

TITLE SHEET:


1. Show station equations and bridge/culvert numbers within project limits. Place a box around bridge or culvert numbers only if bridge or culvert is part of the project scope of work.
2. When available, show traffic counts, design speed and posted speed for the roadways within the project limits. When design and posted speeds change, show limits.
3. Show Route; Township, City or Village; County
4. Show section; control section; job number; and funding type.
 Section 1 for road/non-bridge and section 2 for bridge plans. If project includes a log job then road plans are section 1A and log job is section 1B, bridge plans remain section 2.
 The major control section number based on funding is shown first, with secondary control sections shown in parenthesis.
 Place the lowest job number first then place job numbers in sequential order.
 Federal Project and Item number are left blank, as they are completed by the Specifications and Estimates unit.
5. Show north arrow; township and range on map.
6. Describe type of work and provide length of project. Project description shall match scope of work and cover major items.
7. Show State of Michigan map with county or counties project is located in hatched. Add county or county names where the project is located.
8. Consultant Jobs Only – Use consultant box on Title sheet for Prime consultant only. Place consultant logo in title block at bottom of sheet.
 Sub-consultant work must have their title block or logo on the sheets they are responsible for, no signature required.
 If consultants do a portion of an MDOT designed project, the consultant must sign the first sheet of work and state “Responsible for sheet #__ through sheet #__.”
9. Design Unit for MDOT designed projects is the name of the design unit performing the work. Design Unit for consultant designed projects is the name of the MDOT Project Manager or Consultant Coordinator.
 TSC is the TSC where the project is located.
10. Add MGF (Michigan Geographic Framework) version for PR numbers note with correct version number as programmed in MPINS.
11. Make interstates, state routes and major road names legible.
12. Add names of Construction Engineer and Project Manager below signatures.
13. Show POB and POE stations, control section milepoints and PR milepoints.
14. The project map should be large enough to show the entire project limits and other features that will easily identify the project location.
15. Label railroads, streams, rivers, creeks, drains, and lakes on the project map. Be sure all regulated streams within the project influence are shown and identified.
16. Final ROW Revision box should always be displayed. If ROW revision is required, enter date and related information.

SUGGESTED TEXT SIZES:

MDOT Ex: road names, railroads, streams, rivers, creeks, drains, and lakes.

MDOT PR: station equations, project beginning and ending information, changes in control section, and bridges.

MDOT PR x 1.5: cities, townships, and township and range.

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:			
										FILE:	TSC:			

TYPICAL SECTIONS - GENERAL ITEMS:

G1.All work items on the typical cross sections are to be in capital letters. Use the proper fonts, sizes, levels, weights, etc. Pay items on the typical sections are to match MDOT standard pay items or the pay items from an approved Special Provision.

G2.Whole words should be used when possible, but abbreviations are acceptable. The following are some standard abbreviations:

- AGG – Aggregate
- CONC - Concrete
- CP – Crown Point
- EOS – Edge of Shoulder
- EOT – Edge of Travelway
- OGDG – Open-Graded Drainage Course
- PAVT – Pavement
- PG – Plan Grade
- POR – Point of Rotation
- PT – Point
- REINF – Reinforced
- NONREINF – Non-Reinforced
- SHLD – Shoulder
- SWLK – Sidewalk

G3.Label the existing and proposed lanes and shoulders. If the dimension is a whole number do not label with a decimal. Do not show grade differentials (-0.24') and or circles at break points. For horizontal dimensions use decimals not feet and inches. Vertical dimensions are typically in inches.

G4.Show existing and proposed plan grade, crown point and point of rotation locations.

G5.Typical sections are a general representation; the intent is not to show every scenario. Utilize miscellaneous details or side typical sections to illustrate unique construction locations.

G6.Label the typical sections with general varying widths for the station range of the typical. Exact station ranges and widths of tapers, transitions, gores, etc are to be shown on the construction sheets.

G7.Existing typical cross sections should be developed as complete as possible from old plans, pavement cores, soil borings and field inspections. All layers of all materials should be shown including subbase and aggregate if known. It is critical to identify the type and thickness of concrete pavement, HMA thickness, existing underdrains, or other items that can affect the bid price. Show existing parabolic crown if applicable.

G8.The following items may require separate half section typical or details and shall be used as needed:


- Guardrail sections
- Shoulder sections
- Crossroads
- Fill/Cut sections
- Curb and gutter sections
- Turn lanes
- Lane widening
- Ramps
- Crossovers
- Retaining walls

G9.Government lines will not be shown on typical sections.

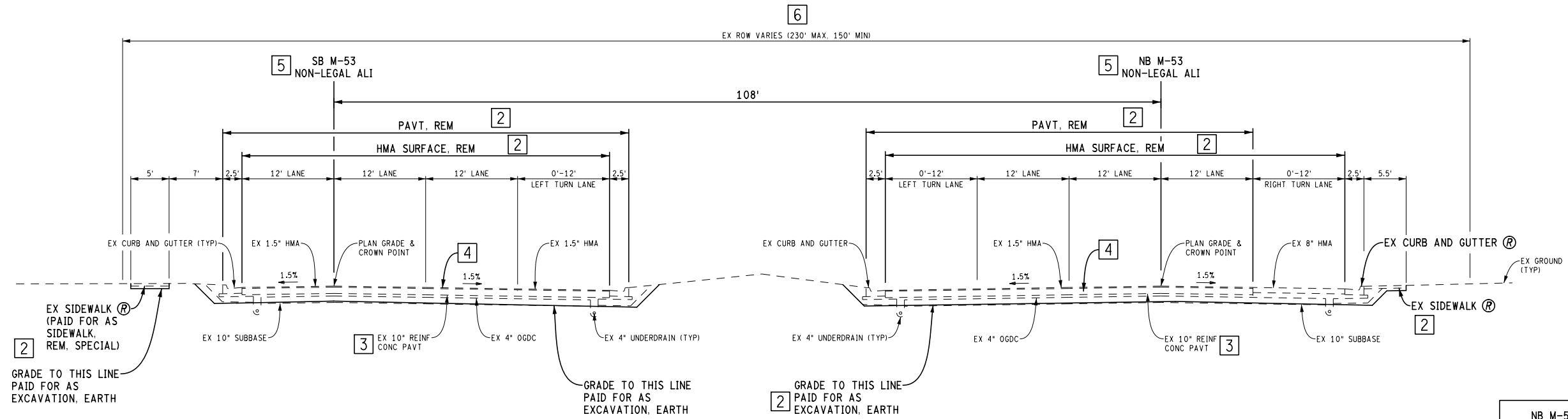
G10.Topsoil stripping will not be shown on typical sections.

