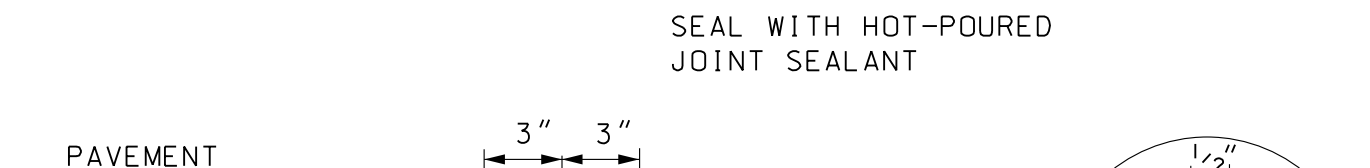
THE SEALING OF THIS JOINT WILL NOT BE REQUIRED WHEN IT IS USED IN BASE COURSE CONSTRUCTION

ON WIDENING CONSTRUCTION REMOVE PLUG FROM FIRST HALF OF HOOK BOLT ASSEMBLY AND INSTALL SECOND HALF OF HOOK BOLT ASSEMBLY.

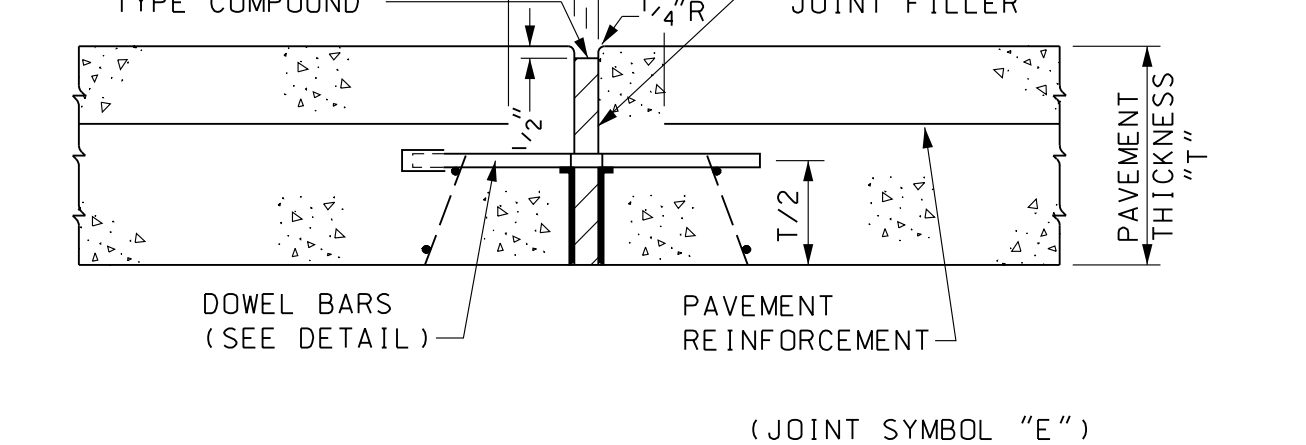
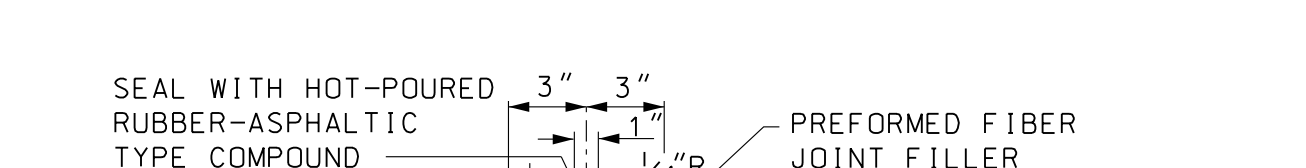


NOTE:
FOR FUTURE PAVEMENT WIDENING THIS JOINT SHALL BE CONSTRUCTED ACCORDING TO THE DETAIL SHOWN EXCEPT THAT THE "SECOND POUR" AND THE "SECOND HALF" OF THE JOINT DOWEL HOOK BOLT SHALL BE OMITTED. THE THREADED HOLE IN THE HOOK BOLT COUPLING SHALL BE FILLED WITH A RUST PREVENTIVE OIL AND PLUGGED WITH A PLASTIC OR NEOPRENE PLUG. THE PLUG SHALL BE OF PROPER DIMENSION TO COMPLETELY SEAL THE HOLE AND SHALL NOT PROJECT MORE THAN 3/8" AFTER INSERTION.

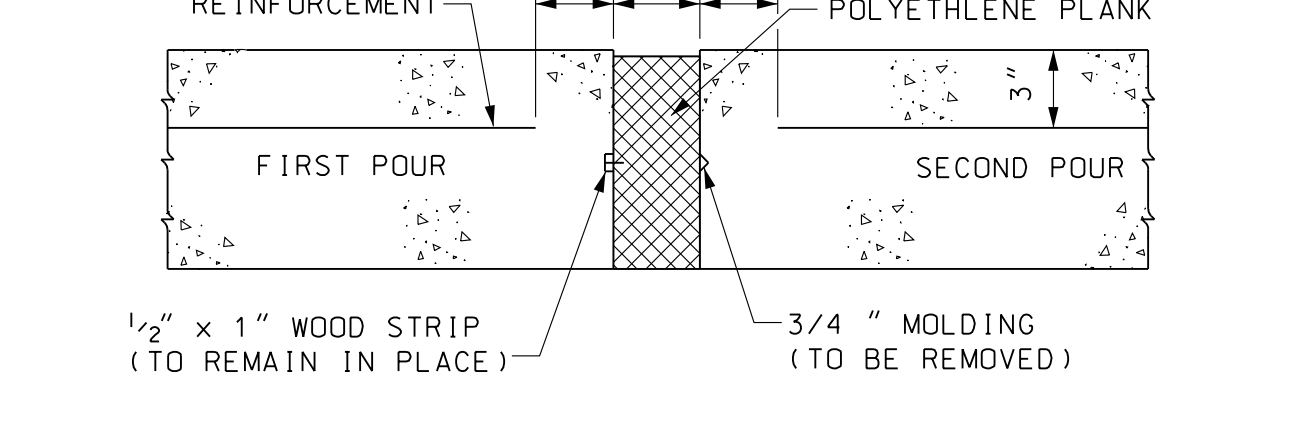
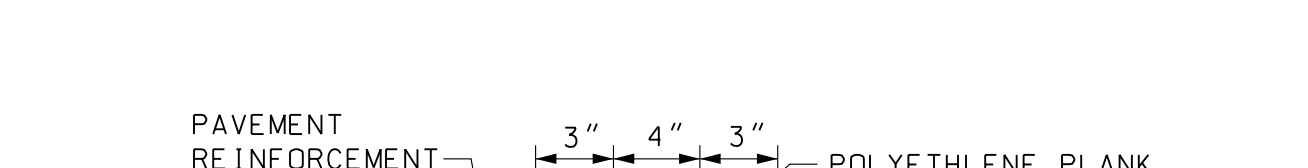
LONGITUDINAL BULKHEAD CONSTRUCTION JOINT "B"
N.T.S.



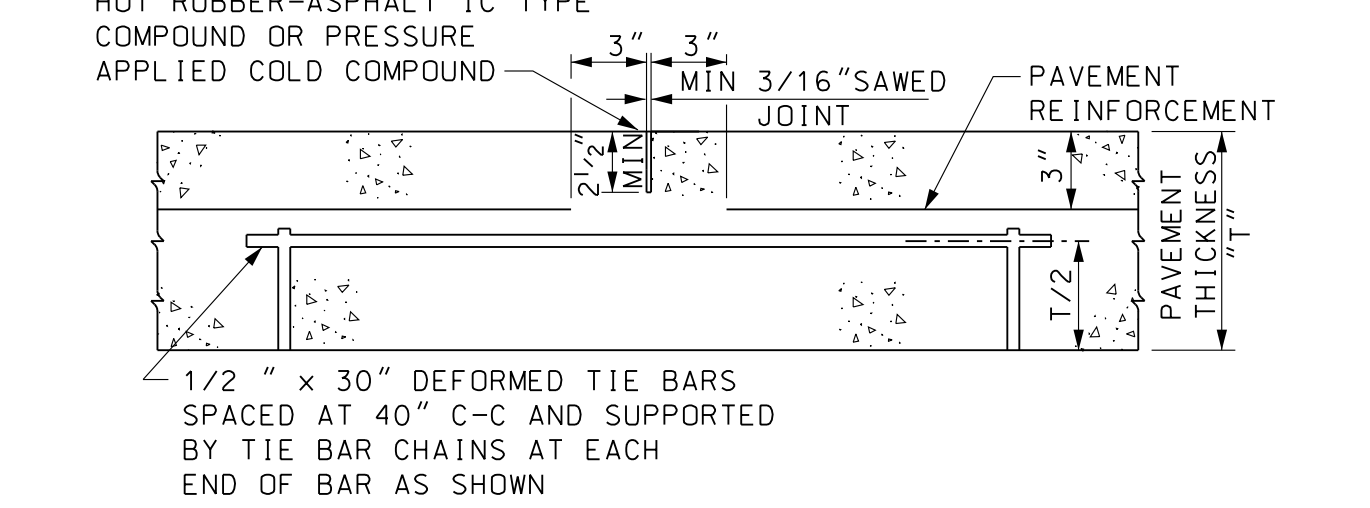
TRANSVERSE CONTRACTION JOINT "C"
N.T.S.



