# **UTILITY CONTACTS**

CITY OF OWOSSO

# THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AT THE TOME OF PREPARING THESES PANS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE REASONABILITY TO BE SATISFIED AS TO ITS ACCURACY AND LOCATION OF EXISTING

PHONE: 989-233-9404

mark.kelly@chartercom.com

# 2019 STREET PROGRAM CONTRACT 3

# SHIAWASSEE COUNTY

SECTION 14, T7N-R2E, CITY OF OWOSSO SECTION 19, T7N-R3E, CITY OF OWOSSO POP: 15,194 (2010 CENSUS)

**LOCATION MAP** 

CITY OF OWOSSO

CITY OF OWOSSO 989-725-0550 ATT: RANDY CHESNEY, P.E. 301 W. MAIN STREET randy.chesney@ci.owosso.mi.us OWOSSO, MI 48867

CHARTER COMMUNICATIONS

1480 S. VALLEY CENTER DRIVE

DAYSTARR COMMUNICATIONS

ATT: BRENT KLEIN

CORUNNA, MI 48817

ATT: MARK KELLY

BAY CITY, MI 48706

CITY OF OWOSSO SANITARY SEWER & WATER MAIN ATT: GLENN CHINAVARE 301 W. MAIN STREET glenn.chinavare@ci.owosso.mi.us OWOSSO, MI 48867

ELECTRIC OFFICE: 989-729-3250 **CONSUMERS ENERGY** ATT: TRACY MAHAR 1801 W. MAIN ST CELL: 517-204-9018 OWOSSO, MI 48867 tmmahar@cmsenergy.com

CONSUMERS ENERGY ATT: ADAM BERTRAM OFFICE: 517-374-2375 CELL: 517-614-8570 530 W. WILLOW STREET P.O. BOX 30162 adam.bertram@cmsenergy.com LANSING, MI 48909

PROJECT LOCATION - SEVENTH STREET B.O.P. STA 50+86 TO E.O.P. STA 58+00 PHONE: 989-720-6000 TOTAL LENGTH = 714 FT (0.14 MILES)

307 N. BALL STREET FAX: 989-720-6060 OWOSSO, MI 48867 brent.klein@daystarrfiber.net

FRONTIER COMMUNICATIONS PHONE: 989-723-0373 ATT: MARK V. STEVENS 1943 W. M-21 mark.stevens@ftr.com OWOSSO, MI 48847

SHIAWASSEE COUNTY HEALTH DEPARTMENT **ENVIRONMENTAL HEALTH DIVISION** ATT: STEVE ALWORDEN 201 N. SHIAWASSEE STREET

CALL MISS DIG AT 1-800-482-7171 OR 811 THREE DAYS, EXCLUDING SATURDAY, SUNDAY, AND HOLIDAY, BEFORE STARTING YOUR PROJECT.

> PROJECT LOCATION - RYAN STREET B.O.P. STA 102+66 TO E.O.P. STA 115+45 TOTAL LENGTH = 1279 FT (0.24 MILES)

SOIL EROSION AND SEDIMENTATION CONTROL

PHONE: 989-743-2289

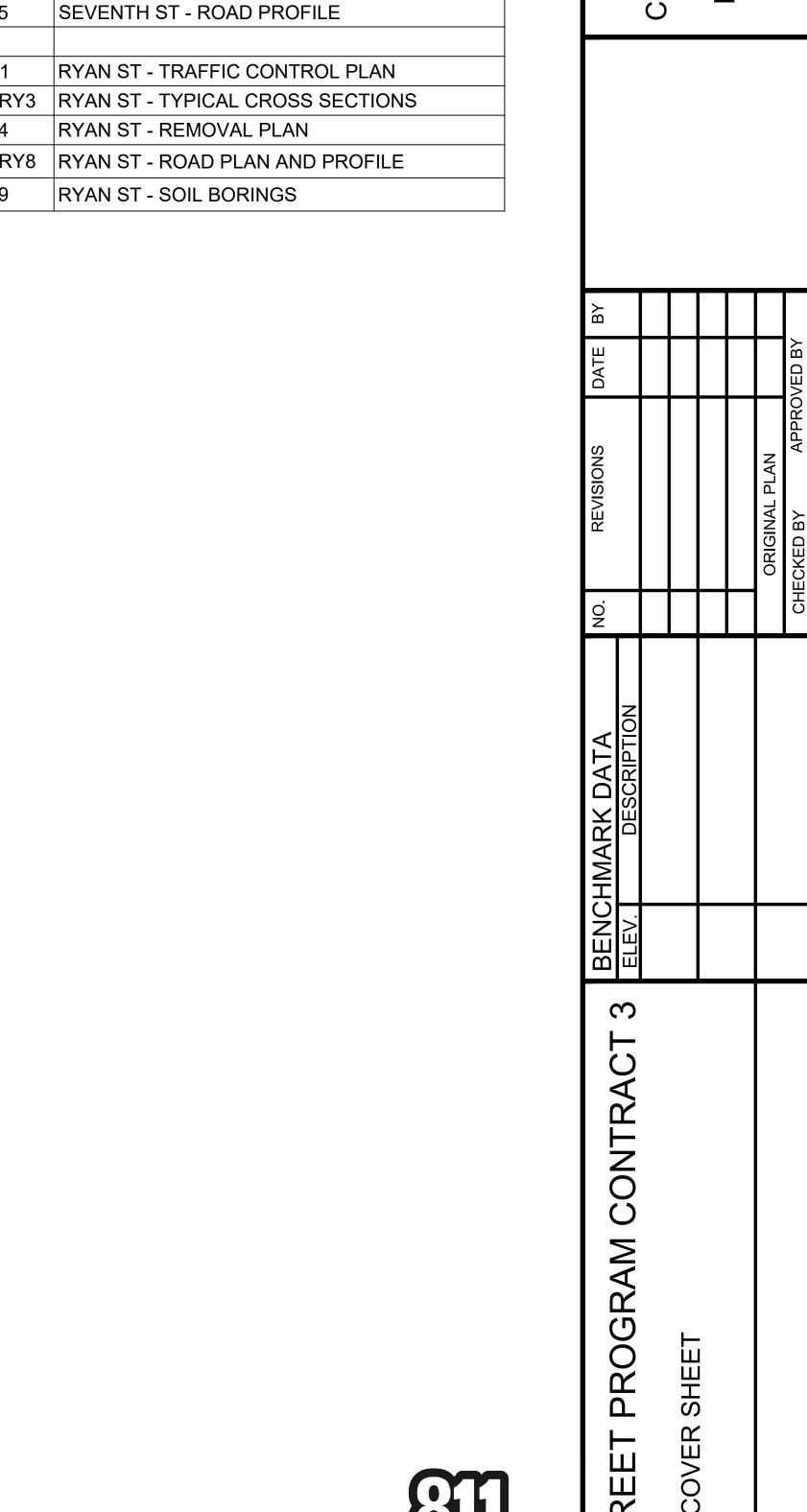
salworden@shiawasseechd.net

FAX: 989-743-2413

# **MDOT ROAD STANDARD PLANS**

DRAINAGE STRUCTURES	R-1-G*
COVER B	R-7-F
MONUMENT BOXES	R-11-E
COVER K	R-15-F
COVER Q	R-18-F
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS	R-28-J*
DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS	R-29-I
CONCRETE CURB AND CONCRETE CURB AND GUTTER	R-30-G
BUMPER & PARKING RAIL AND MISC. WOOD POSTS	R-74-D
GRANULAR BLANKET, UNDERDRAINS, AND OUTLET ENDINGS FOR SEWER UNDERDRAINS, AND SEWER BULKHEADS	R-80-E
BEDDING AND FILLING AROUND PIPE CULVERTS	R-82-D
UTILITY TRENCHES	R-83-C
SOIL EROSION & SEDIMENT CONTROL MEASURES	R-96-E
SEEDING AND TREE PLANTING	R-100-H
*SPECIAL DETAILS INCLUDED IN PROPOSAL OR MODIFIED IN GENERAL PLANS	

SHEET	DECODIDATION
NO.	DESCRIPTION
CS	COVER SHEET
D1	NOTES AND MISCELLANEOUS ESTIMATES ROAD AND STORM SEWER DETAILS
D2	SESC STANDARD NOTES AND DETAILS
SV1	SEVENTH ST - TRAFFIC CONTROL PLAN
SV2	SEVENTH ST - TYPICAL CROSS SECTIONS
SV3	SEVENTH ST - REMOVAL PLAN & SOIL BORING
SV4	SEVENTH ST - ROAD PLAN
SV5	SEVENTH ST - ROAD PROFILE
RY1	RYAN ST - TRAFFIC CONTROL PLAN
RY2 - RY3	RYAN ST - TYPICAL CROSS SECTIONS
RY4	RYAN ST - REMOVAL PLAN
RY5 - RY8	RYAN ST - ROAD PLAN AND PROFILE
RY9	RYAN ST - SOIL BORINGS





2019

#### **GENERAL NOTES**

#### UNDERGROUND UTILITIES/MISS DIG

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 FOR A MINIMUM OF THREE FULL WORKING DAYS. EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBER WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXIST.

#### EXISTING WATER MAINS AND SEWERS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO PROPERLY IDENTIFIED EXISTING WATER MAINS AND / OR EXISTING SEWERS DURING THE CONSTRUCTION OF THE PROJECT.

#### ADJUSTING OF MONUMENT BOXES

ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES AS REQUIRED.

#### PAVEMENT MARKINGS AND SIGNS

ALL PERMANENT PAVEMENT MARKINGS, SHAPES, AND DIMENSIONS SHALL CONFORM WITH MDOT PAVEMENT MARKING TYPICALS PAVE - 900 SERIES.

#### SOIL EROSION MEASURES

APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH DISTURBING ACTIVITIES. PLACE LAWN RESTORATION ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODIBLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED / MULCH BLANKET AS DIRECTED BY THE ENGINEER.

#### SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

#### RUBBISH DISPOSAL

SEE MAINTAINING TRAFFIC SPECIAL PROVISIONS.

#### MAIL DELIVERY

SEE MAINTAINING TRAFFIC SPECIAL PROVISIONS.

#### STORM SEWER REMOVAL

REMOVAL OF SEWER WITH DIAMETER LESS THAN 12 INCHES, WITHIN THE EXCAVATION LIMITS OF NEW SEWER. IS INCLUDED IN THE UNIT PRICE FOR NEW SEWER AND WILL NOT BE PAID FOR SEPARATELY.

#### STORM SEWER STRUCTURES

ALL STORM ORIFICES TO RECEIVE SEWER PIPE SHALL BE FITTED WITH KOR-N-SEAL FLEXIBLE CONNECTOR (S), OR APPROVED EQUAL CONNECTOR. THE FLEXIBLE CONNECTOR WILL NOT BE PAID FOR SEPARATELY, BUT IS CONSIDERED AS PART OF THE DRAINING STRUCTURE PAY ITEM.