TYPICAL SECTIONS:

1. Existing typical sections will be located before the proposed typical sections and will be grouped together. Existing and proposed typical sections will not be on the same sheet.
2. The removal type lines and the 'GRADE TO THIS LINE' call will address how removal items are paid. The 'GRADE TO THIS LINE' call is only shown on the existing typical section and should match the bottom line of the coinciding proposed typical section. Items that are not included in the removal type lines or the 'GRADE TO THIS LINE' call will be tagged with the removal cell. (The removal symbol can be added to a text string by selecting it from the symbol library in the text editor window.) For special cases, such as non-standard items, include a description of how the item will be paid.
3. Label all existing materials.
4. Removal items on the existing typical sections are not to be crosshatched.
5. Only show alignments (LEGAL ALI OR NON-LEGAL ALI) that are being used to construct the roadways. Alignment labels shall match the labels in the plan set.
6. Existing and proposed ROW is labeled from ROW line to ROW line, it is not tied to any of the alignments. Identify if it is limited access (LA) ROW.
7. Include station equations that are within the typical section station range. If multiple equations exist within the station range they should be shown in a separate box.
8. Multiple station ranges can be used on the same typical section.
9. Side slopes that vary through the station limits will be labeled as "SLOPE VARIES" or "SLOPES VARY" in the type line or "VARIES" with an arrow instead of specifying a slope. The specific slopes will typically be detailed on the profile sheets. If there are no profile sheets this information can be detailed on the typical.
10. When the pay item "SLOPE RESTORATION, TYPE _" is used, the type can be left blank.
11. The longitudinal pavement joint type labels will not be shown on the typical sections. Concrete pavement joints will only be shown as a vertical line along with a horizontal lane tie.
12. Proposed ditches that vary within the station range will be labeled as "DITCH SLOPES, BOTTOM WIDTH AND DEPTH VARY". The specific slopes, bottom width and depth will typically be detailed on the profile sheets. If there are no profile sheets this information can be detailed on the typical.
13. The pavement cross slope on a superelevated typical section will be labeled as 'RATE OF SUPER' when the typical section includes the crown-runout and transition or if multiple curves are within the typical station ranges. If the superelevated typical section is in full super for the entire station range then the specific percent super can be shown.
14. Varying shoulder slopes on super elevated typical sections will be labeled with an asterisk (*). Shoulder slopes that are in the same direction that the pavement is superelevated will include a slope arrow. Slopes on the high side that slope in the opposite direction of the pavement super will not have an arrow.
15. The HMA application table should appear only on the first proposed typical sheet that has an HMA pavement section and should be placed in the lower left corner of the sheet.
16. Include POB and POE label with station. Do not show stations with trailing zeros (i.e. 15+00, not 15+00.00).

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:	TYPICAL SECTIONS		5
										FILE:	TSC:			

1



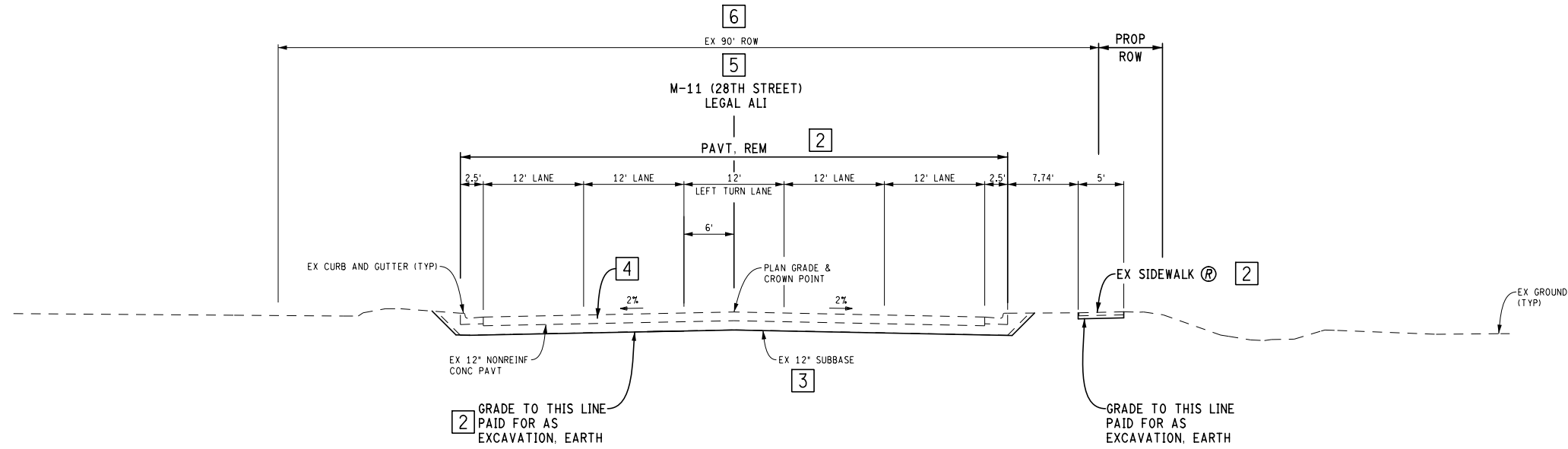
EXISTING NORMAL SECTION

SECTION APPLIES TO:
 SB M-53 STA 520+00.20 TO STA 529+47.50
 SB M-53 STA 550+00.20 TO STA 600+00.50

EXISTING NORMAL SECTION

SECTION APPLIES TO:
 NB M-53 STA 520+00.30 TO STA 529+47.50
 NB M-53 STA 550+00.30 TO STA 600+00.50

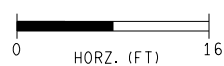
7
 NB M-53 NON-LEGAL ALI
 STA EQUATION
 STA 527+46.10 BK=
 STA 527+47.16 AH
 LINE SHORTENS 1.06'



EXISTING NORMAL SECTION

SECTION APPLIES TO:
 M-11 (28TH ST) STA 70+00 (POB) TO STA 140+00 (POE)

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



FILE:

DATE:
 DESIGN UNIT:
 TSC:

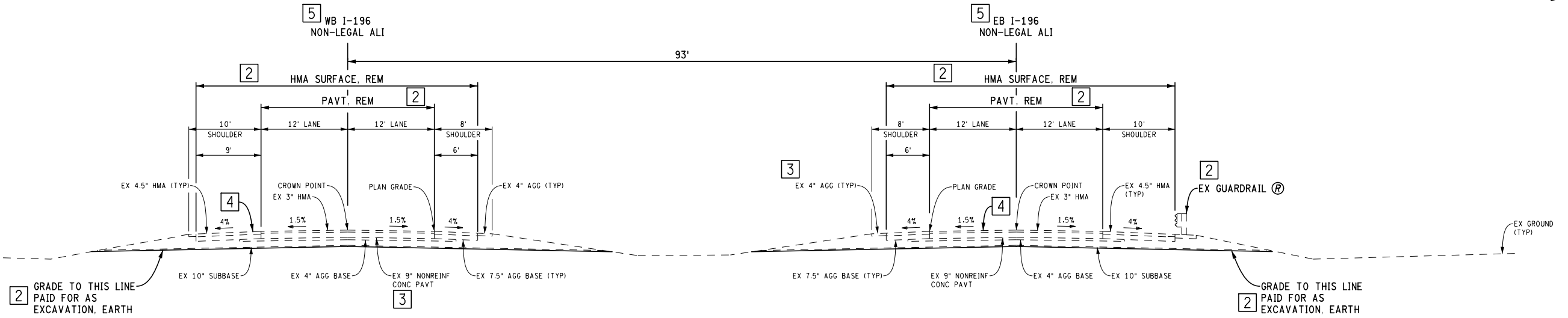
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EXISTING TYPICAL SECTIONS
 M-53 & M-11