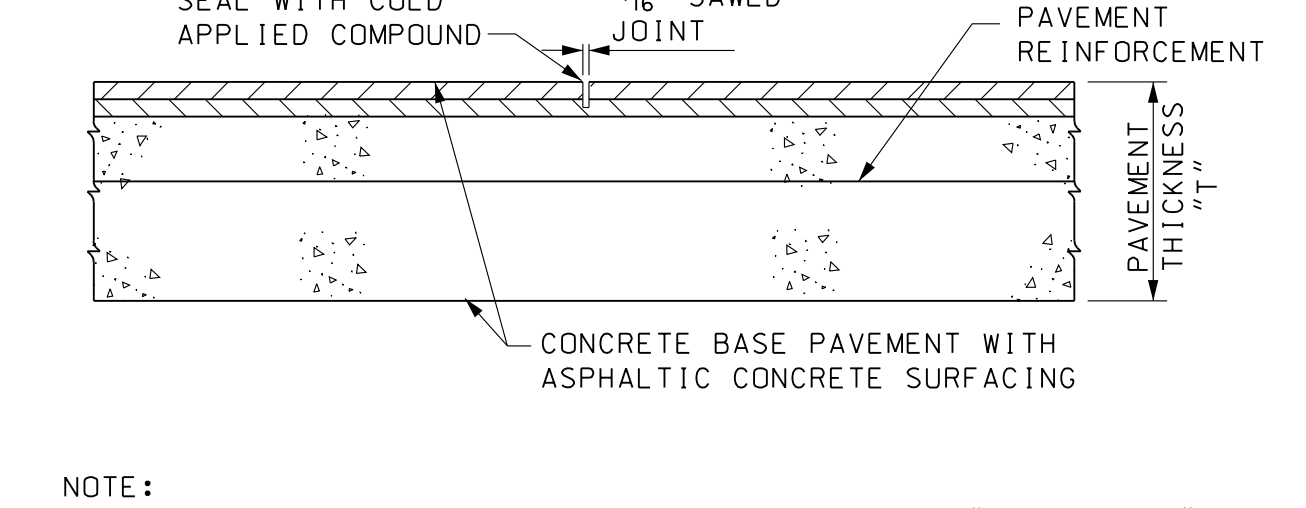
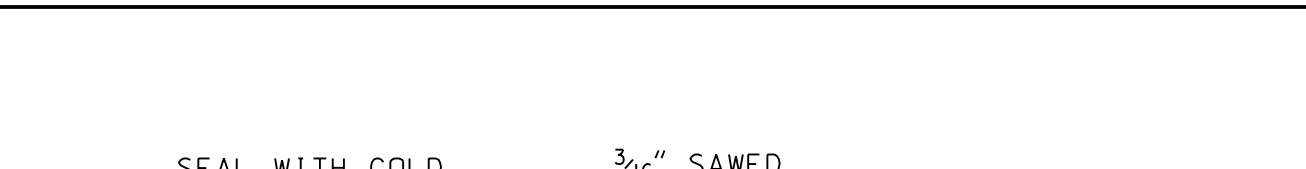
TRANSVERSE EXPANSION JOINT "E"
N.T.S.



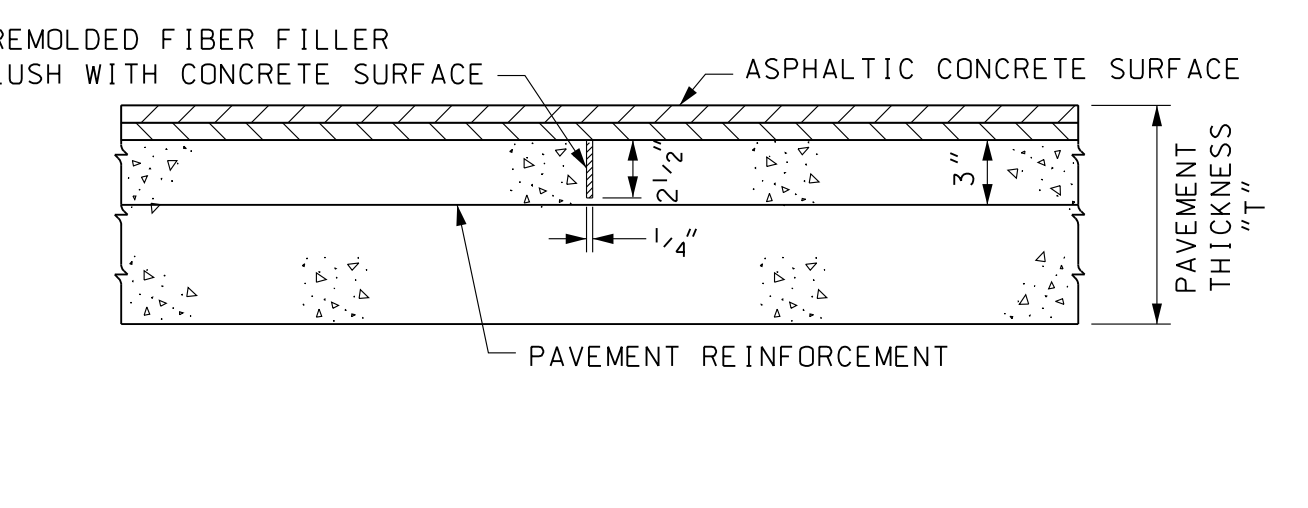
TRANSVERSE PRESSURE RELIEF JOINT "PR"
N.T.S.



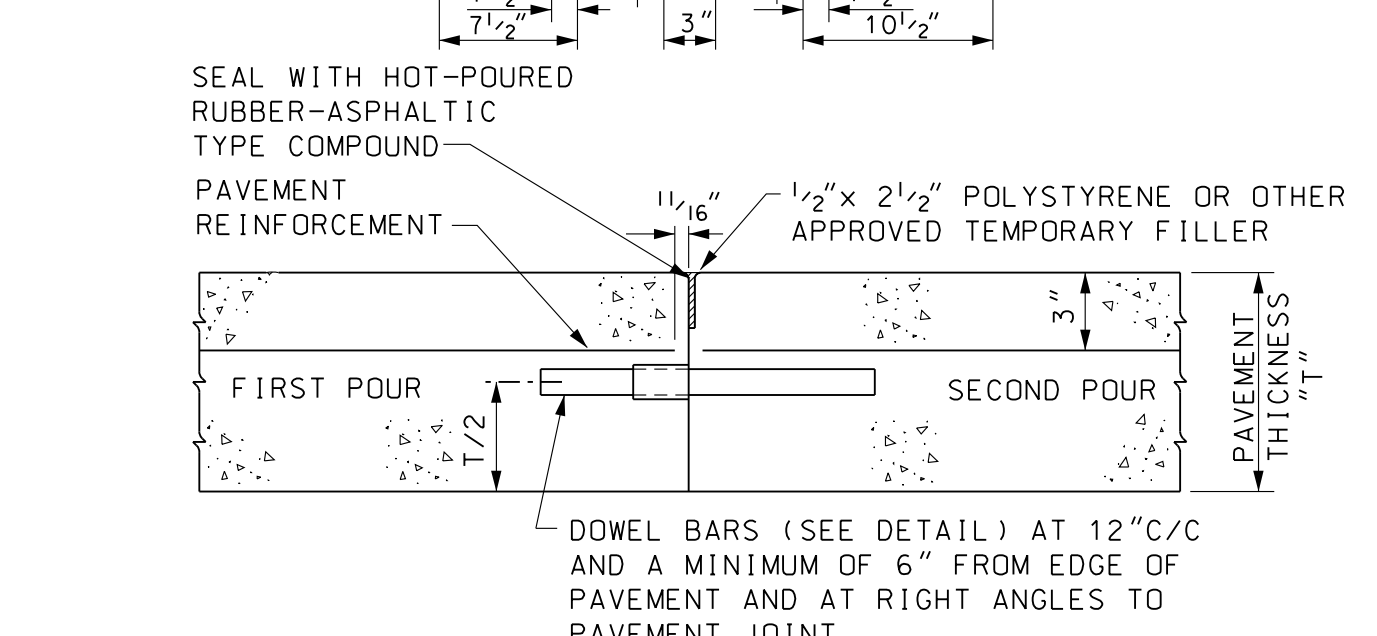
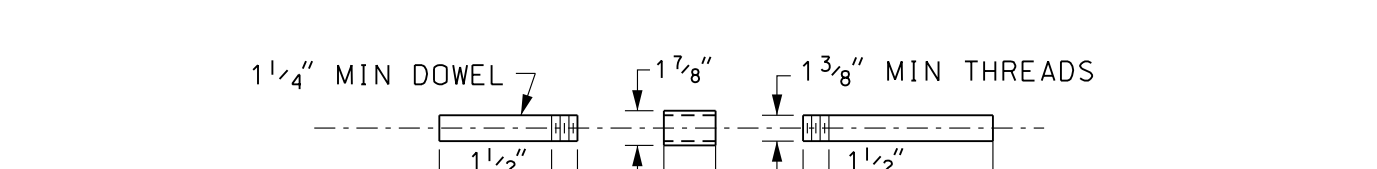
LONGITUDINAL LANE TIE JOINT "D"
N.T.S.