#### STORM SEWER CONNECTIONS

PROPOSED STORM SEWERS SHALL BE CONNECTED TO EXISTING STORM SEWERS WITH A FERNCO COUPLER, OR APPROVED EQUAL, AS DIRECTED BY THE ENGINEER. CONNECTION SHALL BE ACCOMPLISHED WITH COUPLER OF SIMILAR SIZE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. PAYMENT FOR ALL MATERIALS AND LABOR NECESSARY TO ACCOMPLISH THIS WORK WILL NOT BE PAIR FOR SEPARATELY, BUT WILL BE CONSIDERED AS PART OF OTHER WORK ITEMS.

## STREET APPROACHES

STREET APPROACHES SHALL BE PAID FOR AS PART OF THE MAINLINE PAVING PAY ITMES.

#### STRUCTURE ADJUSTMENTS

ADJUSTMENTS TO STORM AND SANITARY STRUCTURES LOCATED WITHIN THE PAVEMENT OR CURB AND GUTTER SHALL BE PAID FOR AS: Dr Structure Cover, Adj, Case 1.

## SIDEWALK RAMPS AND SIDEWALKS

SIDEWALK RAMPS SHALL BE COMPLETED IN ACCORDANCE WITH THE MDOT 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MDOT STANDARD PLAN R-28 SERIES, EXCEPT AS MODIFIED HEREIN. THE PORTION OF RAMP NEAREST THE CURB AND GUTTER SHALL BE 7-INCHES THICK AS IDENTIFIED ON THE SIDEWALK RAMP THICKNESS DETAIL. THE REMAINDER OF THE RAMP SHALL BE 4-INCHES THICK. THE PAY ITEMS FOR Sidewalk Ramp, Conc, 4 inch AND Sidewalk, Conc, inch SHALL INCLUDE ALL EXCAVATION AND EMBANKMENT NECESSARY TO CONSTRUCT EACH ITEM AND ALL WORK NECESSARY TO SAW AND TRIM EDGES OF EXISTING CONCRETE. EXCAVATION AND EMBANKMENT WILL NOT BE PAID FOR SEPARATELY.

DETECTIBLE WARNING SURFACES SHALL BE RED IN COLOR, INSTALLED ONTO FRESH CONCRETE, AND

IN ACCORDANCE WITH MDOT STANDARD R-28 SERIES.

FOR AS Sidewalk, Conc, 6 inch.

SIDEWALKS LOCATED WITHIN RESIDENTIAL DRIVEWAYS SHALL BE 6-INCHES THICK AND WILL BE PAID

#### SIDEWALKS LOCATED WITHIN COMMERCIAL DRIVEWAYS SHALL BE 7-INCHES THICK AND WILL BE PAID FOR AS Sidewalk, Conc, 7 inch.

#### LAWN SPRINKLERS / LANDSCAPING

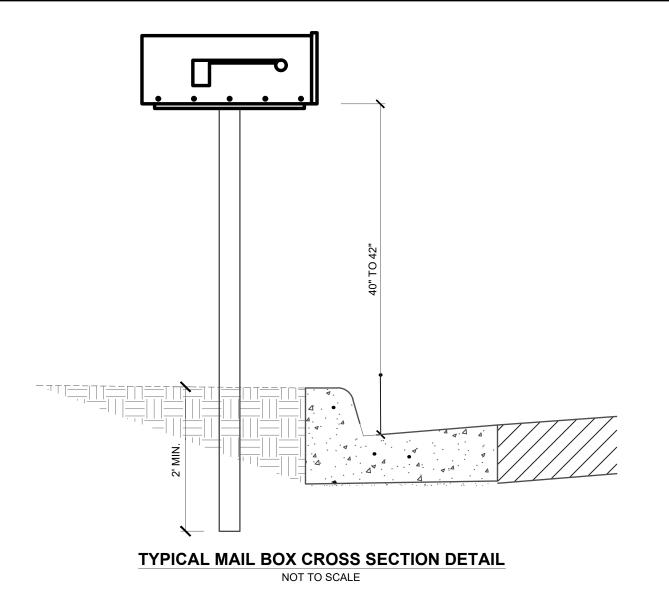
OWNERS OF EXISTING LAWN SPRINKLER SYSTEMS AND / OR LANDSCAPING SHALL BE NOTIFIED (IN WRITING WITH A COPY SENT TO THE ENGINEER) BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF ANY WORK THAT WILL BE DONE THAT WILL AFFECT THOSE SYSTEMS AND / OR LANDSCAPING. IF THE PROPERTY OWNER FAILS TO RELOCATE THE LAWN SPRINKLER SYSTEM PRIOR TO THE CONTRACTOR BEGINNING WORK, AND IF THE CONTRACTOR CUTS THE SYSTEM DURING CONSTRUCTION, THE CONTRACTOR SHALL CAP THE SYSTEM PIPE AND WITNESS THE LOCATION OF THE CAP WITH A WOODEN STAKE FOR THE PROPERTY OWNERS USE. THE CONTRACTOR SHALL PLACE THE SALVAGED SPRINKLER HEADS ON THE BACK OF THE RIGHT OF WAY. IF THE PROPERTY OWNER FAILS TO RELOCATE THE LANDSCAPING PRIOR TO THE CONTRACTOR BEGINNING WORK, THE CONTRACTOR SHALL CAREFULLY SALVAGE THE LANDSCAPING ITEMS AND STOCKPILE THEM ON THE BACK OF THE RIGHT OF WAY OR AT A LOCATION DESIGNATED BY THE ENGINEER FOR THE PROPERTY OWNER. ANY OTHER MODIFICATION TO THE SPRINKLER SYSTEM AND / OR LANDSCAPING IS THE RESPONSIBILITY OF THE OWNER AND IS NOT PART OF THIS CONTRACT. THIS WORK WILL NOT BE PAID FOR SEPARATELY.

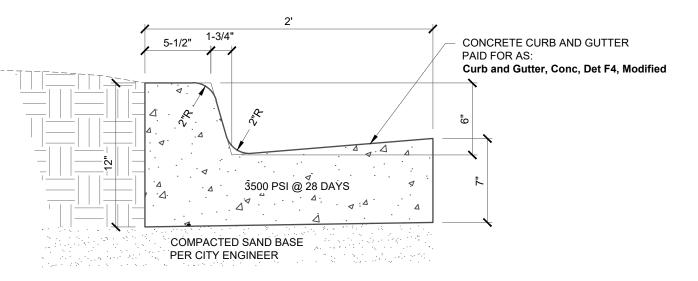
## PROPERTY OWNERS

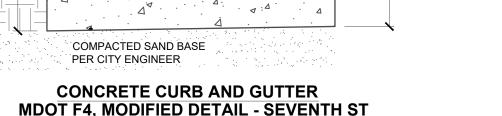
PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THIER ACCURACY IS NOT GUARANTEED.

### MAINTAINING TRAFFIC

REFER TO THE CONTRACT SPECIAL PROVISION FOR WORK RESTRICTIONS RELATIVE TO MAINTAINING TRAFFIC.







NOT TO SCALE

### MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS

10	Ea	Abandoned Gas Main Conflict
100	Syd	Pavt, Rem
50	Syd	Sidewalk, Rem
450	Sft	Sidewalk, Conc, 4 inch
2	Ton	Cement
300	Ft	Curb and Gutter, Rem
300	Ft	Curb and Gutter, Conc, Det F4, I

Mobilization, Max 5%

Sanitary Serv Conflict

. Modified

HMA Approach

Driveway, Nonreinf, Conc, 6 inch Approach, CL II, LM

Sign, Type III, Rem Sign, Type III, Erect, Salv

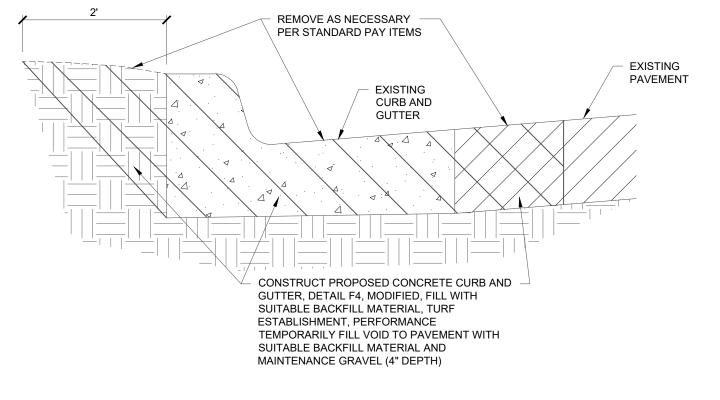
Post, Steel, 3 Pound Turf Establishment, Performance

## MAINTAINING TRAFFIC QUANTITIES

Barricade, Type III, High Intensity, Double Sided, Furn & Oper

Pedestrian, Type II Barricade, Temp Plastic Drum, High Intensity, Furn & Oper Sign, Type B, Temp, Prismatic, Furn & Oper

Minor Traf Devices, Max \$10,000





BACKFILL WITH MOOT

CLASS II OR II A MATERIAL

FOR TRENCH WIDTH

SEE TRENCH

WIDTH CHART

TRENCH DETAIL B - MODIFIED DETAIL

NOT TO SCALE

MINIMUM

I.D. +20"

TRENCH WIDTH CHART

EMBANKMEN'

MAXIMUM

36"

40"

49"

60"

I.D. +24

TRENCH SLOPE SHALL BE OSHA

& MIOSSHA REGULATION

SEE TYPICAL

**PAVEMENT** 

SECTION

INSTALL GEOTEXTILE SEPARATOR

CRUSHED STONE ON ROAD CROSSING

AND ALL OTHER AREAS THAT REQUIRE

COMPLETE SAND BACKFILL, COST TO

BE INCLUDED IN PAY ITEM FOR LINEAL

OVER MDOT 6A COMPACTED

FOOT OF SEWER PIPE AS BID

4" MIN. BEDDING

PIPE SIZE

6", 8" & 10'

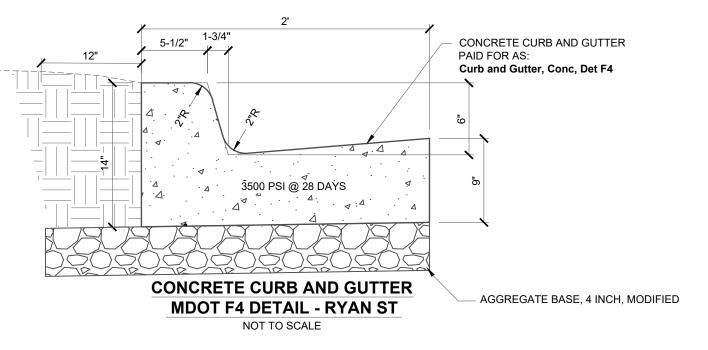
12" & 15"

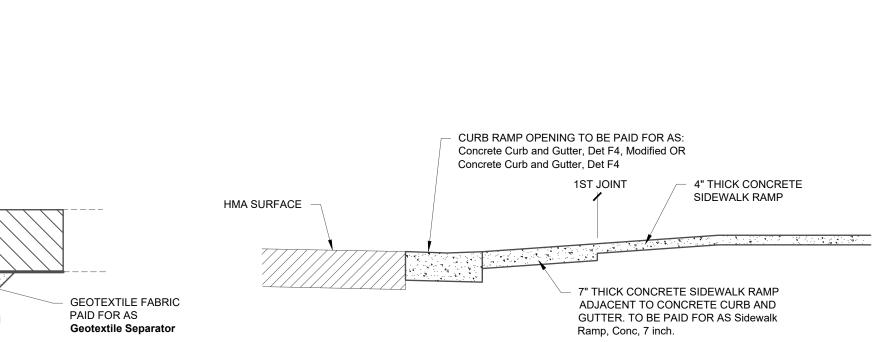
18"