DRAWING SHEET
 EXTYP 001 SECT 1
 6

1

6
EX 300' LA ROW



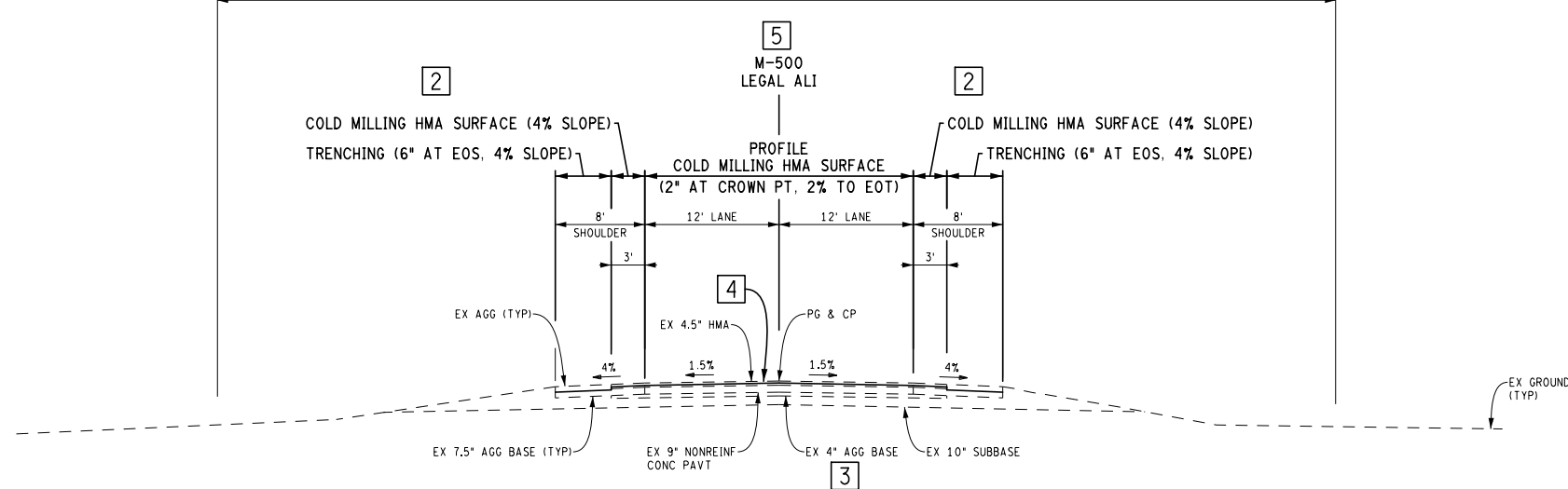
EXISTING NORMAL SECTION

SECTION APPLIES TO:
WB I-196 STA 1279+41.25 TO STA 1280+70.71

EXISTING NORMAL SECTION

SECTION APPLIES TO:
EB I-196 STA 1277+80.65 TO STA 1280+70.17

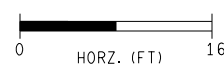
6
EX 100' ROW



EXISTING NORMAL SECTION

SECTION APPLIES TO:
M-500 STA 100+00 TO STA 200+00

FINAL ROW PLAN REVISIONS		(SUBMITTAL DATE:)	
NO.	DATE	AUTH	DESCRIPTION



HORZ. (FT)

16

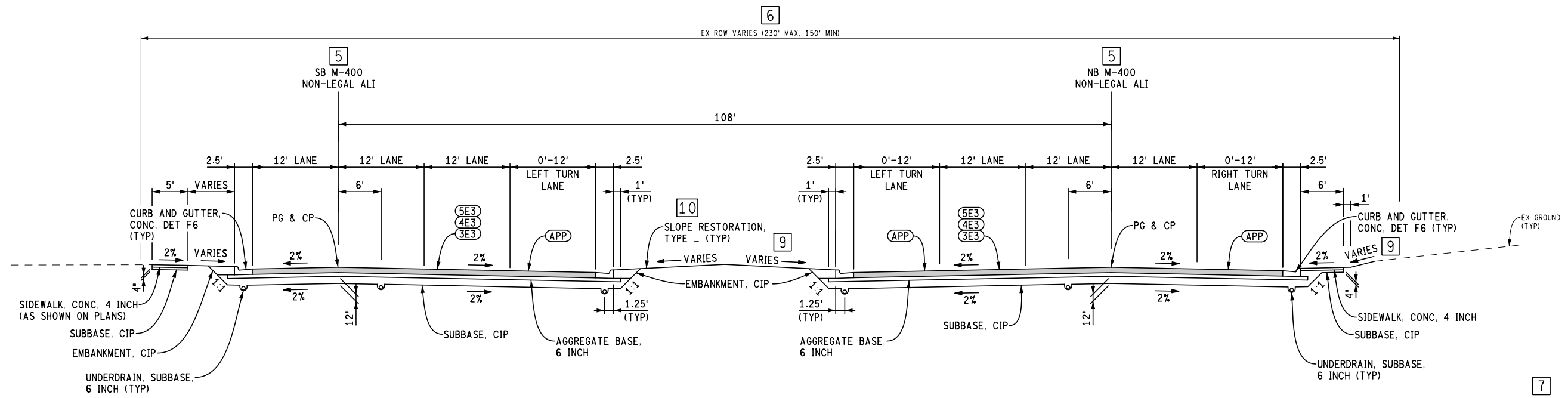
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EXISTING TYPICAL SECTIONS
I-196 & M-500

DRAWING SHEET
EXTYP 002 SECT 1
7



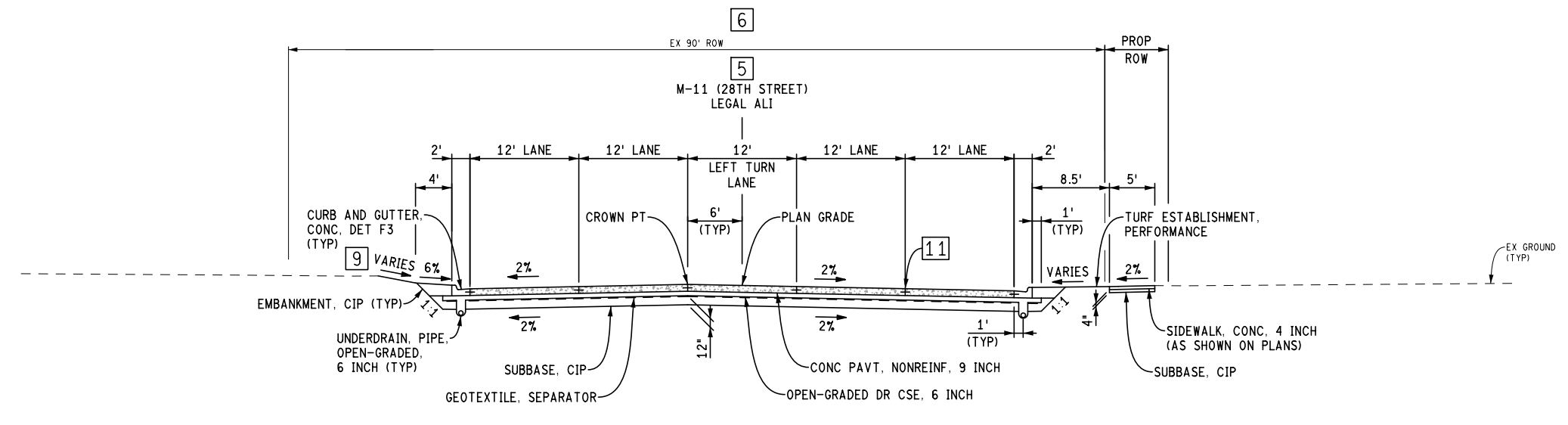
PROPOSED NORMAL SECTION

SECTION APPLIES TO:
SB M-400 STA 520+00 TO STA 524+50

PROPOSED NORMAL SECTION

SECTION APPLIES TO:
NB M-400 STA 520+00 TO STA 524+50

NB M-400 NON-LEGAL ALI
STA EQUATION
STA 527+46.10 BK=
STA 527+47.16 AH
LINE SHORTENS 1.06'