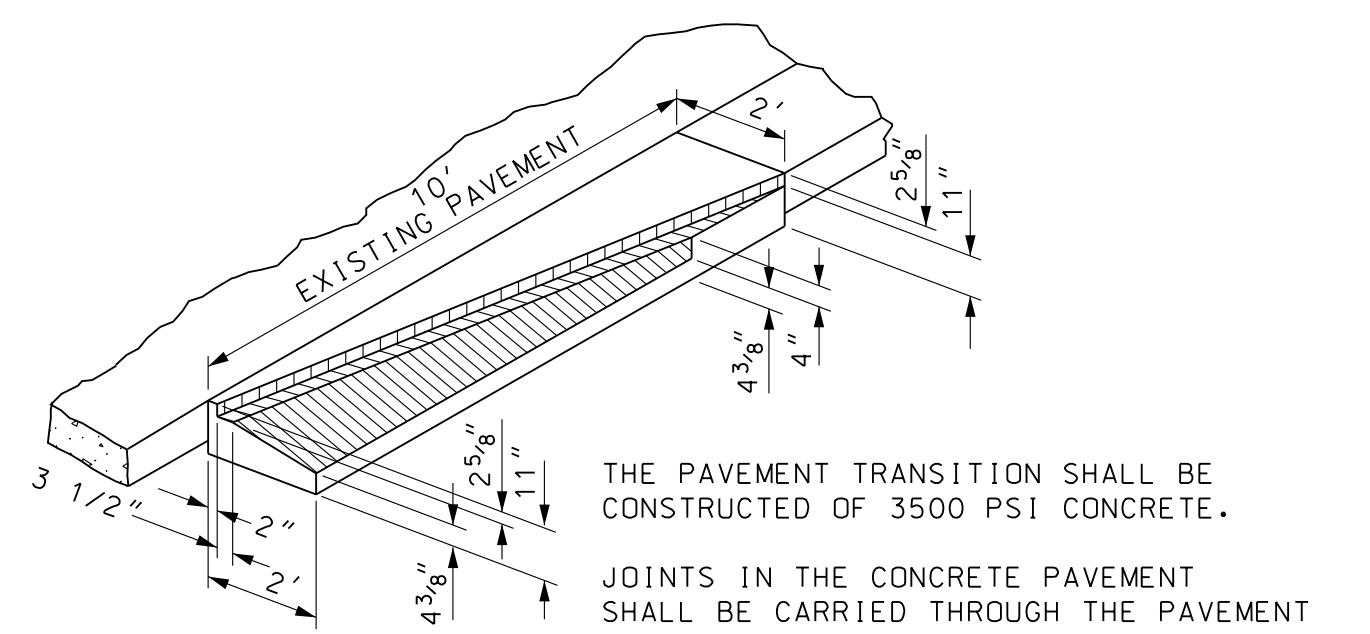
SAWED LONGITUDINAL PLANE OF WEAKNESS JOINT IN ASPHALTIC CONCRETE SURFACE "S"
N.T.S.



TRANSVERSE PLANE OF WEAKNESS^B JOINT FOR CONCRETE BASE COURSE "WT_B"
N.T.S.



TRANSVERSE END OF POUR CONSTRUCTION JOINT
N.T.S.



CONCRETE PAVEMENT TRANSITION HEADER

NOTE:
PRIOR TO PLACING CONCRETE IN THE FIRST POUR, THE SLEEVE DOWELS AND CONTRACTION BASKET ASSEMBLY WITH BULKHEAD SHALL BE FIRMLY SECURED TO THE SUBGRADE, TRUE TO LINE AND POSITION.
THE BULKHEAD SHALL BE SUFFICIENTLY RIGID TO PREVENT DEFORMATION WHEN CONCRETE IS PLACED AND SHALL CONFORM TO THE CROWN OF THE FINISHED PAVEMENT. THE DAY AFTER PLACING THE FIRST POUR, THE HALF OF THE BASKET AND DOWELS OUTSIDE THE FIRST POUR SHALL BE CAREFULLY REMOVED TO AVOID RUPTURING THE FRESH CONCRETE. THE OPEN END OF THE SLEEVE SHALL BE PLUGGED IN THE SAME MANNER AS REQUIRED FOR HOOK BOLTS.

PRIOR TO PLACING CONCRETE IN SECOND POUR, THE DOWELS TO THE SECOND POUR SHALL BE SCREWED INTO THE SLEEVES AND COATED ONLY IF THE JOINT IS AT AN EXISTING OR PROPOSED CONTRACTION OR EXPANSION JOINT LOCATION AFTER THE SECOND POUR THE JOINT SHALL BE FINISHED ACCORDING TO CURRENT SPECIFICATIONS FOR CONTRACTION JOINTS.

THIS DETAIL SHALL BE USED FOR ALL TRANSVERSE CONSTRUCTION JOINTS IN CONJUNCTION WITH PAVEMENT GAPPING WHEN IT IS ANTICIPATED THAT THE SECOND POUR WILL BE PLACED MORE THAN THREE (3) DAYS AFTER THE FIRST POUR. WHEN THE CONSTRUCTION (SECOND POUR) OF THE PAVEMENT WILL CONTINUE WITHIN THREE (3) DAYS, THE TWO PIECE DOWELS WILL NOT BE REQUIRED AND THE JOINT WILL BE FORMED AS A STANDARD CONSTRUCTION JOINT.

BASKET ASSEMBLY NOTES:
N.T.S.
THE DOWEL BAR SPACING SHALL BE 12" AS SHOWN AND EXCESS SPACE EQUALIZED AT EACH SIDE OF PAVEMENT SLAB, WHERE LANE WIDTHS OTHER THAN INDICATED OCCUR.

ALL WIRES SHOWN ARE MINIMUM SIZE AND SHALL CONFORM TO THE CURRENT SPECIFICATIONS FOR COLD-DRAWN STEEL WIRE FOR CONCRETE REINFORCEMENT, A.S.T.M. DESIGNATION A-82.

THE SIZE OF WIRE SHOWN SHALL CONFORM TO THE UNITED STATES STEEL WIRE GAUGE STANDARD.

METAL EXPANSION CAPS SHALL BE CLOSE FITTING AND SHALL CONTAIN A SUITABLE STOP TO HOLD THE END OF THE CAP FROM THE END OF THE BAR DURING THE PLACEMENT OF THE CONCRETE SO THAT A SPACE OF ONE INCH IS PROVIDED FOR SUBSEQUENT MOVEMENT OF THE BAR IN THE TUBE. OTHER CAPS MAY BE SUBSTITUTED WHEN APPROVED BY THE ENGINEER.