24"

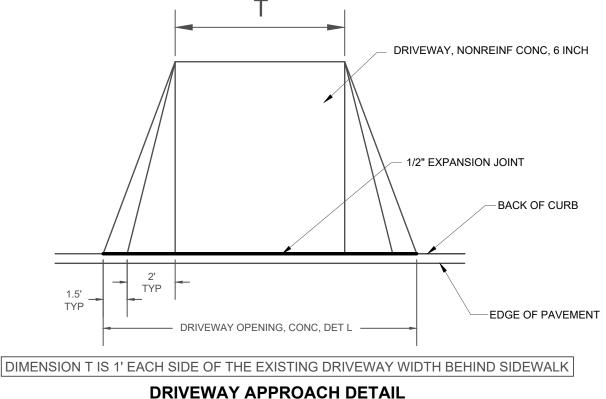
36"

LARGER THAN 36"





#### SIDEWALK RAMP THICKNESS DETAIL NOT TO SCALE



NOT TO SCALE

#### EVICTING EEATHDECH ECEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL DESCRIPTION
€``}	TREE (DECIDUOUS)	C	CABLE BOX	SURVEY CONTROL POINT
	BUSH	T	TELEPHONE RISER	BM#1 BENCHMARK
£	TREE (CONIFEROUS)		TELEPHONE MANHOLE	- SECTION CORNER
	DEAD TREE	THH	TELEPHONE HANDHOLE	BOUNDARY LINE
<b>©</b>	STUMP	E	ELECTRICAL RISER	PROPERTY LINE
$\circ$	MANHOLE	(E)	ELECTRICAL MANHOLE	WATERMAIN
0	SANITARY CLEANOUT	EHH	ELECTRICAL HANDHOLE	SANITARY SEWER STORM SEWER
<b>#</b>	RD. CATCH BASIN	-•	POWER POLE	CULVERT (21" AND UNDER)
	SQ. CATCH BASIN	×	LIGHT POLE	CULVERT (24" AND UP)
	FIRE HYDRANT	0	GUY POLE	CABLE T.V.
$\bowtie$	WATER VALVE	)	GUY ANCHOR	т т т т
8	CURB STOP & BOX	<b>₽</b> □	PED CROSSING SIGNAL	<u>ELECTRIC</u>
<b>®</b>	WELL	×	YARD LIGHT	OVERHEAD LINES OH
<b>W</b>	WATER MANHOLE	ф	SIGN	GUARDRAIL
<b>M</b>	WATER METER		MAILBOX	x_FENCExx
● B#	SOIL BORING	•	GUARD POST	WOODLINE
	MONITORING WELL	•	FOUND CONC. MONUMENT	
		•	FOUND IRON ROD	
		0	SET IRON ROD	NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

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MICHIGAN IVISION SERVICE

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# MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED					
ERO:	EROSION CONTROLS							
E1	SELECTIVE GRADING AND SHAPING		To reduce steep slopes and erosive velocities.					
E2	GRUBBING OMITTED		For use on steep slopes to prevent rilling, gullying, and reduce sheet flow velocity or where clear vision corridors are necessary.					
E3	SLOPE ROUGHENING AND SCARIFICATION		Where created grades cause increased erosive velocites. Promotes infiltration and reduces runoff velocity.					
E4	TERRACES		On relatively long slopes up to 8% grades with fairly stable soils.					
E5	DUST CONTROL		For use on construction sites, unpaved roads, etc. to reduce dust and sedimentation from wind and construction activities.					
E6	MULCH		For use in areas subject to erosive surface flows or severe wind or on newly seeded areas.					
E7	TEMPORARY SEEDING	ALL THE PROPERTY OF THE PROPER	Stabilization method utilized on construction sites where earth change has been initiated but not completed within a 2 week period.					
E8	PERMANENT SEEDING	A TOREN MARKEN MARKAN	Stabilization method utilized on sites where earth change has been completed (final grading attained).					
E9	MULCH BLANKETS		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.					
E10	SODDING		On areas and slopes where immediate stabilization is required.					
E11	VEGETATED CHANNELS	- where the same of the same o	For use in created stormwater channels. Vegetation is used to slow water velocity and reduce erosion within the channel.					
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.					
E13	GABION WALLS		On newly created or denuded stream banks to reduce velocity until permanent stabilization is achieved or on existing banks to retard erosive velocities.					
E14	ENERGY DISSIPATOR		Where the energy transmitted from a concentrated flow of surface runoff is sufficient to erode receiving area or watercourse.					
E15	TEMPORARY SLOPE DRAIN		Where surface runoff temporarily accumulates or sheet flows over the top of a slope and must be conveyed down a slope in order to prevent erosion.					
E16	SLOPE DRAIN		Where concentrated flow of surface runoff must be permanently conveyed down a slope in order to prevent erosion.					

B = BIOENGINEERING



# MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E17	CELLULAR CONFINEMENT SYSTEMS		Used on steep slopes and high velocity channels.
E18	PLASTIC SHEETS		Used on exposed slopes, seeded areas, new ditch bottoms, and areas subject to surface runoff and erosion. Used as a liner in temporary channels and to stabilize stockpiles.
E19	TEMPORARY DRAINAGEWAY/ STREAM CROSSING		Use on construction sites where stream/drainageway crossings are required.
E20	TEMPORARY BYPASS CHANNEL		Use within existing stream corridors when existing flow cannot be interrupted, and at culvert and bridge repair sites
E21	LIVE STAKING	В	In areas requiring protection of slopes against surface erosion and shallow mass wasting.
	EROSION / SEDIME CONTROLS	NT	
ES31	CHECK DAM		Used to reduce surface flow velocities within constructed and existing flow corridors.
ES32	STONE FILTER BERM		Use primarily in areas where sheet or rill flow occurs and to accommodate dewatering flow.
ES33	FILTER ROLLS	B	In areas requiring immediate protection of slopes against surface erosion and gully formation and for perimeter sediment control.
ES34	SAND FENCE		For use in areas susceptible to wind erosion, especially where the ground has not yet been stabilized by other means.
ES35	DEWATERING		Use where construction activities are limited by the presence of water and dry work is required.
ES36	DIVERSION DIKE/BERM		Within existing flow corridors to address or prevent erosion and sedimentation, or on disturbed or unstable slopes subject to erosive surface water velocities.
ES37	DIVERSION DITCH	ADESTRONGE STATE OF THE STATE O	In conjunction with a diversion dike, or where diversion of upslope runoff is necessary to prevent damage to unstabilized or disturbed construction areas.
ES38	COFFERDAM/SHEET PILINGS		Constructed along or within water corridor or waterbody to provide dry construction area.
ES39	STREAMBANK BIOSTABILIZATION	В	For use along banks where stream and riparian zones may have difficulty recovering from the long—term effects of erosion.
ES40	POLYMERS		To minimize soil erosion and reduce sedimentation in water bodies by increasing soil particle size.
ES41	WATTLES	В	In areas requiring protection of slopes against surface erosion and gully formation.

B = BIOENGINEERING



# MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
S	EDIMENT CONTROLS		
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden shee flow from entering these areas.
S52	CATCH BASIN SEDIMENT GUARD		Use in or at stormwater inlets, especially at construction sites
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leave a construction site.
S54	TIRE WASH		For use on construction sites where vehicular traffic requires sediment removed from its tires in highly erosive areas.
S55	SEDIMENT BASIN		At the outlet of disturbed areas and at the location of a permanent detention basin.
S56	SEDIMENT TRAP		In small drainage areas, along construction site perimeters, and above check dams or drain inlets.
S57	VEGETATED BUFFER/FILTER STRIP		Use along shorelines, waterways, or other sensitive areas. Slows velocity, reduces sediment load, and reduces erosion in areas of sheet flow.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.
S59	INLET PROTECTION FABRIC FENCE		Use at stormwater inlets, especially at construction sites.
S60	INLET PROTECTION STONE		Use around urban stormwater inlets.
S61	TURBIDITY CURTAIN		Use during construction adjacent to a water esource, to contain sediment within the work area when other BMP's cannot be used.

B = BIOENGINEERING

# CONSTRUCTION SEQUENCE

- INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES.
   TRENCH EXCAVATION, WATER MAIN INSTALLATION, AND BACKFILL.
   PERMANENT MEASURES, FINAL GRADING, SEEDING AND MULCHING.

SOIL E	ROSIO OPER						TROL					
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC
STRIP AND STOCKPILE TOPSOIL												
ROUGH GRADE/ SEDIMENT CONTROL												
TEMP CONTROL MEASURES										-		
STORM FACILITIES										N/A		
TEMP CONSTRUCTION ROADS										N/A		
FOUNDATION/ BLDG. CONSTRUCTION										N/A		
SITE CONSTRUCTION												
PERM CONTROL MEASURES												
FINISH GRADING												
LANDSCAPING										N/A		

_						
DATE BY	Ŧ					) BY
REVISIONS					ORIGINAL PLAN	ECKED BY APPROVED BY
Ö	1					CHECK
BENCHMARK DATA	ELEV. DESCRIPTION					
		SESC STANDARD NOTES AND DETAILS				
0 0 4 0 0	2019 STR			)2	2	

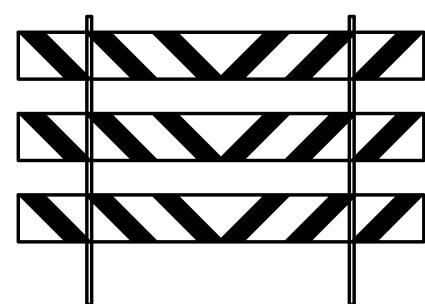
# SEVENTH ST

CITY OF OWOSSO 2019 STREET PROGRAM CONTRACT 3

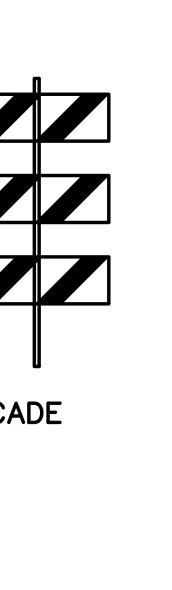
SHEET NO.	DESCRIPTION
SV1	SEVENTH ST - TRAFFIC CONTROL PLAN
SV2	SEVENTH ST - TYPICAL CROSS SECTIONS
SV3	SEVENTH ST - REMOVAL PLAN & SOIL BORING
SV4	SEVENTH ST - ROAD PLAN
SV5	SEVENTH ST - ROAD PROFILES