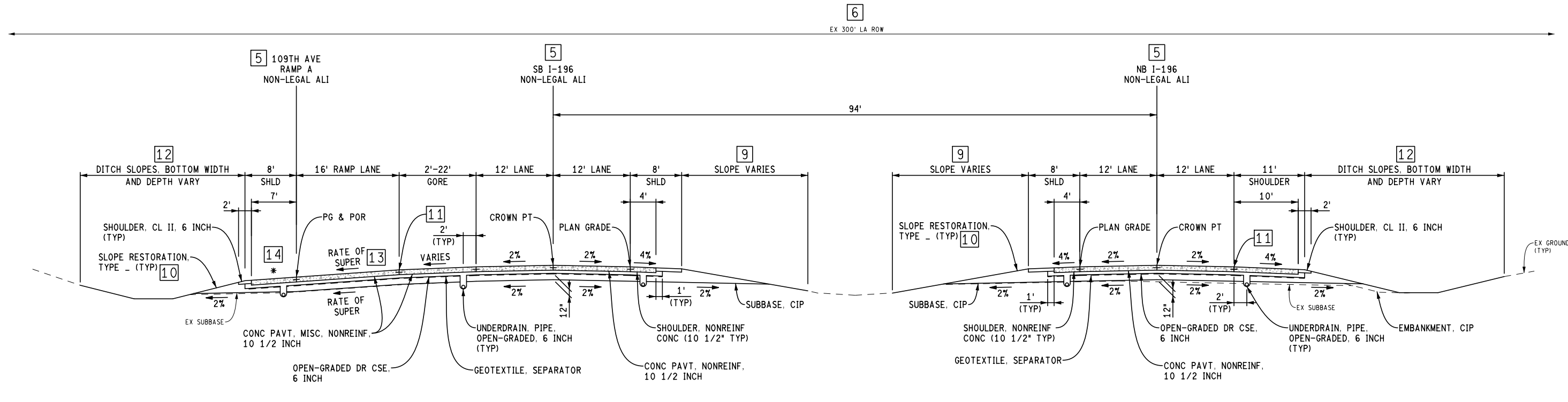
PROPOSED NORMAL SECTION

SECTION APPLIES TO:
M-11 (28TH ST) STA 70+00 (POB) TO STA 73+00.26

HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
5E3	HMA, 5E3	220	64-28	TOP COURSE AWI=260
4E3	HMA, 4E3	220	64-28	LEVELING COURSE
3E3	HMA, 3E3	550	58-22	BASE COURSE
APP	HMA APPROACH	220	64-28	TURN LANES, HMA, 5E3 (TOP COURSE AWI=260)
		220	64-28	TURN LANES, HMA, 4E3 (LEVELING COURSE)
		550	58-22	TURN LANES, HMA, 3E3 (BASE COURSE)
HP	HAND PATCHING	330	64-22	HMA, 4E3
	* BOND COAT	0.05-0.15 GAL		

*FOR INFORMATION ONLY

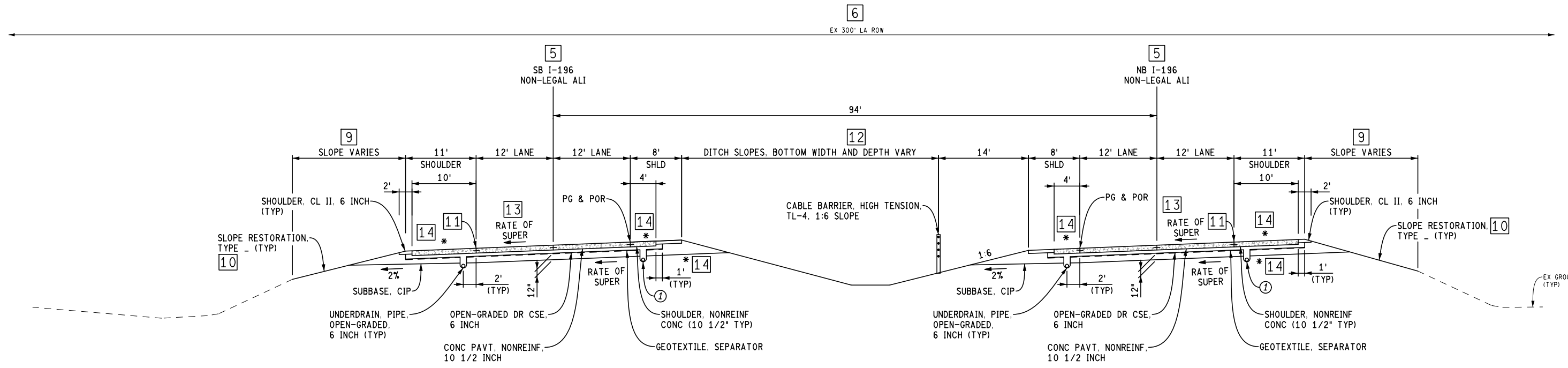


PROPOSED NORMAL SECTION

PROPOSED NORMAL SECTION

SECTION APPLIES TO:
 SB I-196 STA 1693+40 TO STA 1694+11
 109TH AVE RAMP A STA 1693+44 TO STA 1694+13

SECTION APPLIES TO:
 NB I-196 STA 1691+00 TO STA 1700+00
 NB I-196 STA 1696+86 TO STA 1703+00



PROPOSED SUPERELEVATED SECTION

PROPOSED SUPERELEVATED SECTION

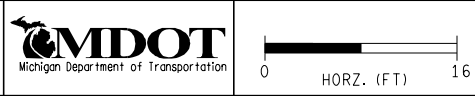
SECTION APPLIES TO:
 SB I-196 STA 1642+00 TO STA 1647+63
 SB I-196 STA 1647+95 TO STA 1653+60