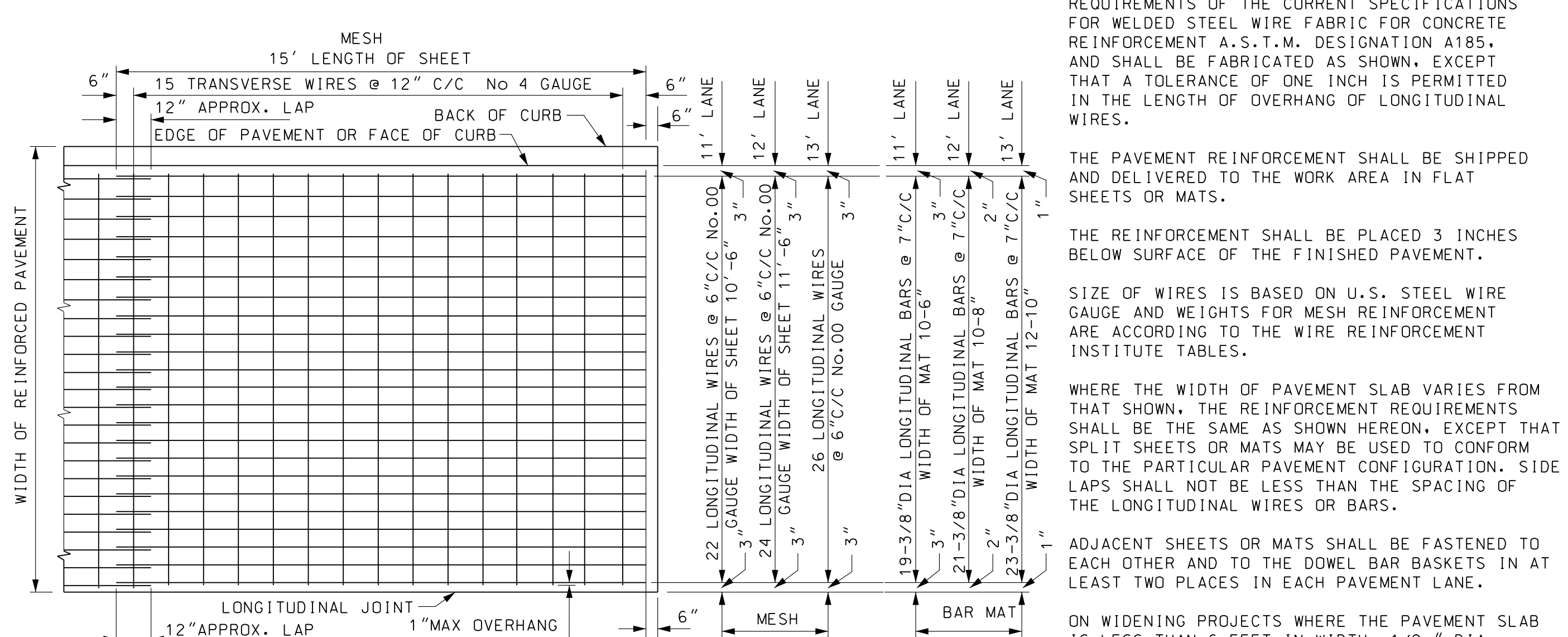
THE MAXIMUM PERMISSIBLE TOLERANCE ON DOWEL BAR ALIGNMENT SHALL BE 3/16 INCH IN THE LENGTH OF A DOWEL IN EACH PLANE, HORIZONTAL AND VERTICAL.

PERMISSIBLE VARIATION IN STRAIGHTNESS FOR DOWEL BARS SHALL BE A MAXIMUM OF 0.075 INCH IN THE LENGTH OF THE DOWEL.

TOLERANCE ON DOWEL BAR LENGTH SHALL BE PLUS OR MINUS 1/4 INCH.

EACH ASSEMBLY SHALL BE HELD IN PLACE ON THE SUBGRADE BY SIX STAKES AS SHOWN.

DOWEL BARS SHALL BE 1 1/4 INCH DIAMETER FOR 8, 9 AND 10 INCH CONCRETE PAVEMENT EXCEPT THAT 1 INCH DIAMETER DOWEL BARS MAY BE SUBSTITUTED IN 8 INCH CONCRETE PAVEMENT.



MESH REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT A.S.T.M. DESIGNATION A185, AND SHALL BE FABRICATED AS SHOWN, EXCEPT THAT A TOLERANCE OF ONE INCH IS PERMITTED IN THE LENGTH OF OVERHANG OF LONGITUDINAL WIRES.
THE PAVEMENT REINFORCEMENT SHALL BE SHIPPED AND DELIVERED TO THE WORK AREA IN FLAT SHEETS OR MATS.
THE REINFORCEMENT SHALL BE PLACED 3 INCHES BELOW SURFACE OF THE FINISHED PAVEMENT.
SIZE OF WIRES IS BASED ON U.S. STEEL WIRE GAUGE AND WEIGHTS FOR MESH REINFORCEMENT INSTITUTE TABLES.
WHERE THE WIDTH OF PAVEMENT SLAB VARIES FROM THAT SHOWN, THE REINFORCEMENT REQUIREMENTS SHALL BE THE SAME AS SHOWN HEREON, EXCEPT THAT SPLIT SHEETS OR MATS MAY BE USED TO CONFORM TO THE PARTICULAR PAVEMENT CONFIGURATION. SIDE LAPS SHALL NOT BE LESS THAN THE SPACING OF THE LONGITUDINAL WIRES OR BARS.
ADJACENT SHEETS OR MATS SHALL BE FASTENED TO EACH OTHER AND TO THE DOWEL BAR BASKETS IN AT LEAST TWO PLACES IN EACH PAVEMENT LANE.

ON WIDENING PROJECTS WHERE THE PAVEMENT SLAB IS LESS THAN 6 FEET IN WIDTH 1/2" DIA LONGITUDINAL REINFORCING BARS MAY BE SUBSTITUTED FOR STANDARD REINFORCEMENT, PROVIDED THE BARS ARE SPACED NOT MORE THAN 12" CENTER TO CENTER, WITH THE FIRST BAR NOT MORE THAN 3" FROM EDGES OF THE WIDENED SLAB BARS SHALL BE LAPPED A MINIMUM OF 12".

MESH PAVEMENT REINFORCEMENT 11 FT, 12 FT, & 13 FT LANES
N.T.S.

PROJECT MANAGER: [illegible]
FIELD BOOK INFORMATION: [illegible]
DATE: [illegible]