ROAD CLOSED LOCAL TRAFFIC ONLY

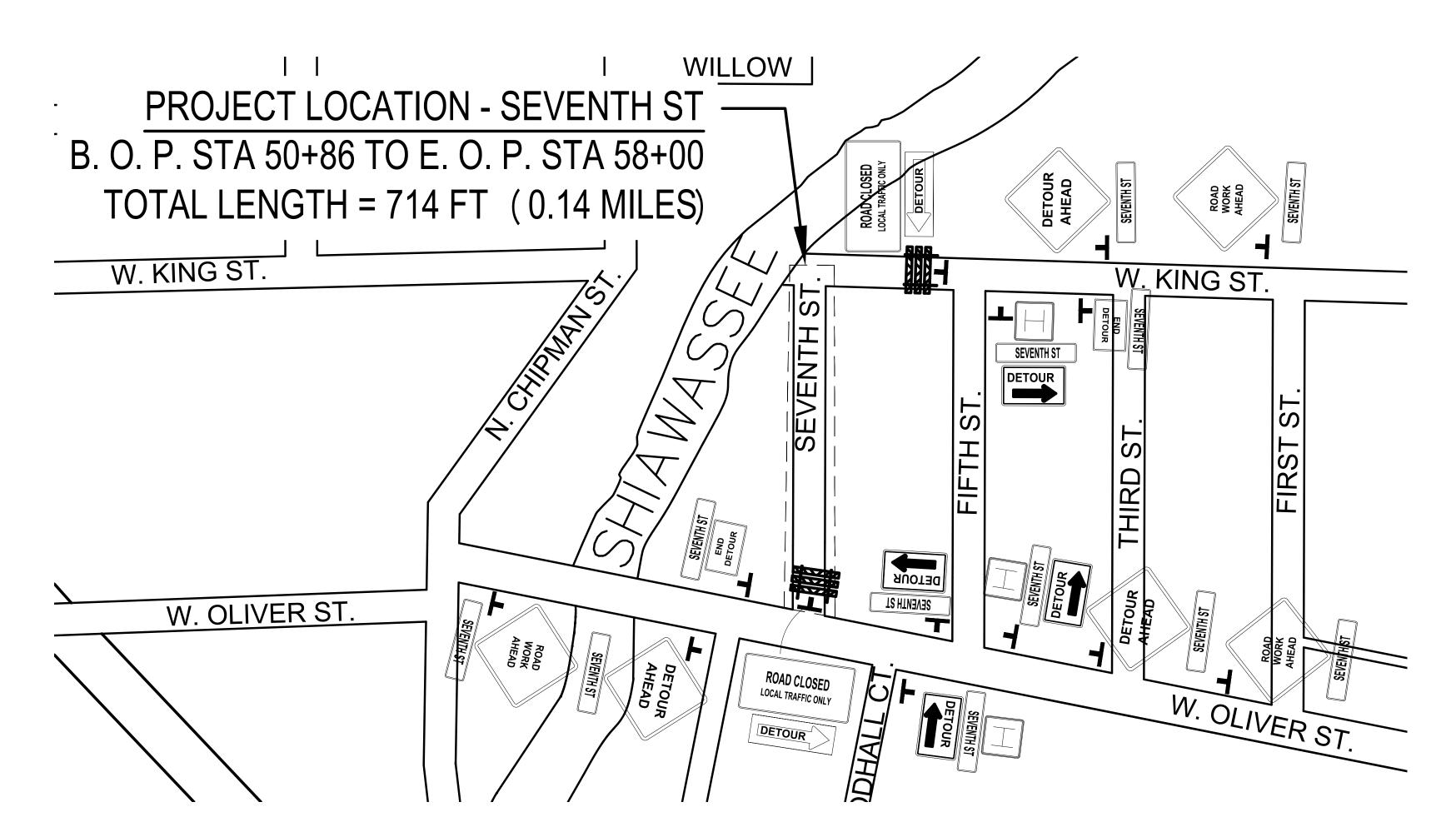
R11-3a 60" x 30"



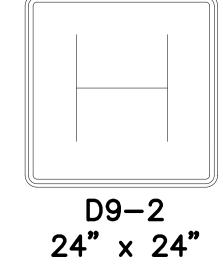
TYPE III BARRICADE







VICINITY MAP AND TRAFFIC CONTROL PLAN
SEVENTH ST



DETOUR

M4-10L 48" × 18" DETOUR

M4-10R 48" x 18"



W20-1 48" x 48

SEVENTH ST

M4-8 (MOD) 30" x 8"

> END DETOUR

M4-8a 24" x 18"



M4-9R 30" × 24"



M4-9L 30" x 24" CITY OF OWOSSO, MICHIC ENGINEERING DIVISION DEPT. OF PUBLIC SERVIC

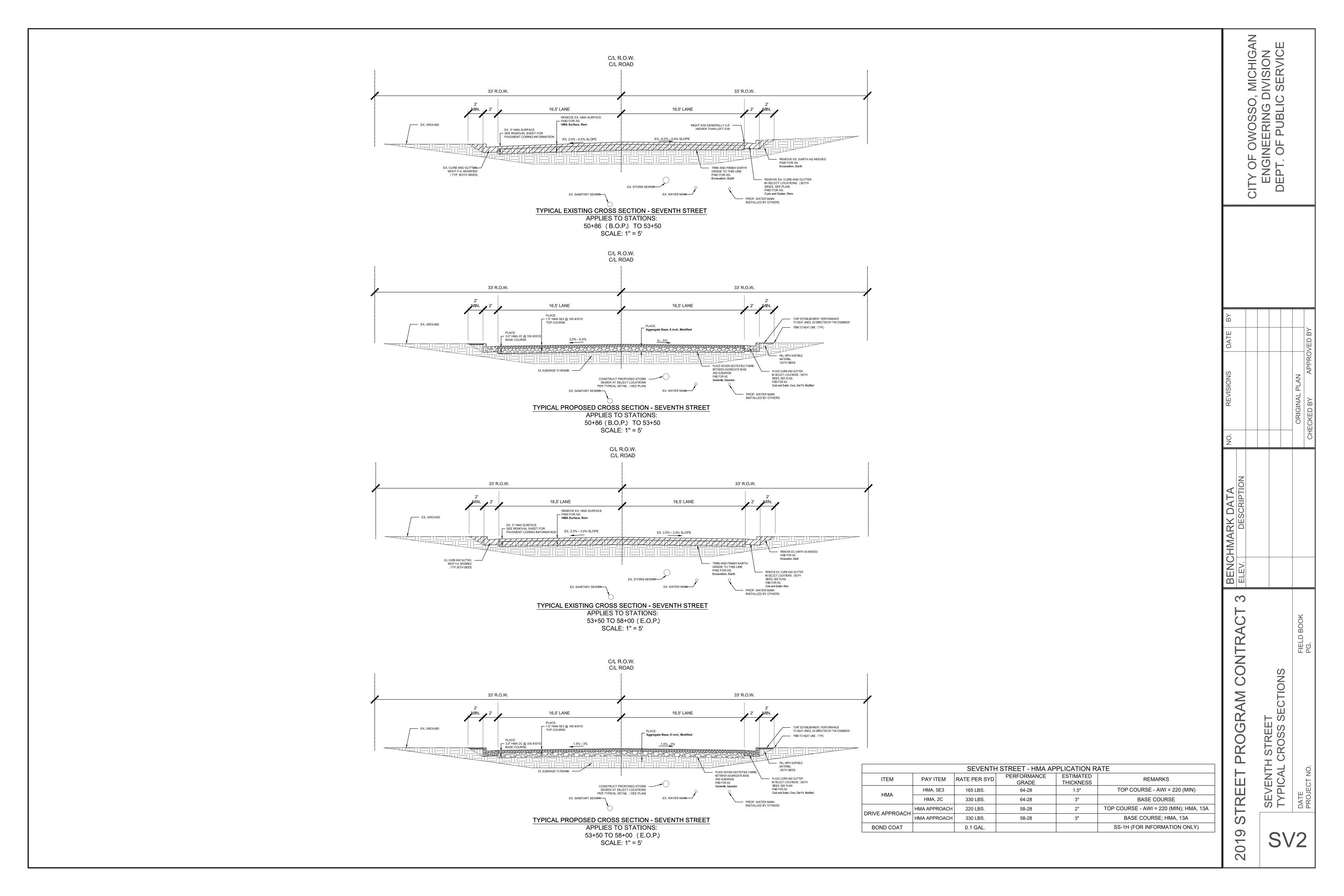
ВУ					
DATE					APPROVED BY
REVISIONS				ORIGINAL PLAN	CHECKED BY APPRO
Ö					CHE
BENCHMARK DATA	ELEV. DESCRIPTION				
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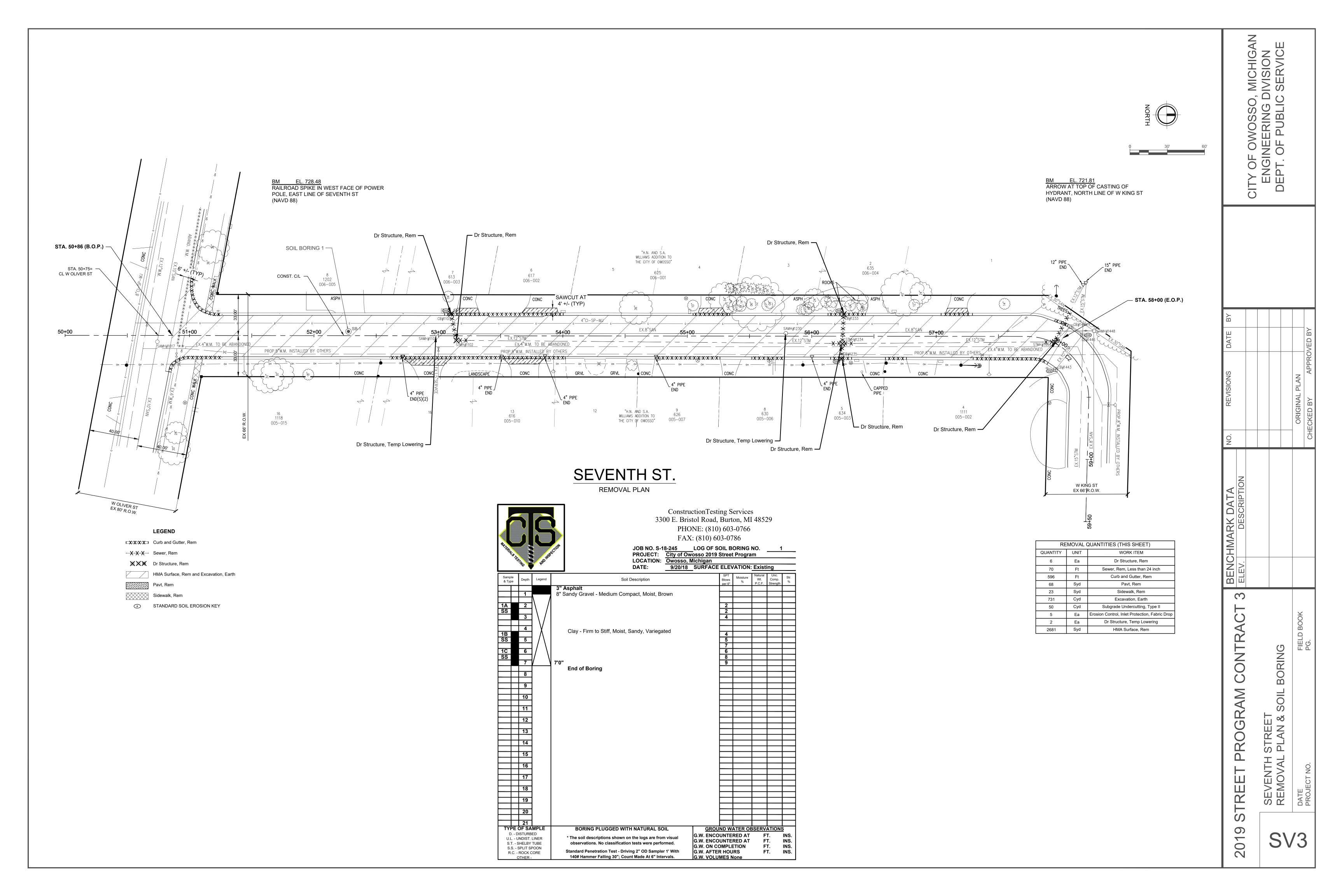
SV1