SECTION APPLIES TO:
 NB I-196 STA 1642+00 TO STA 1647+63
 NB I-196 STA 1647+95 TO STA 1653+60

① WHEN ALL LANES ARE IN FULL SUPERELEVATION THE UNDERDRAIN UNDER THE HIGH SIDE SHOULDER IS NOT REQUIRED

⑭ * FOR SHOULDER SLOPES IN SUPER TRANSITION AND FULL SUPER SEE STANDARD PLAN R-107 SERIES

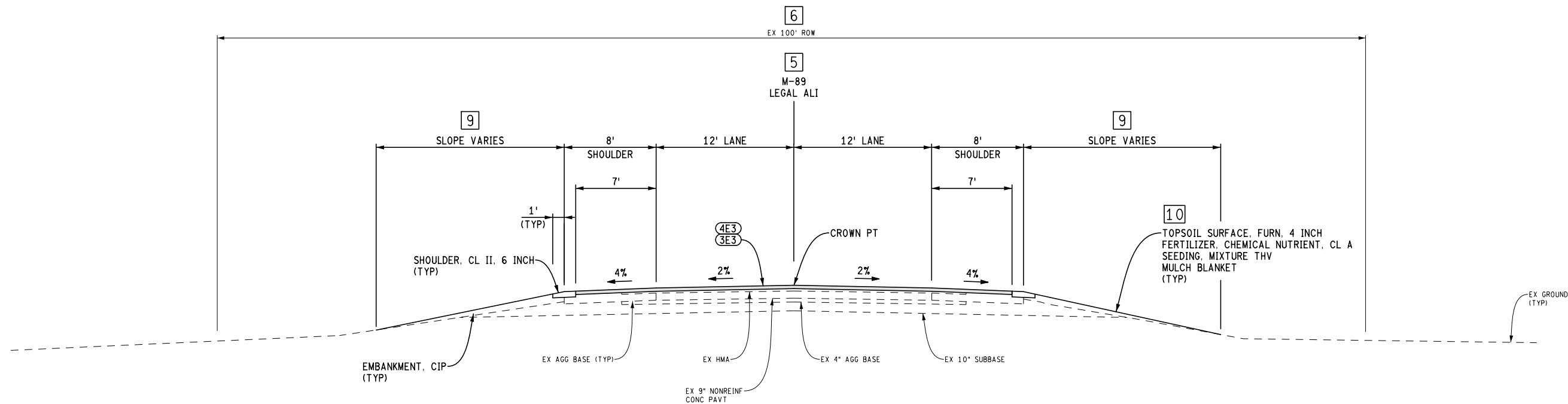
FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: _____
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 FILE: _____

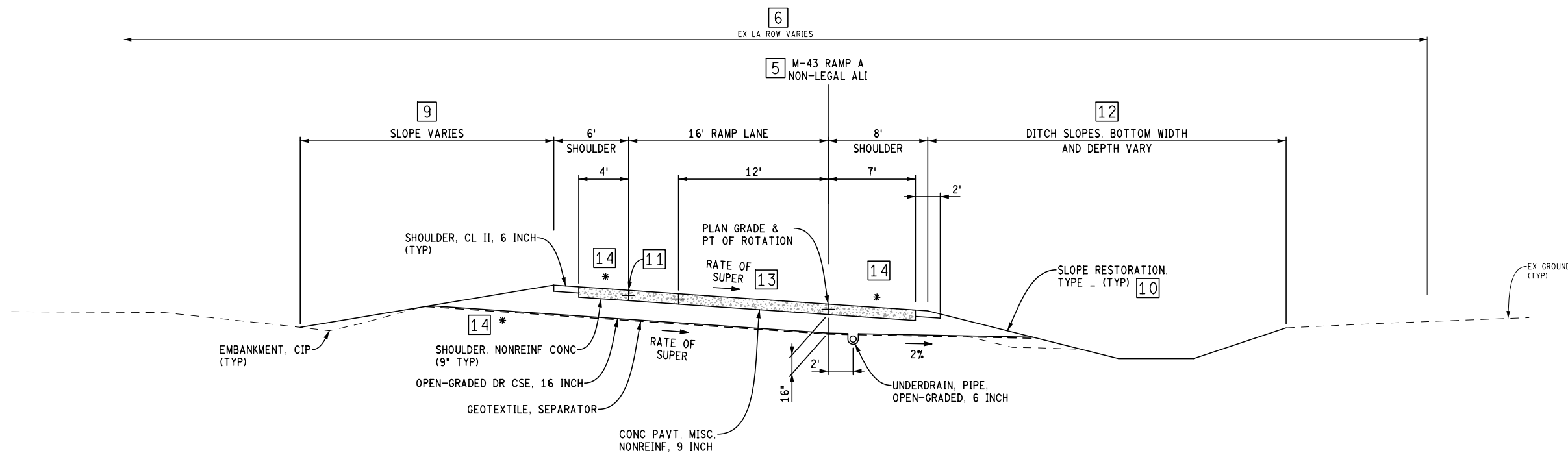
CS: _____
 JN: _____

PROPOSED TYPICAL SECTIONS		DRAWING	SHEET
I-196		PRTYP 002	SECT 1 9



PROPOSED NORMAL SECTION

SECTION APPLIES TO:
M-89 STA 100+00 TO STA 200+00



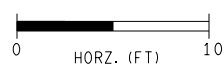
PROPOSED RAMP SUPERELEVATED SECTION

SECTION APPLIES TO:
RAMP A STA 10+00 TO STA 20+00

14

* FOR SHOULDER SLOPES IN SUPER TRANSITION AND FULL SUPER SEE STANDARD PLAN R-107 SERIES

FINAL ROW PLAN REVISIONS		(SUBMITTAL DATE:)	
NO.	DATE	AUTH	DESCRIPTION



FILE:

DATE:
DESIGN UNIT:
TSC:


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JN:

PROPOSED TYPICAL SECTIONS
M-89 & M-43

DRAWING SHEET
PRTYP 003 10

LEGEND SHEET:

1. All patterns are found in the MDOT pattern cell library. The patterns are to be patterned at the scale of the drawing.
2. Any cells or linestyles special to the project will be placed in the lower right corner.
3. Proposed and existing linestyles are the same. Proposed linestyles are weight 1 and existing linestyles are weight 0.
4. Removing pavement pattern is used to represent the area of pavement removal regardless of underlying material and pay item used.

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										FILE:	TSC:				
												11			

WATER AND SEWER SYMBOLS

Ⓢ	SANITARY MANHOLE
Ⓢ	STORM SEWER MANHOLE
Ⓢ	STORM SEWER CATCH BASIN
⌈	HEADWALL
△	CULVERT END SECTION
⊖	WATER SERVICE CURB STOP BOX
⊗	WATER GATE VALVE AND BOX
⊙	WATER METER
⊙	WATER GATE WELL MANHOLE
⊙	FIRE HYDRANT
⊙	GROUND WATER MONITORING WELL
→	DRAINAGE FLOW ARROW
W.T. /	WATER TABLE (PROFILES)
^	CHECK DAM (PROFILES)

UTILITY SYMBOLS

●	ELECTRICAL, GUY OR TELEPHONE POLE
ⓔ	ELECTRICAL MANHOLE
ⓔ	ELECTRICAL HANDHOLE
ⓔ	ELECTRICAL TRANSFORMER BOX
⊙	ELECTRIC & LIGHT POLE
ⓔ	LIGHT MANHOLE
ⓔ	LIGHT HANDHOLE
⊙	LIGHT POLE
⊙	LIGHT STANDARD
ⓔ	GENERIC UTILITY MANHOLE
ⓔ	TELEPHONE MANHOLE
⊙	TELEPHONE PEDESTAL
ⓔ	GAS LINE, PETROLEUM OR FIBER OPTIC MARKER
ⓔ	GAS VALVE
⊖	GAS FILLER PIPE
ⓔ	GAS WELL
⊖	OIL WELL
ⓔ	GUY ANCHOR
ⓔ	POWER TOWER