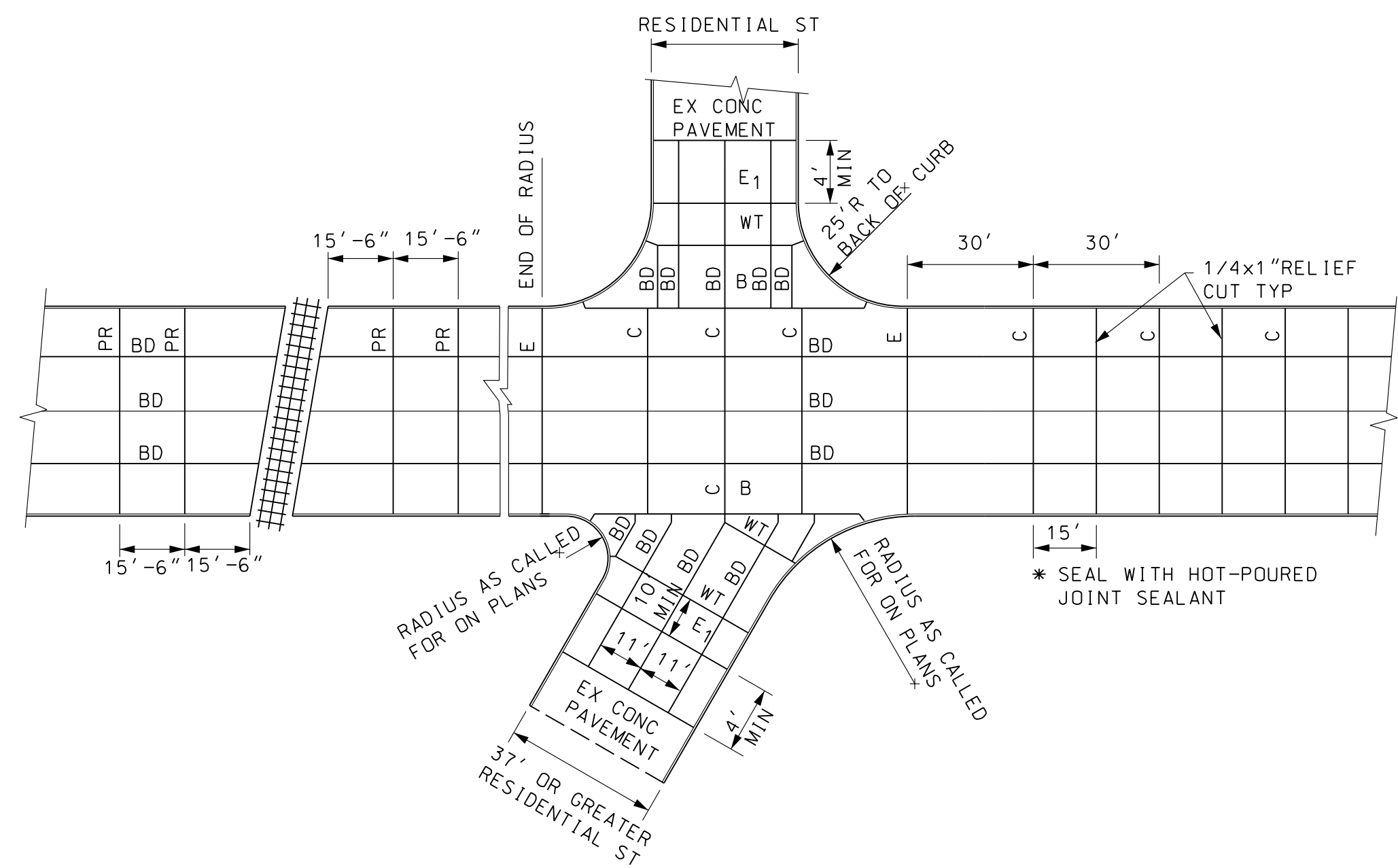
REV.	DATE	DESCRIPTION

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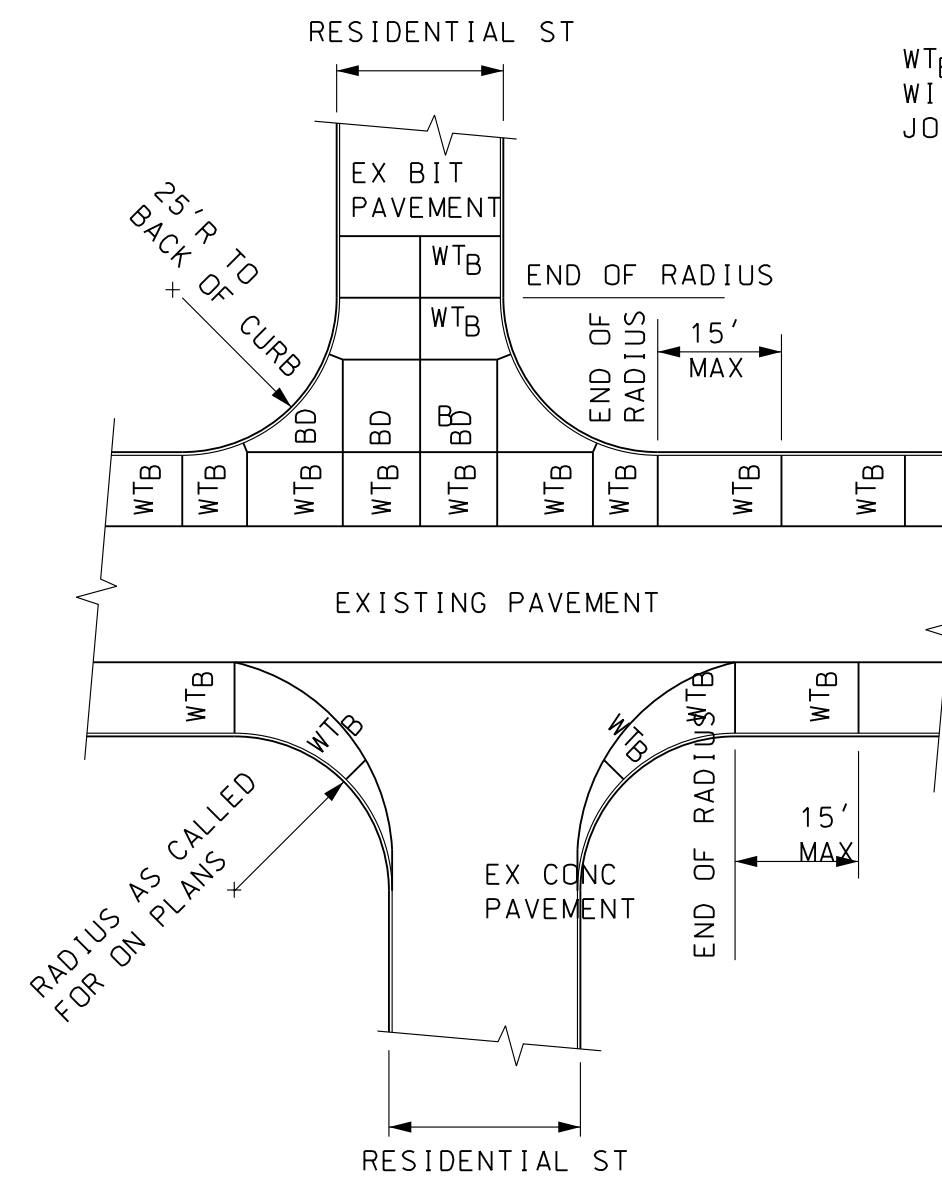
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PO Box 10
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STANDARD PAVING DETAILS (PD-3)