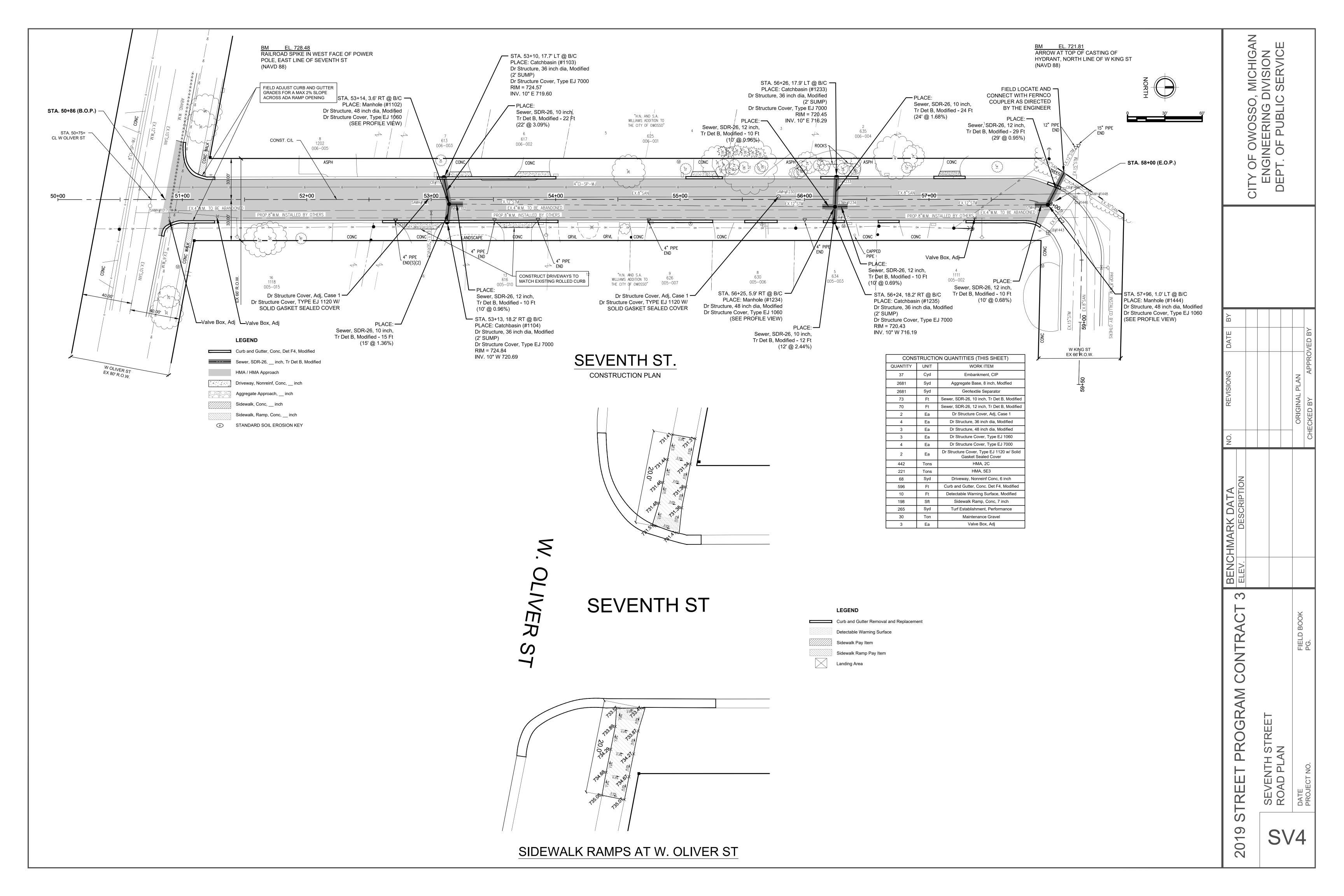
SEVENTH STREET TRAFFIC CONTROL

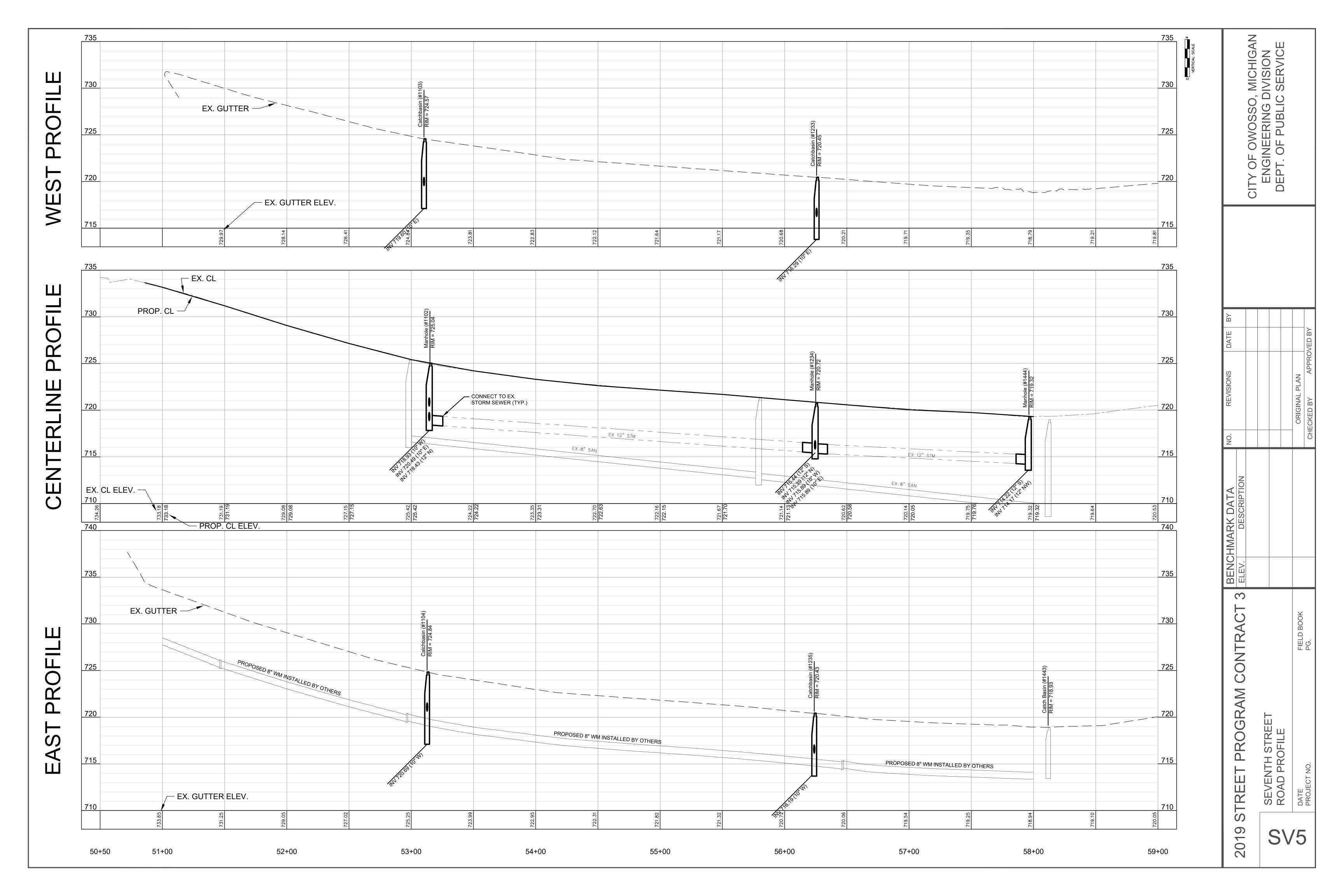
STREET PROGRAM CONTRACT

2019









# RYAN STREET

CITY OF OWOSSO 2019 STREET PROGRAM CONTRACT 3

SHEET NO.	DESCRIPTION
RY1	RYAN ST - TRAFFIC CONTROL PLAN
RY2 - RY3	RYAN ST - TYPICAL CROSS SECTIONS
RY4	RYAN ST - REMOVAL PLAN
RY5 - RY8	RYAN ST - ROAD PLAN AND PROFILE
RY9	RYAN ST - SOIL BORINGS
	NO.  RY1  RY2 - RY3  RY4  RY5 - RY8