HAZARDOUS OR FLAMMABLE MATERIAL GAS AND ELECTRICAL LINES LABEL

CAUTION - CRITICAL UTILITY FIBER OPTIC, TELEPHONE LINES, AND WATER MAIN LABEL

UNDERGROUND UTILITY LINSTYLES

---	E	---	ELECTRIC LINE
---	GAS	---	NATURAL GAS LINE
---	OIL	---	OIL PIPELINE
---	TEL	---	TELEPHONE LINE
---	CTV	---	CABLE TV LINE
---	FO	---	FIBER OPTICS LINE
---	WM	---	WATER MAIN

OVERHEAD UTILITY LINSTYLES

---	OH-E	---	ELECTRIC LINE
---	OH-TEL	---	TELEPHONE LINE
---	OH-CTV	---	CABLE TV LINE

ROW AND PROPERTY LINSTYLES

---	---	---	FREE ACCESS ROW
---	X X	---	LIMITED ACCESS ROW
---	---	---	GOVERNMENT LINE
---	PLAT-L	---	LEGAL PLAT LINES
---	PLAT-NL	---	NON-LEGAL PLAT LINES
---	PARCEL-L	---	LEGAL PARCEL LINES
---	PARCEL-NL	---	NON-LEGAL PARCEL LINES
---	---	---	CITY LIMITS LINE

OTHER LINSTYLES

---	---	---	HEDGE LINE
---	---	---	TREE LINE
---	X X X X X X X X X X	---	FENCE
---	---	---	GUARDRAIL
---	---	---	MEDIAN CABLE BARRIER
---	---	---	SINGLE FACE CONC BARRIER
---	---	---	DOUBLE FACE CONC BARRIER
---	---	---	SOUND WALL
---	SS	---	SLOPE STAKE LINE
---	---	---	DRAINAGE COURSE
---	---	---	CULVERT/STORM SEWER
---	---	---	SANITARY SEWER
---	X X X X X X X X X X	---	REM CURB OR CURB & GUTTER
---	---	---	SWAMP AREA
---	---	---	DELINEATED WETLANDS

PLAN SHEET PATTERNS 1

---	HMA APPROACH/DRIVEWAY
---	CONCRETE PAVEMENT BRIDGE APPROACH
---	MISCELLANEOUS CONCRETE PAVEMENT
---	REMOVING SIDEWALK
---	REMOVING PAVEMENT 4
---	COLD-MILLING (HMA/CONCRETE)
---	HMA BASE CRUSH & SHAPE OR RUBBLIZE
---	POTENTIALLY CONTAMINATED SITE

SIDEWALK RAMP PATTERNS

1	---	---	DETECTABLE WARNING SURFACE
---	---	---	SIDEWALK RAMP
---	---	---	SIDEWALK LANDING

TYPICAL SECTION PATTERNS 1

---	CONCRETE PAVEMENT
---	HMA PAVEMENT (ALL)

3 NOTE: PROPOSED LINSTYLES AND SYMBOLS ARE THE SAME AS EXISTING EXCEPT BOLD

REAL ESTATE & SURVEY SYMBOLS

---	PROPERTY OWNERSHIP ARROW
---	CONTIGUOUS PROPERTY SYMBOL
123456	PARCEL NUMBER BOX
⊙	SECTION CORNER
⊙	QUARTER CORNER
⊙	QUARTER QUARTER CORNER
---	HALF SECTION CORNER
---	HALF QUARTER CORNER
⊙	PROPERTY CORNER
⊙	REFERENCE MARKER
△ CP#	CONTROL POINT
⊙ BM#	BENCH MARK
PRESERVE	PRESERVE MONUMENT BOX
PROTECT	PROTECT MONUMENT CORNERS

TRAFFIC SYMBOLS

•	PEDESTRIAN PUSH BUTTON
•	PEDESTRIAN PEDESTAL
⊙	PEDESTRIAN SIGNAL
---	POLE MOUNTED SIGNAL CONTROLLER
---	BASE MOUNTED SIGNAL CONTROLLER
⊙	SIGNAL HANDHOLE
Ⓢ	SIGNAL MANHOLE
⊙	POWER POLE W/PUSH BUTTON
⊙	POWER POLE W/PEDESTRIAN SIGNAL
⊙	PEDESTRIAN POLE W/PUSH BUTTON AND PEDESTRIAN SIGNAL
⊙	STEEL SIGNAL POLE
⊙	STEEL SIGNAL POLE W/PUSH BUTTON
⊙	STEEL SIGNAL POLE W/PEDESTRIAN SIGNAL
⊙	STEEL SIGNAL POLE W/PUSH BUTTON AND PEDESTRIAN SIGNAL
⊙	STRAIN POLE FOR OH LIGHTS
⊙	WOOD POLE
RR	RAILROAD SWITCH BOX
RR	FLASHING RAILROAD SIGNAL

2 SPECIAL LEGEND THIS PROJECT

MISCELLANEOUS SYMBOLS

Ⓢ	MAILBOX
Ⓢ	SIGN WITH ONE POST
Ⓢ	SIGN WITH TWO POSTS
Ⓢ	RIPRAP
☆	CONIFER TREE
☆	DECIDUOUS TREE
⊙	SHRUB
Ⓢ	STUMP
A	ABANDON
B	BULKHEAD
C	CLEARING
R	REMOVAL
S	SAVE
ADJ	ADJUST
ADJ-	ADJUST DRAINAGE STRUCTURE W/COVER
ADJ-B/O	ADJUST BY OTHERS
REL-B/O	RELOCATE BY OTHERS
REL-	RELOCATE W/CASE NUMBER
SALV	SALVAGE
SWR-	SIDEWALK RAMP TYPE
→	TRAFFIC FLOW ARROW
⊙ TH#25	TEST HOLE NUMBER
⊙	EROSION CONTROL ITEM NUMBER (SEE STANDARD PLAN R-96 SERIES)

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION



NO SCALE

DATE:	CS:
DESIGN UNIT:	JN:
FILE:	TSC:


LEGEND SHEET

DRAWING	SHEET
LEGEND	SECT 1

ALIGNMENT/ROW SHEETS:

1. Label all roadway names and county drains at the outside of the sheet using MDOT Pr x 1.5 text size.
2. Label all alignments using current naming convention.
3. Place north arrow in upper right corner.
4. Show section, township and range information, and city, village, township or county.
5. ROW is dimensioned only to the legal alignments. If a legal alignment is not available then the ROW is dimensioned from ROW line to ROW line. Label ROW within the sheet every time it changes. Label and dimension proposed ROW.
6. An alignment key is required and should be located in the upper left corner of the first alignment sheet.
7. Show section corners, quarter corners, quarter quarter corners, section lines, bearings of the section lines and distances as shown. The section corner information will only be shown on the alignment sheets.
8. All crossroad alignment ties will only be shown on the alignment sheets.
9. Show tangent bearings on all alignments.
10. Existing and proposed alignment curve data is only shown on the alignment sheets. Show the curve data on the alignment sheet where the PI appears. List existing (if applicable) and proposed superelevation rates below curve data.
11. Dimension the distances between alignments.
12. Show parcel and plat lines on the alignment sheets. Parcel lines are not shown on the removal and construction sheets.
13. Label all subdivisions and plats. Label with proposed text size and on the appropriate level.
14. If a POT is shown at the end/beginning of an alignment, northing and easting shall be included to establish the location.
15. The POB/POE, job number, control section and mile points, and physical reference and mile points need to be shown at the beginning and end of the construction limits.
16. If the existing ROW has been established from survey and it is not dependent on the legal alignment, label the bearing and distance of the existing ROW and the station of the location that the ROW is no longer dependent on the legal alignment.
17. Label and dimension any existing or proposed easements.
18. Use the standard GEOPAK orientation for labeling PC, PI & PT locations whenever possible. These can be modified if readability becomes an issue.
19. Parcel numbers and property boundary information shall be shown on the Alignment/ROW sheets only.
20. Use separate sheets for ramp and/or crossroad alignments as needed, only show the information once.
21. The scale of the Alignment/ROW sheets is at the discretion of the designer. Due to the amount of information shown on these sheets it may be beneficial to use the same scale as the removal and construction sheets.
22. Show all station equations.
23. Show LA terminator cell signifying the change from LA ROW to ROW.

24. The alignment(s), stationing and curve data used to construct the roadway (the ones shown on typicals, removal, and construction sheets) will be shown as weight 1. All other alignments will be weight 0.

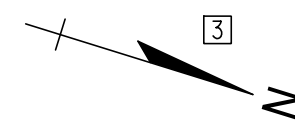
FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:				ALIGNMENT/ROW SHEETS
										FILE:	TSC:				

6

ALIGNMENT KEY

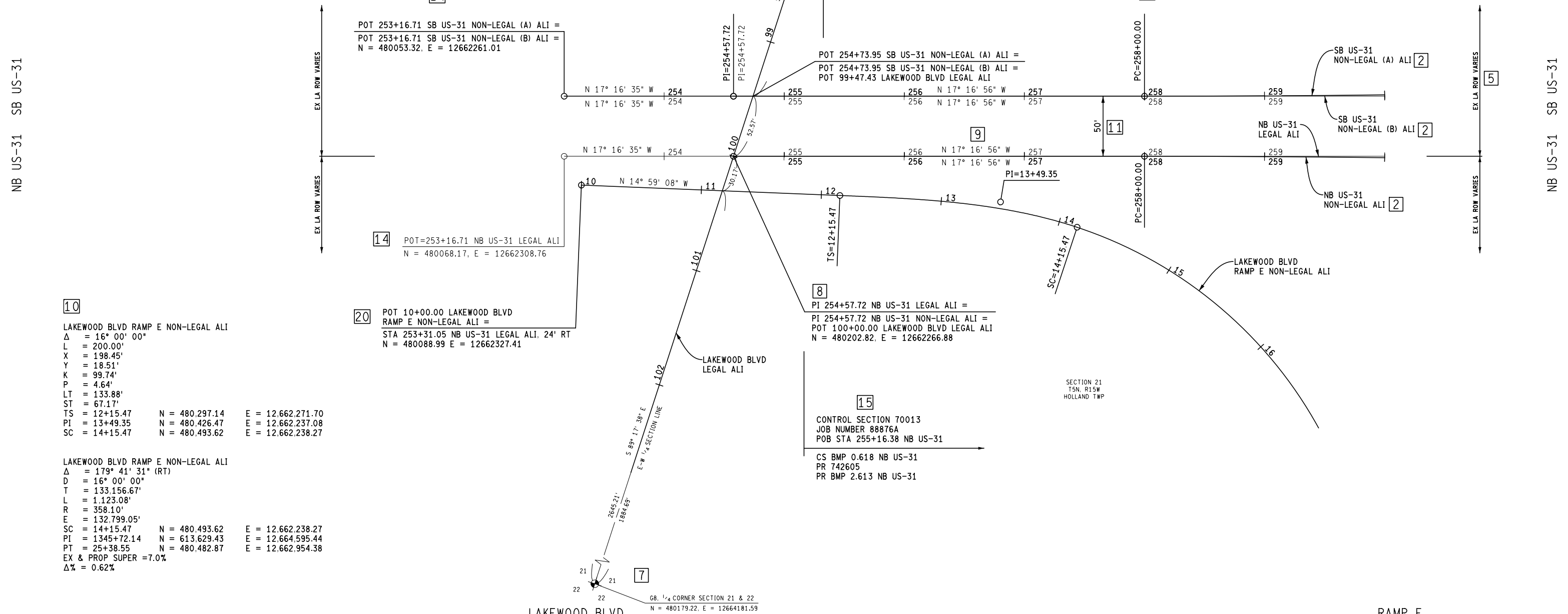
NB US-31 LEGAL ALI: NB US-31 1955 CONSTRUCTION ALIGNMENT FROM PROJECT 82-27 AS RETRACED FOR JN 88876A IN 2011
 SB US-31 NON-LEGAL (B) ALI: SB US-31 1955 CONSTRUCTION ALIGNMENT FROM PROJECT 82-27 AS RETRACED FOR JN 88876A IN 2011
 LAKEWOOD BLVD RAMP A NON-LEGAL (B) ALI: LAKEWOOD BLVD RAMP A 1955 CONSTRUCTION ALIGNMENT FROM PROJECT 82-27 AS RETRACED FOR JN 88876A IN 2011
 LAKEWOOD BLVD RAMP D NON-LEGAL (B) ALI: LAKEWOOD BLVD RAMP D 1955 CONSTRUCTION ALIGNMENT FROM PROJECT 82-27 AS RETRACED FOR JN 88876A IN 2011
 JAMES ST LEGAL ALI: JAMES ST 1955 CONSTRUCTION ALIGNMENT FROM PROJECT 82-27 AS RETRACED FOR JN 88876A IN 2011
 LAKEWOOD BLVD LEGAL ALI: LAKEWOOD BLVD 1955 CONSTRUCTION ALIGNMENT FROM PROJECT 82-27 AS RETRACED FOR JN 88876A IN 2011
 NB US-31 NON-LEGAL (A) ALI: NB US-31 CONSTRUCTION ALIGNMENT AS PROPOSED FOR JN 88876A
 SB US-31 NON-LEGAL (A) ALI: SB US-31 CONSTRUCTION ALIGNMENT AS PROPOSED FOR JN 88876A
 LAKEWOOD BLVD RAMP A NON-LEGAL (A) ALI: LAKEWOOD BLVD RAMP A CONSTRUCTION ALIGNMENT AS PROPOSED FOR JN 88876A
 LAKEWOOD BLVD RAMP D NON-LEGAL (A) ALI: LAKEWOOD BLVD RAMP D CONSTRUCTION ALIGNMENT AS PROPOSED FOR JN 88876A
 LAKEWOOD BLVD RAMP E NON-LEGAL ALI: LAKEWOOD BLVD RAMP E CONSTRUCTION ALIGNMENT AS PROPOSED FOR JN 88876A