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SHEET		

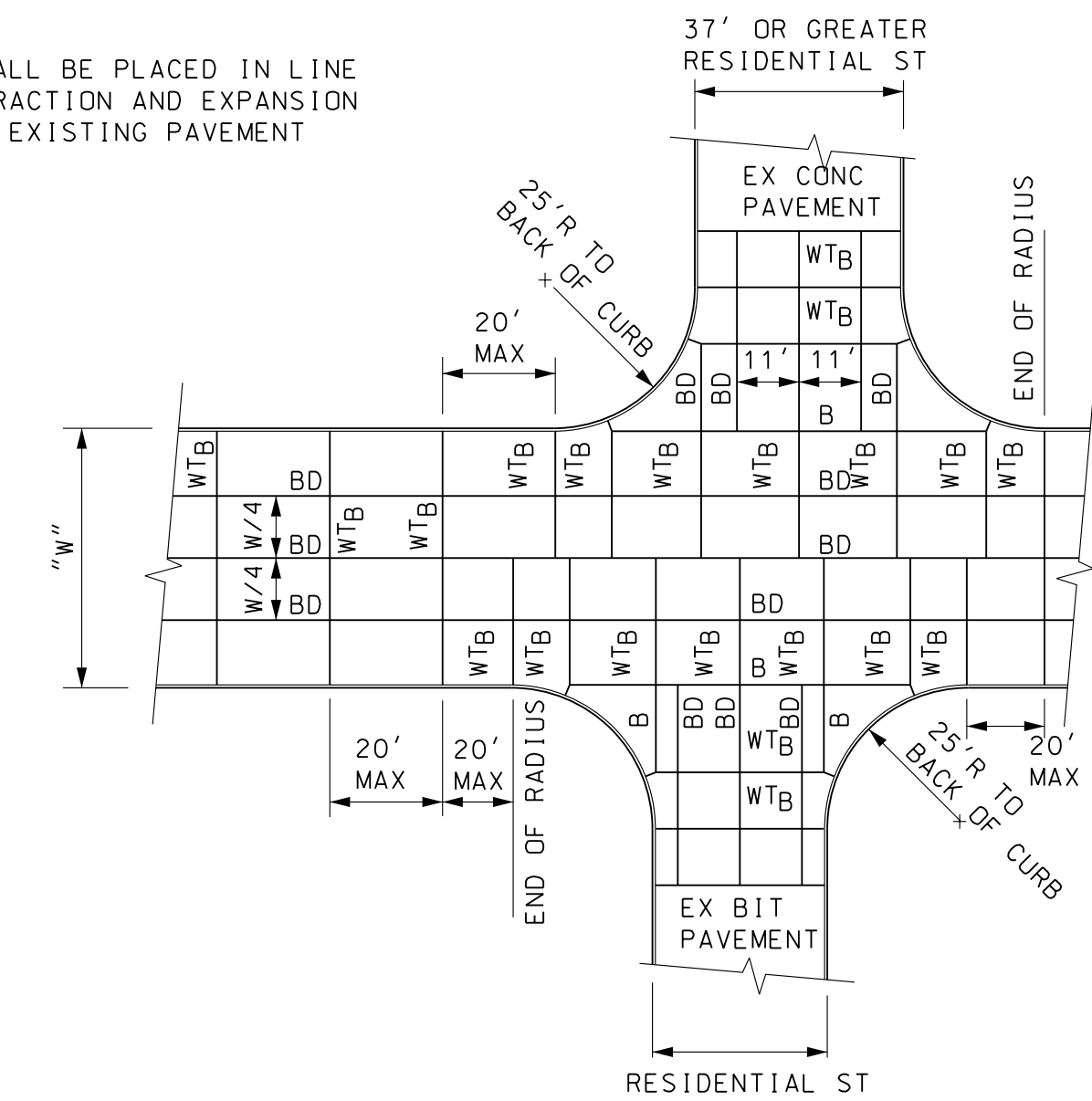


TYPICAL CONCRETE REINFORCED PAVEMENT JOINT LAYOUT



CONCRETE BASE COURSE WIDENING

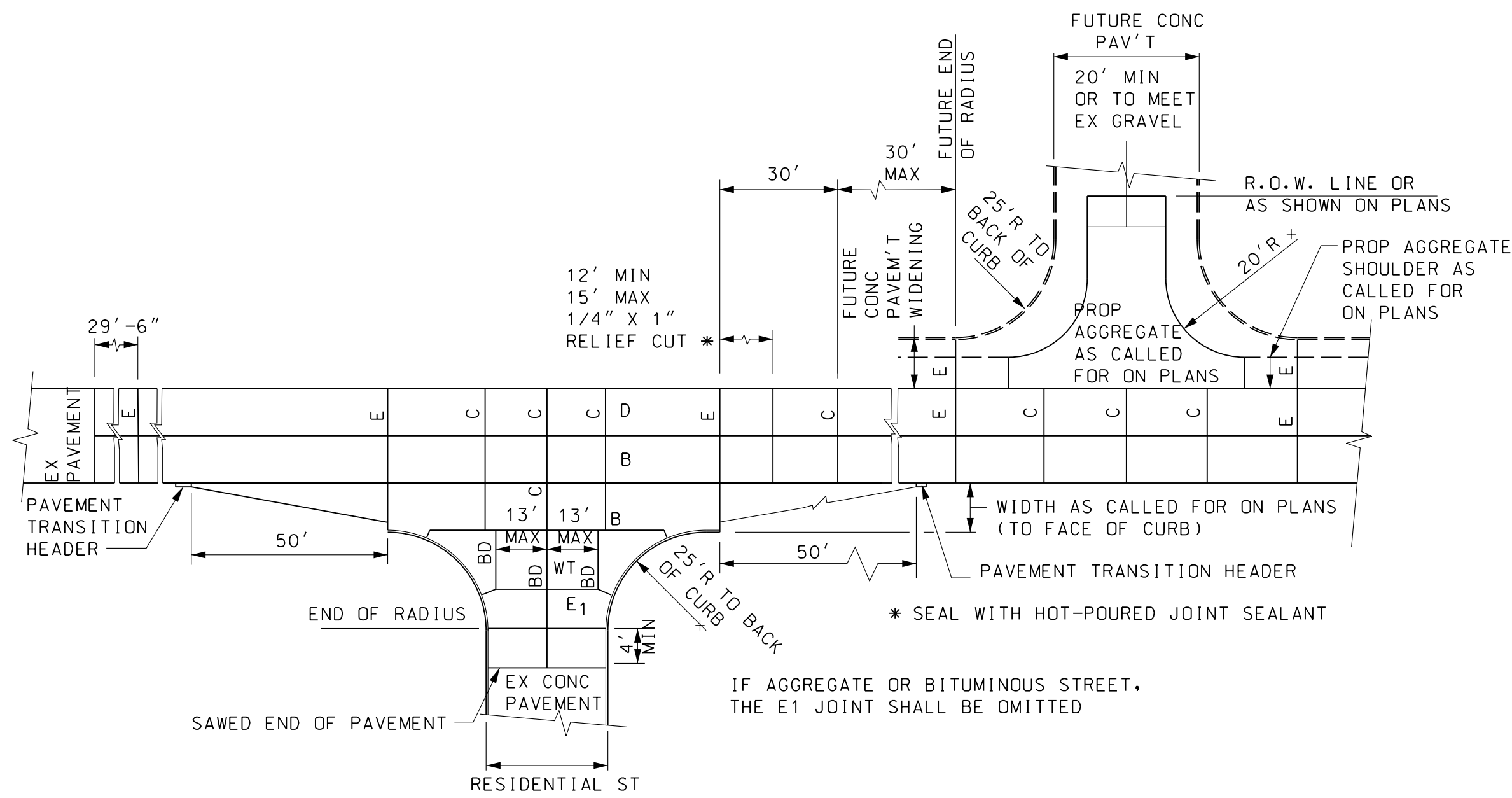
WT_B JOINTS SHALL BE PLACED IN LINE WITH ALL CONTRACTION AND EXPANSION JOINTS IN THE EXISTING PAVEMENT



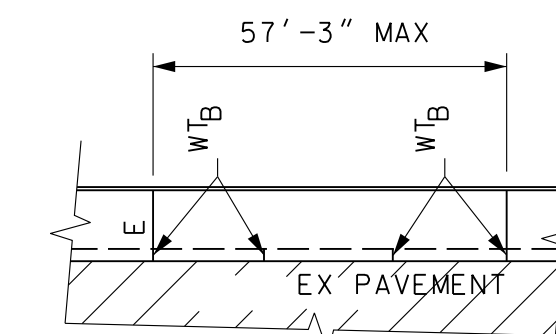
CONCRETE BASE COURSE CONSTRUCTION

TYPICAL REINFORCED CONCRETE BASE COURSE JOINT LAYOUT

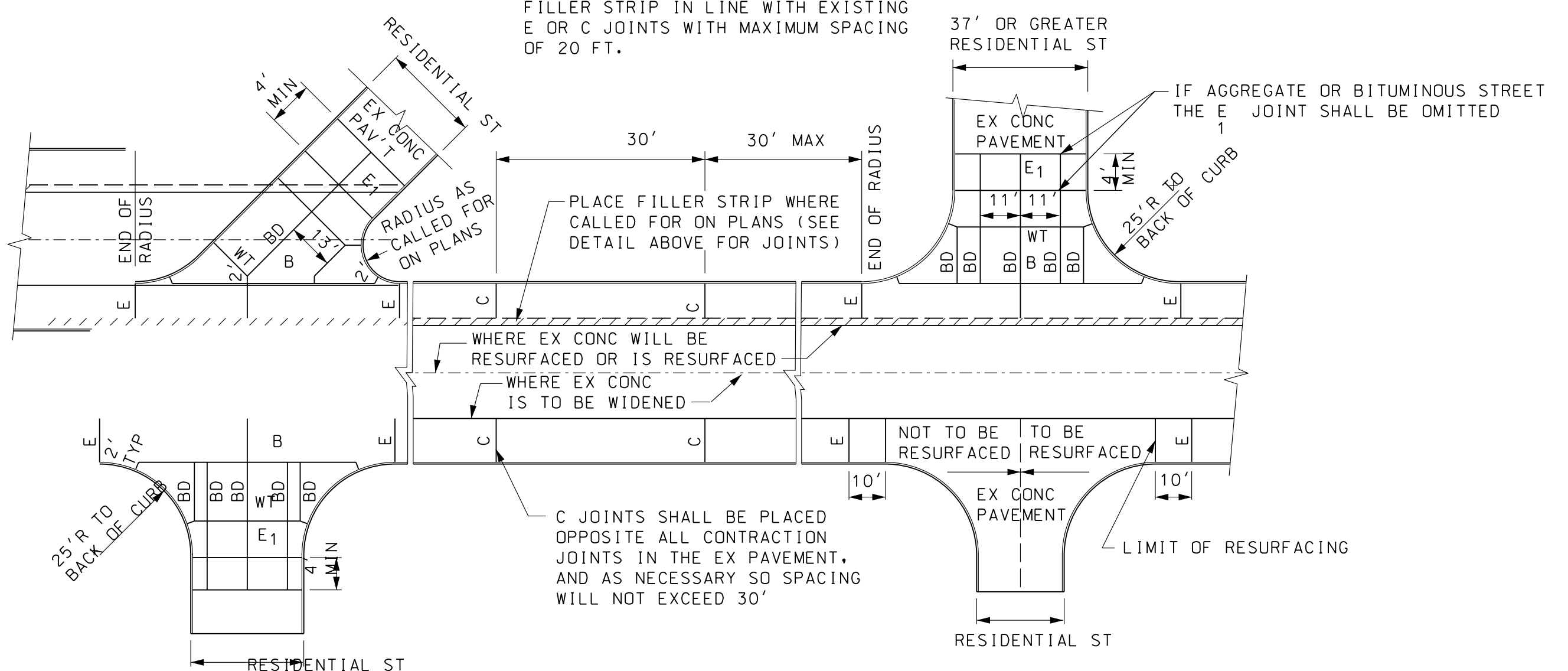
N. T. S.