**ROAD** 

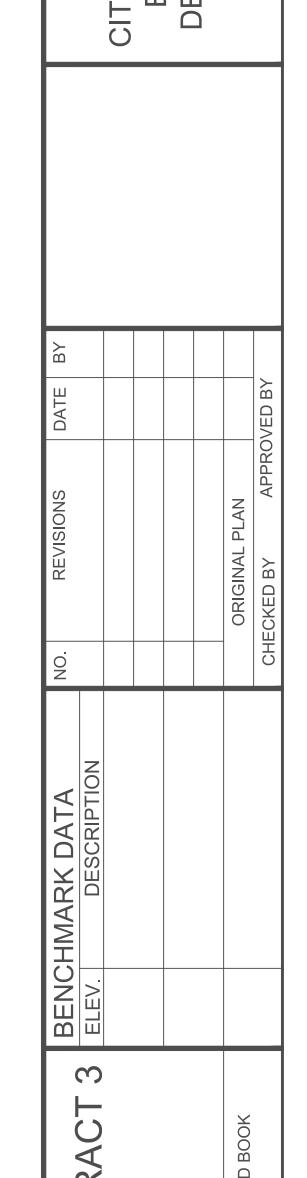
WORK

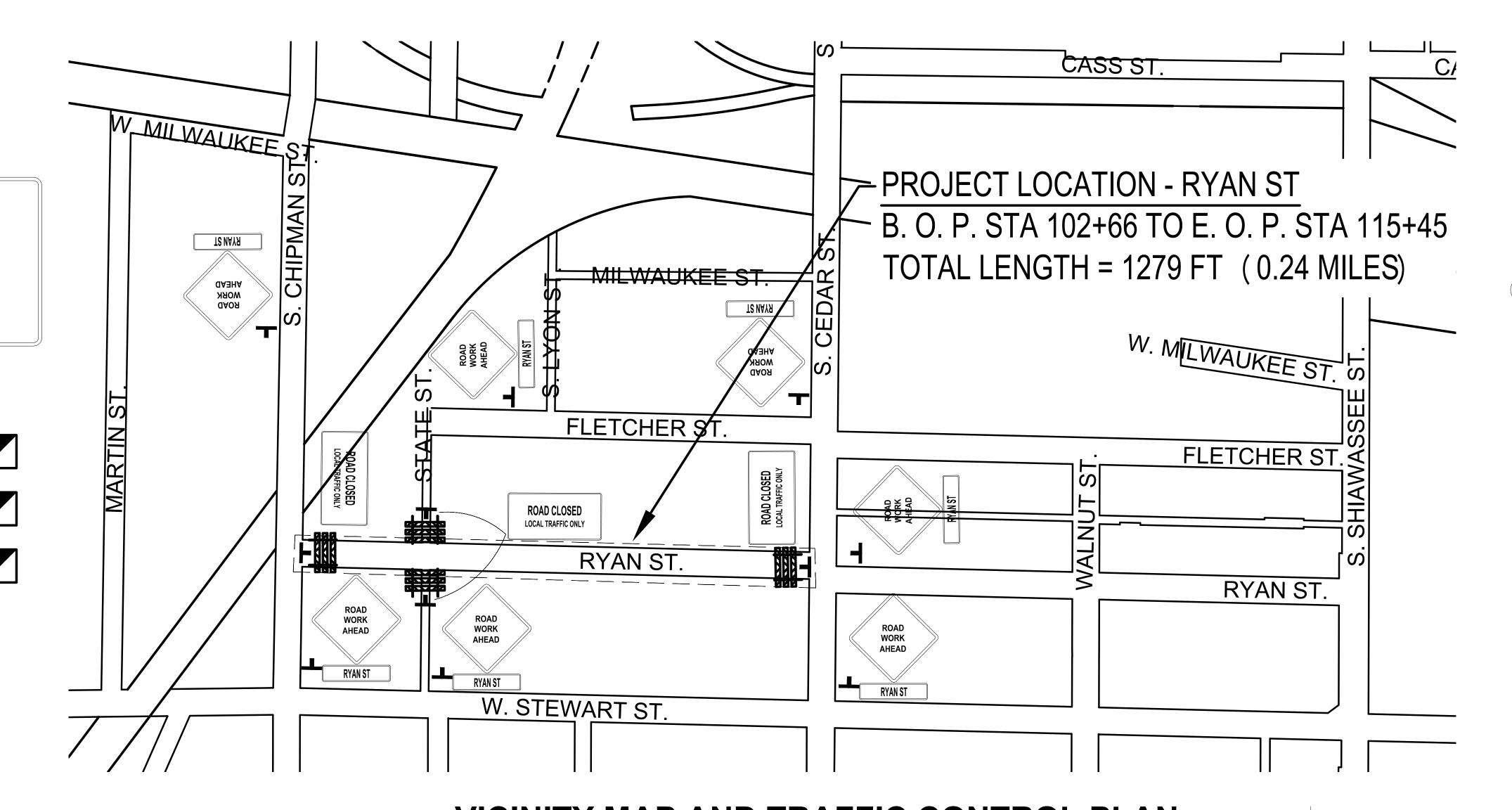
**AHEAD** 

W20-1 48" x 48"

RYAN ST

M4-8 (MOD) 30" x 8"





ROAD CLOSED

LOCAL TRAFFIC ONLY

R11-3a

60" x 30"

TYPE III BARRICADE

VICINITY MAP AND TRAFFIC CONTROL PLAN
RYAN ST



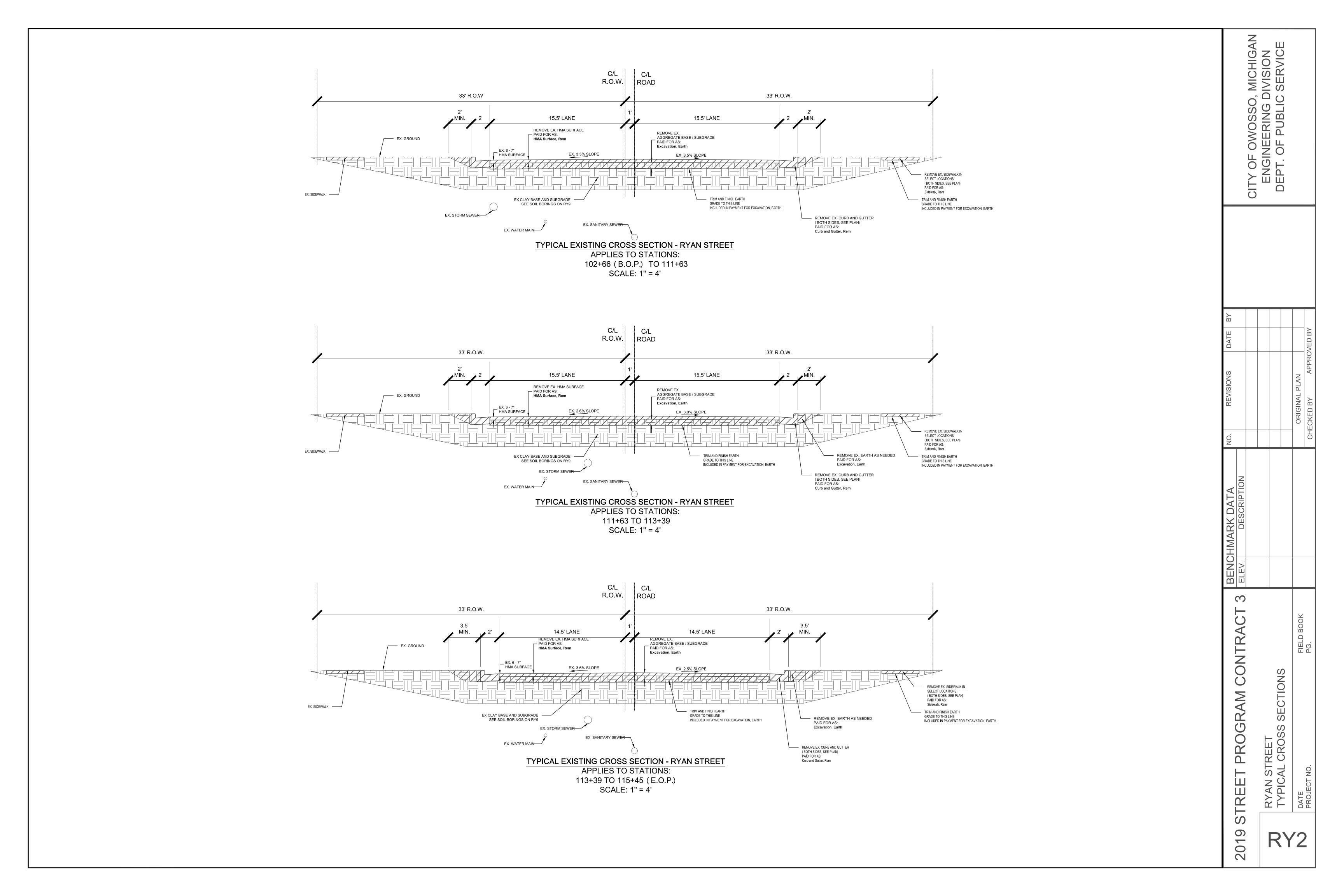
STREET PROGRAM CONTRACT 3 ELEV.