TYPICAL REINFORCED CONCRETE PAVEMENT JOINT LAYOUT



PLACE WT_B JOINTS IN THE PROPOSED FILLER STRIP IN LINE WITH EXISTING E OR C JOINTS WITH MAXIMUM SPACING OF 20 FT.



TYPICAL CONCRETE PAVEMENT WIDENING JOINT LAYOUT

N. T. S.

UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY THE ENGINEER, JOINT LOCATION AND SPACING SHALL BE AS FOLLOWS:

LONGITUDINAL JOINTS

- B = LONGITUDINAL BULKHEAD CONSTRUCTION JOINTS SHALL BE SHOWN ON PLANS. HAND FINISHED POURS ON STREET RETURNS SHALL BE A MAXIMUM WIDTH OF 18" UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- D = LONGITUDINAL LANE TIE JOINTS SHALL BE PLACED AS SHOWN ON PLANS.
- BD = OPTIONAL B OR D JOINT.

TRAVERSE JOINTS

- C = CONTRACTION JOINTS WITH BASKET ASSEMBLIES SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE PLANS AND ELSEWHERE AT MAXIMUM INTERVALS OF 30- FEET. BETWEEN EXPANSION JOINTS MINIMUM DISTANCE BETWEEN ANY LOAD TRANSFER JOINTS SHALL BE 12'. IN ADDITION A 1/4"x1" RELIEF CUT SHALL BE MADE HALF WAY BETWEEN EACH CONTRACTION JOINT WITH BASKET ASSEMBLY. MAXIMUM SPACING FROM RELIEF CUT TO CONTRACTION JOINT WITH BASKET 15', MINIMUM 12'. RELIEF CUTS SHALL BE SEALED WITH HOT-POURED JOINT SEALANT.
- E = EXPANSION JOINTS WITH LOAD TRANSFER SHALL BE PLACED AT SPRING POINTS, AT LOCATIONS SHOWN ON THE PLANS AND AT LOCATIONS INDICATED AS FOLLOWS:
 - a.) WHERE NECESSARY TO RELIEVE HORIZONTAL PRESSURES AT SHARP VERTICAL CURVES, WHERE DIRECTED BY THE ENGINEER.
 - b.) EXPANSION JOINTS SHALL BE ALSO PLACED AT PC AND PT OF HORIZONTAL CURVES WHERE THE DEGREE OF CURVATURE IS 2°30' OR MORE.
 - c.) DURING THE PERIOD FROM SEPT. 15 TO APRIL 15, EXPANSIONNTS SHALL BE SPACED AT MAXIMUM INTERVALS OF 315'. IF ANY PORTION OF A MULTIPLE LANE PAVEMENT IS TO BE PLACED BETWEEN SEPT. 15 AND APRIL 15, EXPANSION JOINTS FOR ENTIRE WIDTH OF PAVEMENT SHALL BE SPACED AT MAXIMUM INTERVALS OF 315'.

WT_B = PLANE OF WEAKNESS JOINTS SHALL BE PLACED IN CONCRETE BASE COURSE AT 20' MAXIMUM INTERVALS.

PR = PRESSURE RELIEF JOINTS SHALL BE PLACED AT LOCATIONS SHOWN ON PLANS.

REV.	DATE	DESCRIPTION	BY

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WADE TRIM

CITY OF PLYMOUTH
201 SOUTH MAIN STREET
PLYMOUTH, MICHIGAN 48170

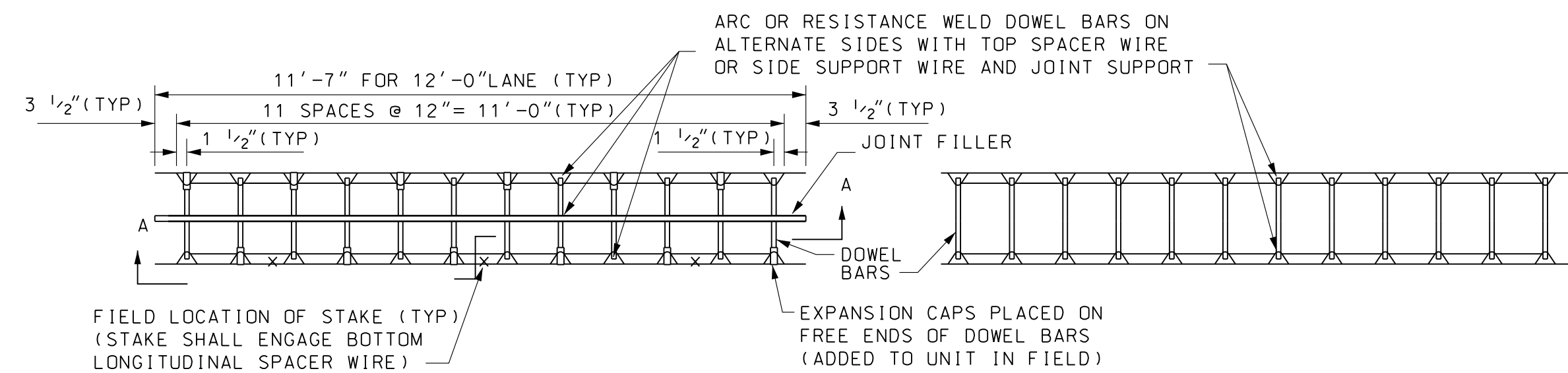
STANDARD PAVING DETAILS (PD-4)

ISSUED FOR: DATE: BY:

JOB NO. -

SHEET

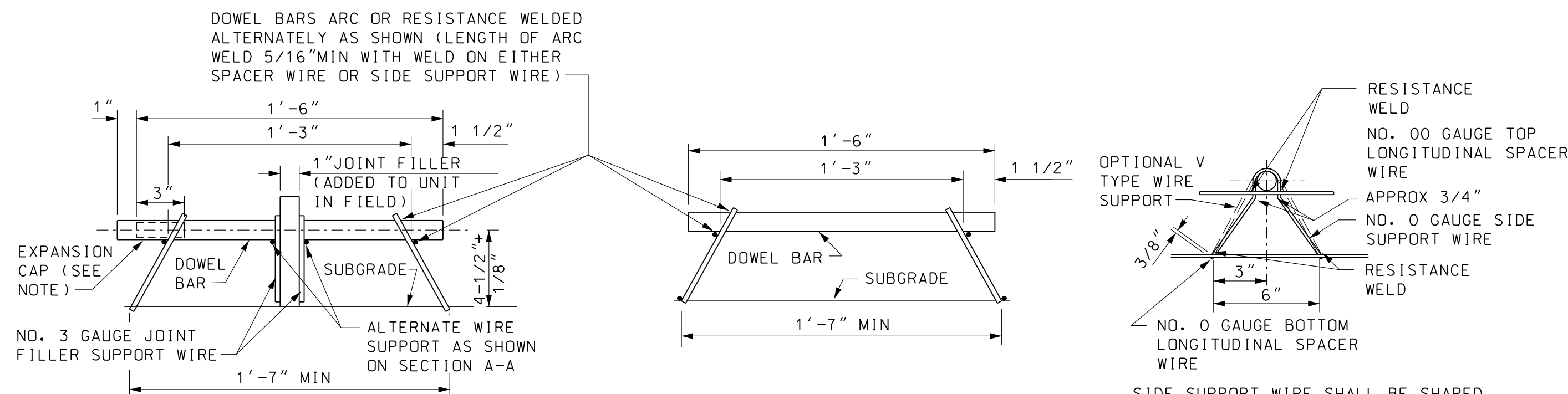
PD-4



PLAN VIEW EXPANSION BASKET ASSEMBLY PLAN VIEW CONTRACTION BASKET ASSEMBLY



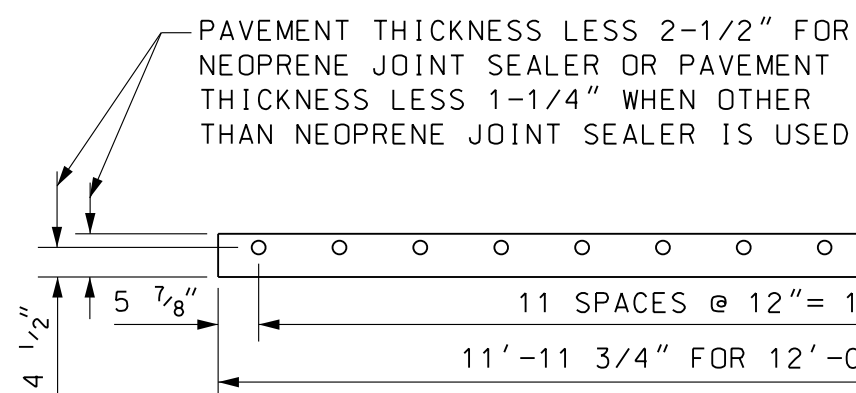
SECTION A-A EXPANSION BASKET ASSEMBLY SIDE ELEVATION CONTRACTION BASKET ASSEMBLY



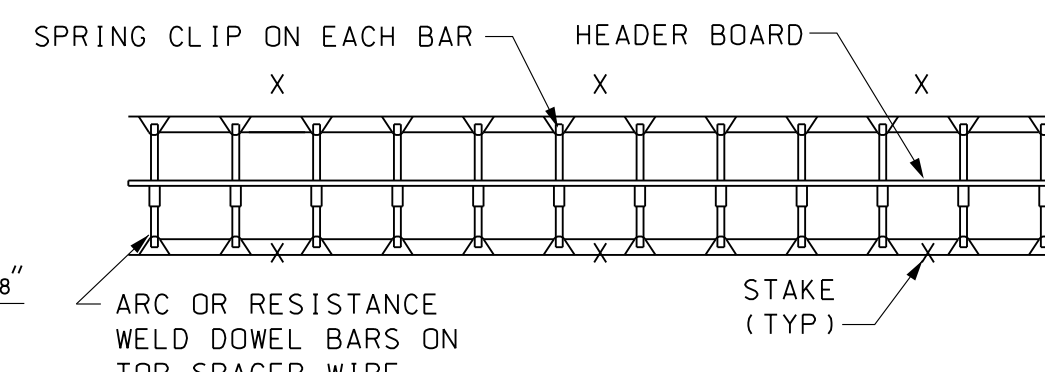
SECTION THROUGH EXPANSION BASKET ASSEMBLY

SECTION THROUGH CONTRACTION BASKET ASSEMBLY

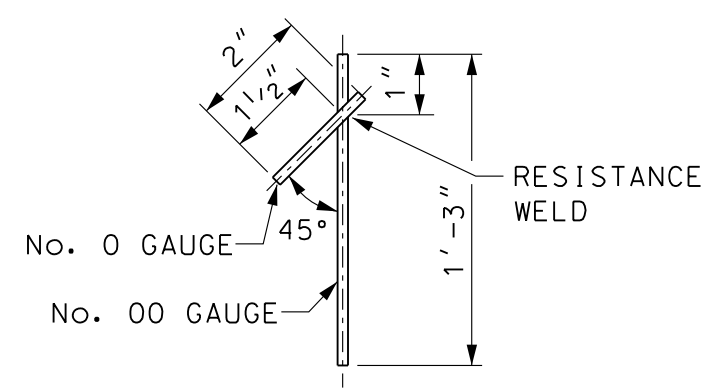
END VIEW



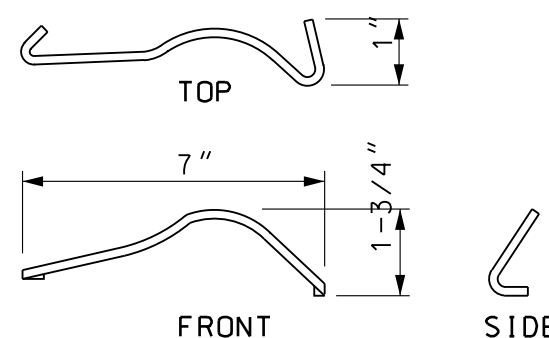
EXPANSION JOINT FILLER



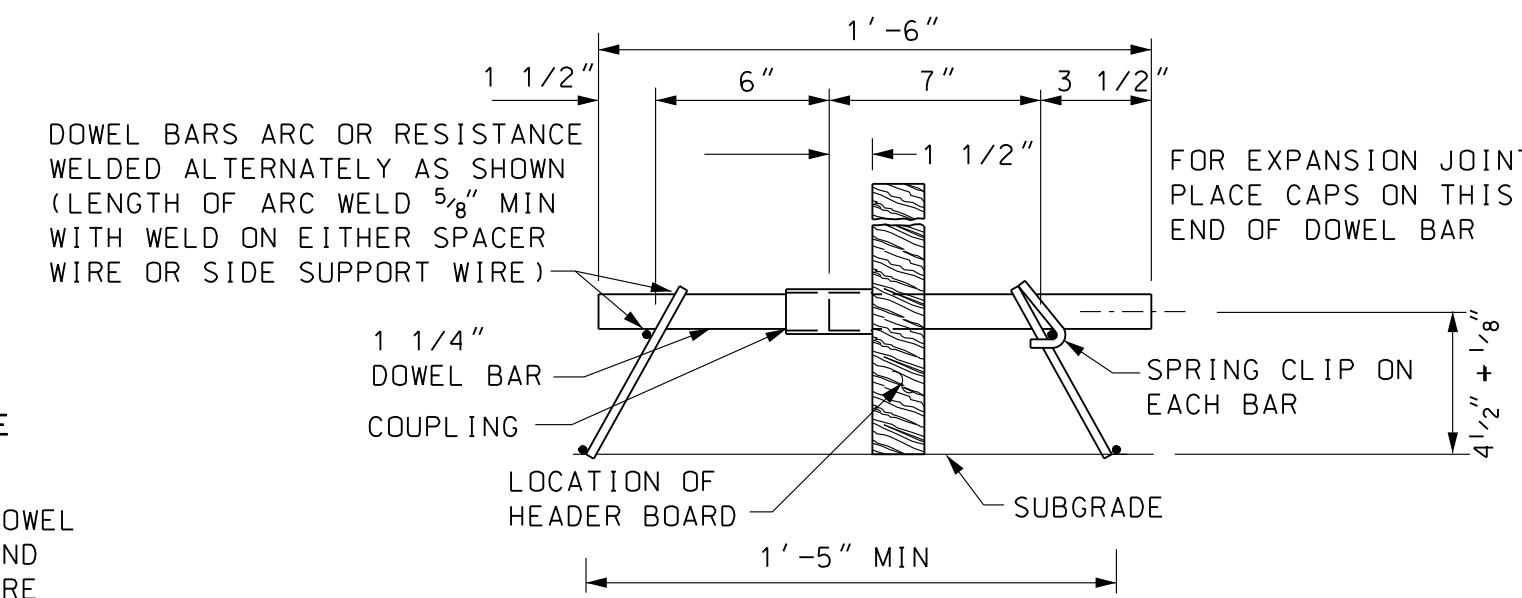
PLAN VIEW END OF POUR BASKET ASSEMBLY



WIRE STAKE DETAIL



SPRING CLIP



SECTION THROUGH END OF POUR BASKET ASSEMBLY

NOTE:
A SINGLE WIRE MAY BE USED IN LIEU OF STAKE DETAIL SHOWN PROVIDED A 00 GAUGE WIRE IS USED AND BENT INTO A HOOK AT TOP END TO CONFORM TO DETAIL.

NOTE:
SPRING CLIP SHALL MAINTAIN DOWEL BAR IN ITS PROPER POSITION AND ALIGNMENT. DIMENSION SHOWN ARE APPROXIMATE AND TO BE USED ONLY AS A GUIDE. OTHER CLIPS MAY BE SUBSTITUTED WHEN APPROVED BY THE ENGINEER.

DOWEL BAR ASSEMBLIES FOR LOAD TRANSFER AT TRANSVERSE JOINT
N. T. S.

REV.	DATE	DESCRIPTION	BY

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Taylor, MI 48180
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WADE TRIM

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STANDARD PAVING DETAILS (PD-5)

ISSUED FOR: DATE: BY:

JOB NO. -

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PD-5