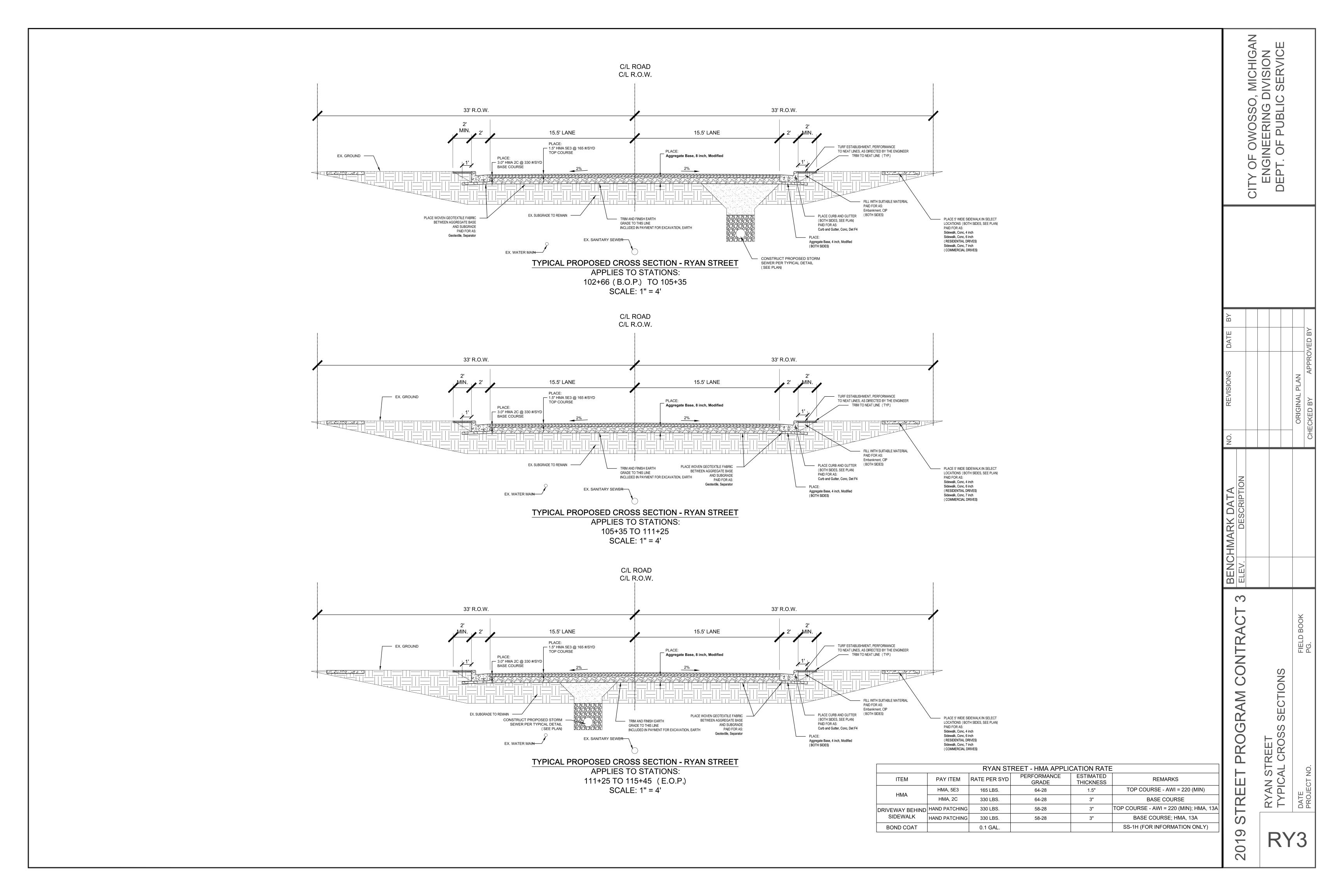
RYAN STREET

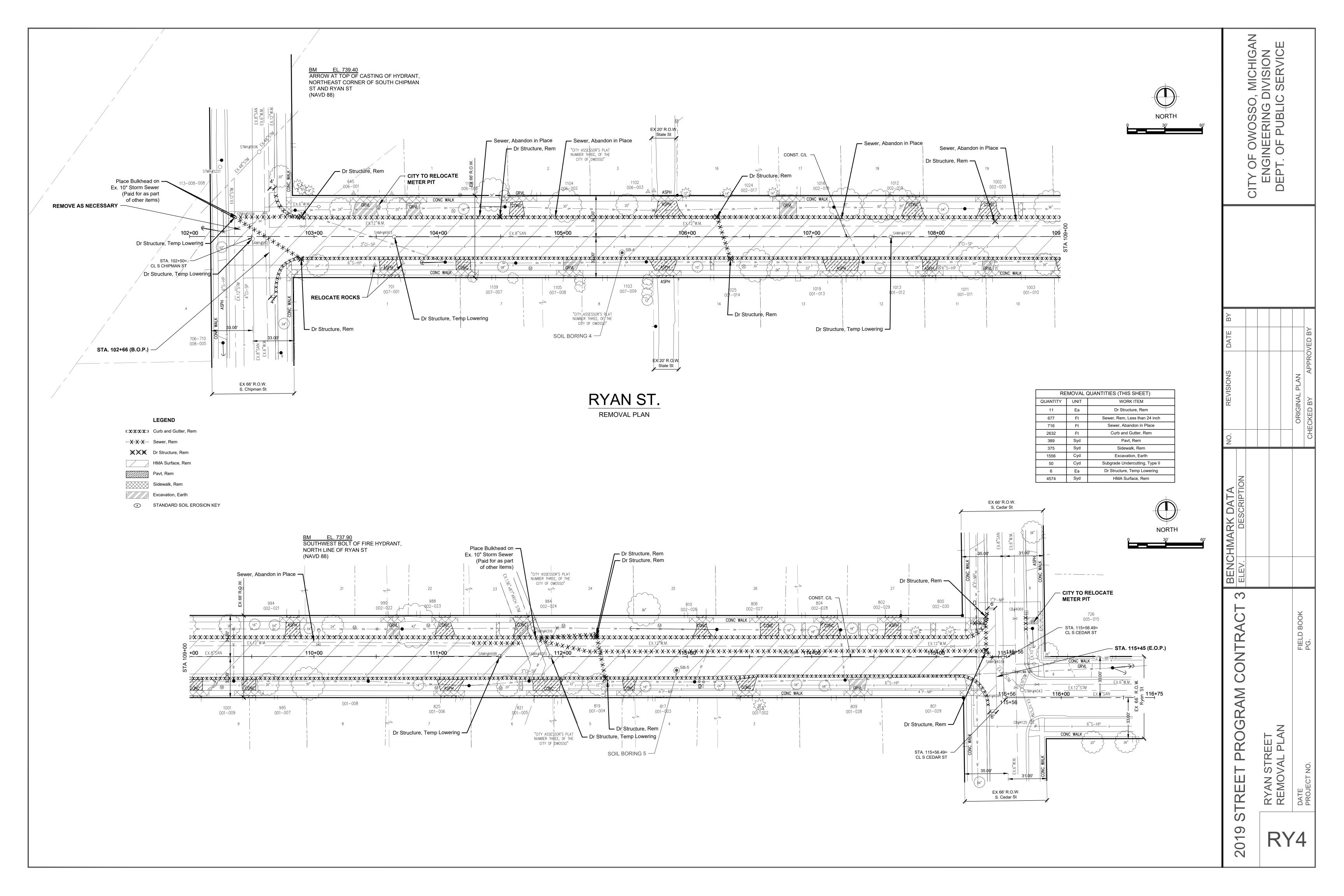
201

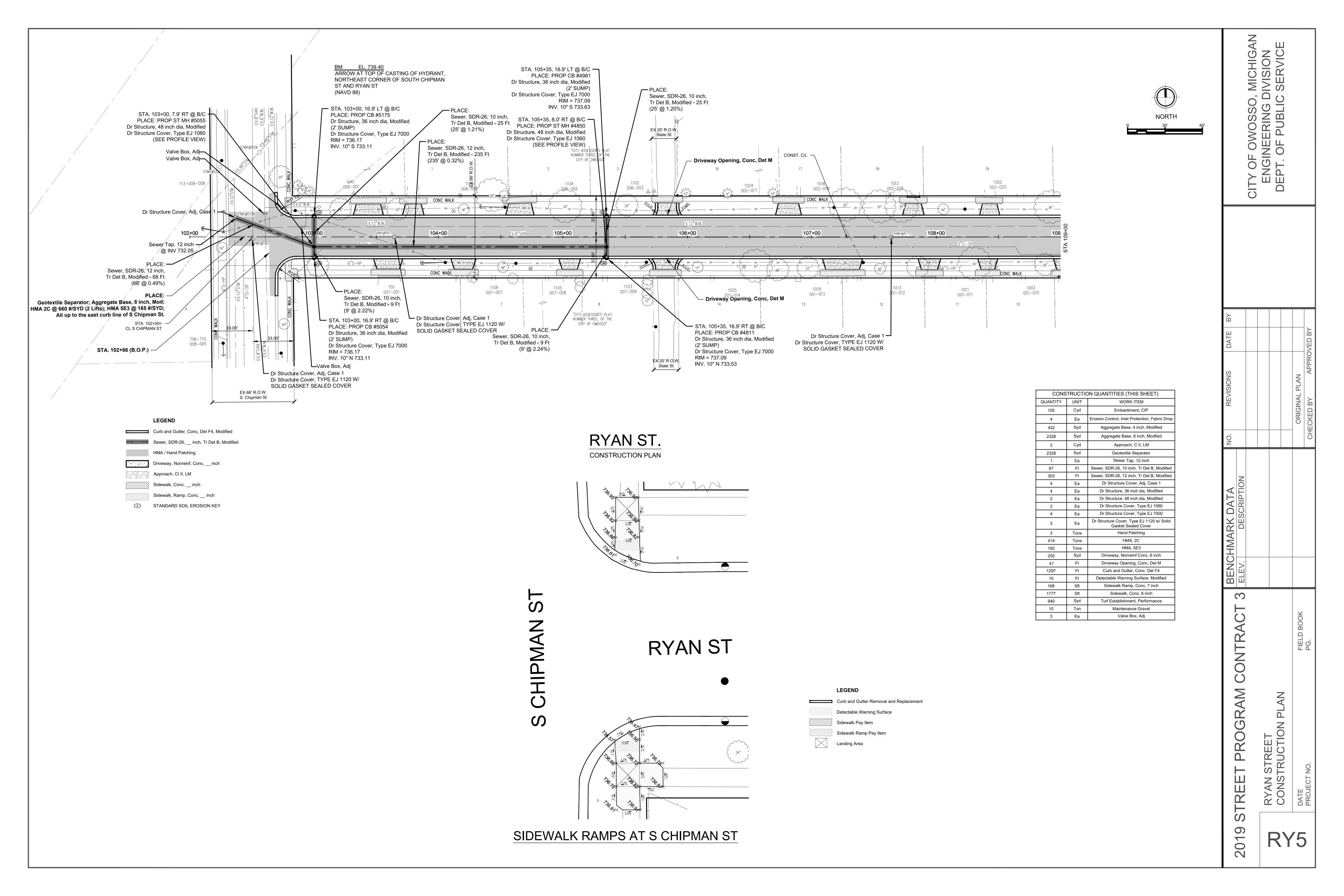
RYAN STR TRAFFIC C

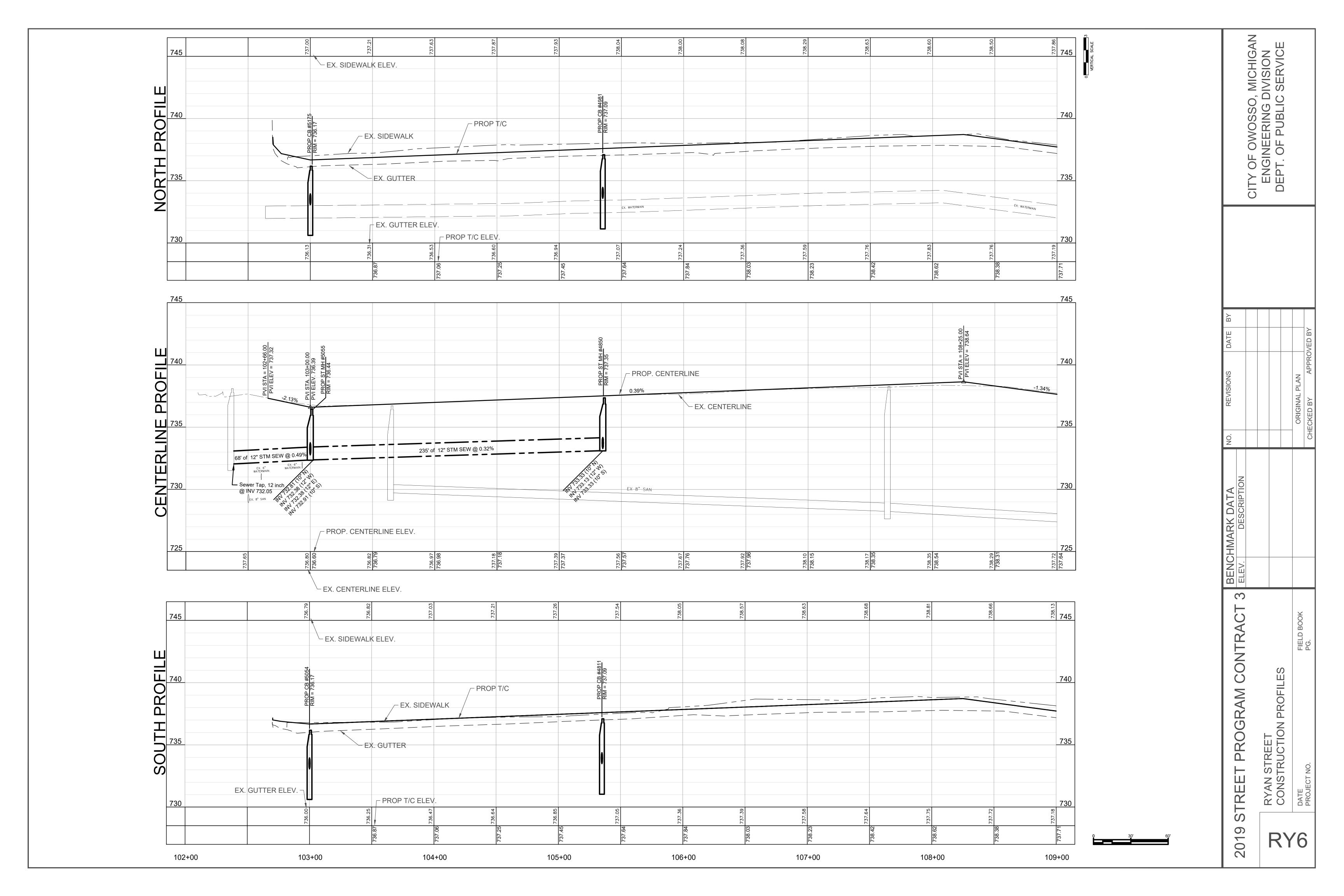
RY1

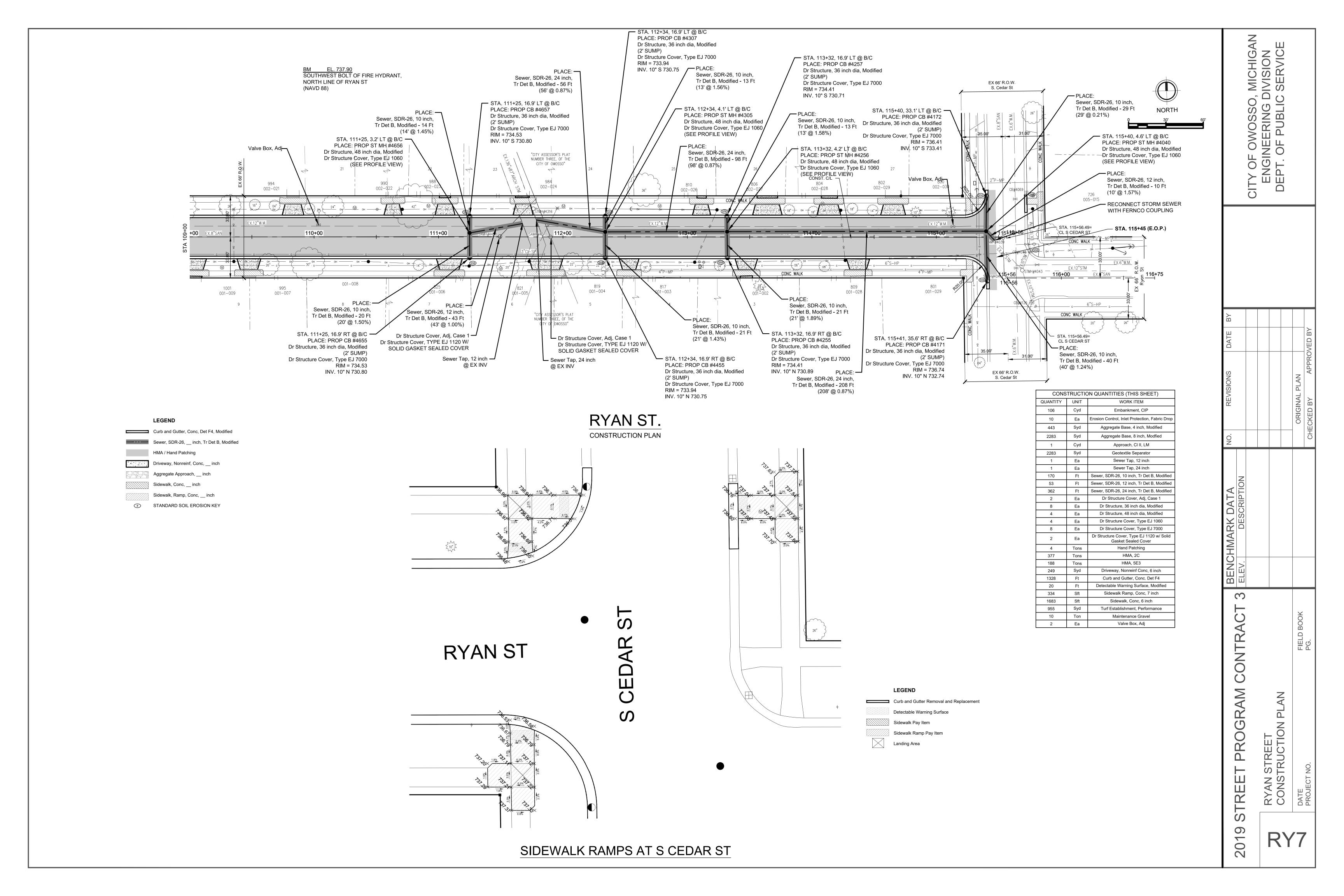


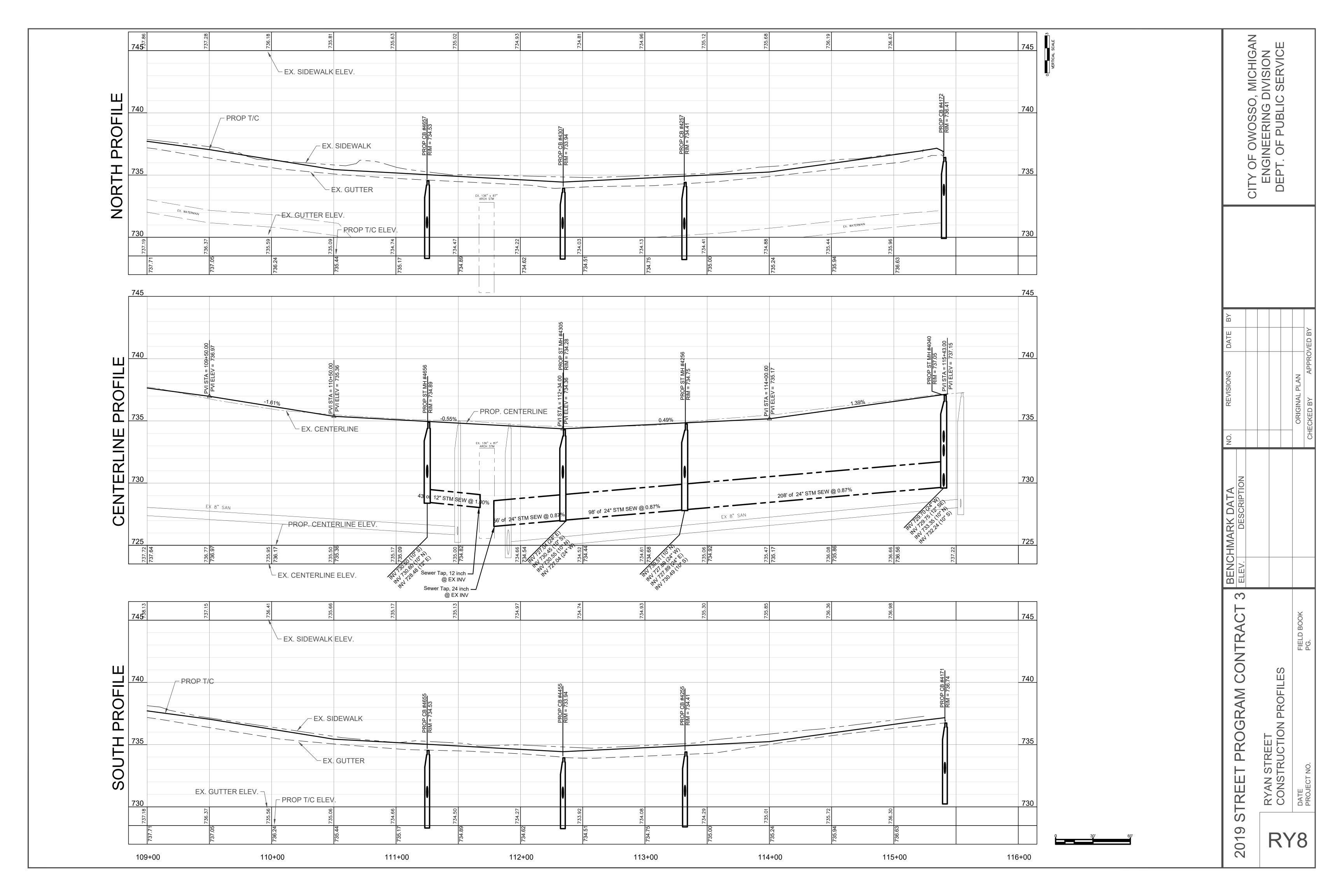














S.S. - SPLIT SPOON R.C. - ROCK CORE

OTHER -

# ConstructionTesting Services 3300 E. Bristol Road, Burton, MI 48529 PHONE: (810) 603-0766 FAX: (810) 603-0786

JOB NO. S-18-245 LOG OF SOIL BORING NO. PROJECT: City of Owosso 2019 Street Program LOCATION: Owosso, Michigan

G.W. ON COMPLETION

FT.

G.W. AFTER HOURS G.W. VOLUMES None

\$ <b>▼</b> 4	DATE: <u>9/20/18</u> SURFAC	E ELE	VATION	Exist	ing	
Sample Depth Legend	Soil Description	SPT Blows per 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %
	Asphalt - Lower 3.5" Heavily Deteriorated	, poi 0				
4A 2		2				
SS 3	Clay - Firm, Moist, Sandy, Variegated w/Green Tint, Possible Swamp Bottom	3	<u> </u>			
	Swamp Bottom					
4B 4 4 10 11 11 11 11 11 11 11 11 11 11 11 11		3				
SS 5 4'9"		6				
4C 6	Clay - Stiff to Very Stiff, Moist, Sandy, Variegated w/Green Tint	8	<u> </u>			
SS	& occ/Stone	13				
7 7'0"	End of Boring	15				
8	End of Borning					
9						
10						
11						
12						
12						
13						
14						
45						
15						
16						
17						
18						
19						
20						
TYPE OF SAMPLE	BORING PLUGGED WITH NATURAL SOIL GRO	UND W	 ATER O	SSERV	ΔΤΙΩΝ <b>ς</b>	3
D DISTURBED	* The soil descriptions shown on the logs are from visual			F		INS.
U.L UNDIST. LINER S.T SHELBY TUBE	observations. No classification tests were performed.  G.W. ENC			F F		INS. INS.

Standard Penetration Test - Driving 2" OD Sampler 1' With

140# Hammer Falling 30"; Count Made At 6" Intervals.



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JOB NO. S-18-245 LOG OF SOIL BORING NO.
PROJECT: City of Owosso 2019 Street Program
LOCATION: Owosso, Michigan
DATE: 9/20/18 SURFACE ELEVATION: Existing

				DATE: <u>9/20/18</u> S	UKFACE		AHON.	LXISU	iig	
Sample & Type	Depth	Legend		Soil Description		SPT Blows per 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %
5A SS	2		6" A 2'6"	Asphalt - Lower 2" Heavily Deteriorated  Clay - Firm, Moist, Sandy, Variegated w/Green Tint, Pelocc/Vegetation, Possible Swamp Bottom	oble &	2 3				
5B SS	4 5		3'9"	Sand - Compact, Moist, Brown w/Black Streaks		6 9				
SC SS	6	X	7'0"	Clay - Very Stiff, Moist, Sandy, Variegated		11 9 13 15				
	8			End of Boring						
	10									
	12									
	14									
	16									
	18									
	20									
D D U.L U S.T S S.S R.C		LINER TUBE POON CORE		observations. No classification tests were performed.  Standard Penetration Test - Driving 2" OD Sampler 1' With	GROU G.W. ENCO G.W. ENCO G.W. ON C G.W. AFTE G.W. VOLL	OUNTE OUNTE OMPLE R HOU	RED AT ETION RS	SSERV F F F F	Т. Т. Т.	INS. INS. INS. INS.

	BENC	BENCHMARK DATA	ON	REVISIONS	DATE	ВУ	
<u>ო</u>	ELEV.	DESCRIPTION					
				ORIGINAL PLAN			
			H.C.	CHECKED BY APF	APPROVED BY		

PROGRAM STREET

2019