LAKEWOOD BLVD 1



NB US-31 SB US-31

NB US-31 SB US-31



10

LAKWOOD BLVD RAMP E NON-LEGAL ALI
 $\Delta = 16^\circ 00' 00''$
 $L = 200.00'$
 $X = 198.45'$
 $Y = 18.51'$
 $K = 99.74'$
 $P = 4.64'$
 $LT = 133.88'$
 $ST = 67.17'$
 $TS = 12+15.47 \quad N = 480.297.14 \quad E = 12.662.271.70$
 $PI = 13+49.35 \quad N = 480.426.47 \quad E = 12.662.237.08$
 $SC = 14+15.47 \quad N = 480.493.62 \quad E = 12.662.238.27$

20

POT 10+00.00 LAKEWOOD BLVD RAMP E NON-LEGAL ALI =
 STA 253+31.05 NB US-31 LEGAL ALI, 24' RT
 $N = 480088.99 \quad E = 12662327.41$

10

LAKWOOD BLVD RAMP E NON-LEGAL ALI
 $\Delta = 179^\circ 41' 31''$ (RT)
 $D = 16^\circ 00' 00''$
 $T = 133.156.67'$
 $L = 1.123.08'$
 $R = 358.10'$
 $E = 132.799.05'$
 $SC = 14+15.47 \quad N = 480.493.62 \quad E = 12.662.238.27$
 $PI = 1345+72.14 \quad N = 613.629.43 \quad E = 12.664.595.44$
 $PT = 25+38.55 \quad N = 480.482.87 \quad E = 12.662.954.38$
 EX & PROP SUPER = 7.0%
 $\Delta\% = 0.62\%$

LAKEWOOD BLVD

RAMP E

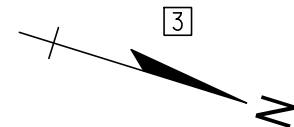
FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)								DATE:	CS:	ALIGNMENT/ROW SHEET		DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE			AUTH	DESCRIPTION	JN:	US-31 STA 253+16.71 TO STA 260+00		US31 ALI 001
FILE:								DESIGN UNIT:					
								TSC:					

10

SB US-31 NON-LEGAL (A) ALI
 $\Delta = 1^\circ 23' 23''$ (LT)
 $D = 0^\circ 20' 13''$
 $T = 206.17'$
 $L = 412.32'$
 $R = 17,000.00'$
 $E = 1.25'$
 $PC = 258+00.00$ N = 480.514.79 E = 12.662.117.45
 $PI = 260+06.17$ N = 480.711.66 E = 12.662.056.20
 $PRC = 262+12.32$ N = 480.906.98 E = 12.661.990.20
 PROP SUPER = N.C.

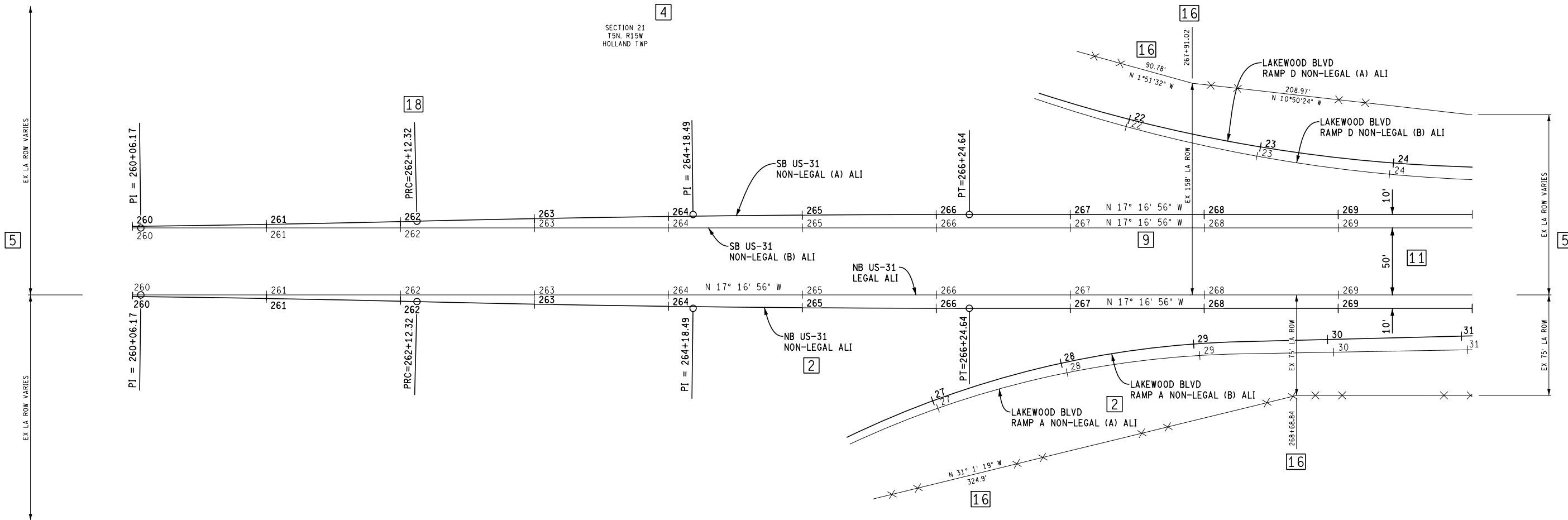
SB US-31 NON-LEGAL (A) ALI
 $\Delta = 1^\circ 23' 23''$ (RT)
 $D = 0^\circ 20' 13''$
 $T = 206.17'$
 $L = 412.32'$
 $R = 17,000.00'$
 $E = 1.25'$
 $PRC = 262+12.32$ N = 480.906.98 E = 12.661.990.20
 $PI = 264+18.49$ N = 481.102.29 E = 12.661.924.19
 $PT = 266+24.64$ N = 481.299.16 E = 12.661.862.95
 PROP SUPER = N.C.

RAMP D



NB US-31 SB US-31

NB US-31 SB US-31



NB US-31 NON-LEGAL ALI
 $\Delta = 1^\circ 23' 23''$ (RT)
 $D = 0^\circ 20' 13''$
 $T = 206.17'$
 $L = 412.32'$
 $R = 17,000.00'$
 $E = 1.25'$
 $PC = 258+00.00$ N = 480.529.65 E = 12.662.165.20
 $PI = 260+06.17$ N = 480.726.51 E = 12.662.103.95
 $PRC = 262+12.32$ N = 480.924.80 E = 12.662.047.49
 PROP SUPER = N.C.

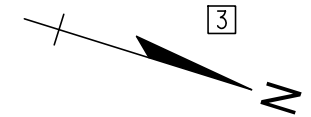
NB US-31 NON-LEGAL ALI
 $\Delta = 1^\circ 23' 23''$ (LT)
 $D = 0^\circ 20' 13''$
 $T = 206.17'$
 $L = 412.32'$
 $R = 17,000.00'$
 $E = 1.25'$
 $PRC = 262+12.32$ N = 480.924.80 E = 12.662.047.49
 $PI = 264+18.49$ N = 481.123.09 E = 12.661.991.03
 $PT = 266+24.64$ N = 481.319.95 E = 12.661.929.79
 PROP SUPER = N.C.

RAMP A

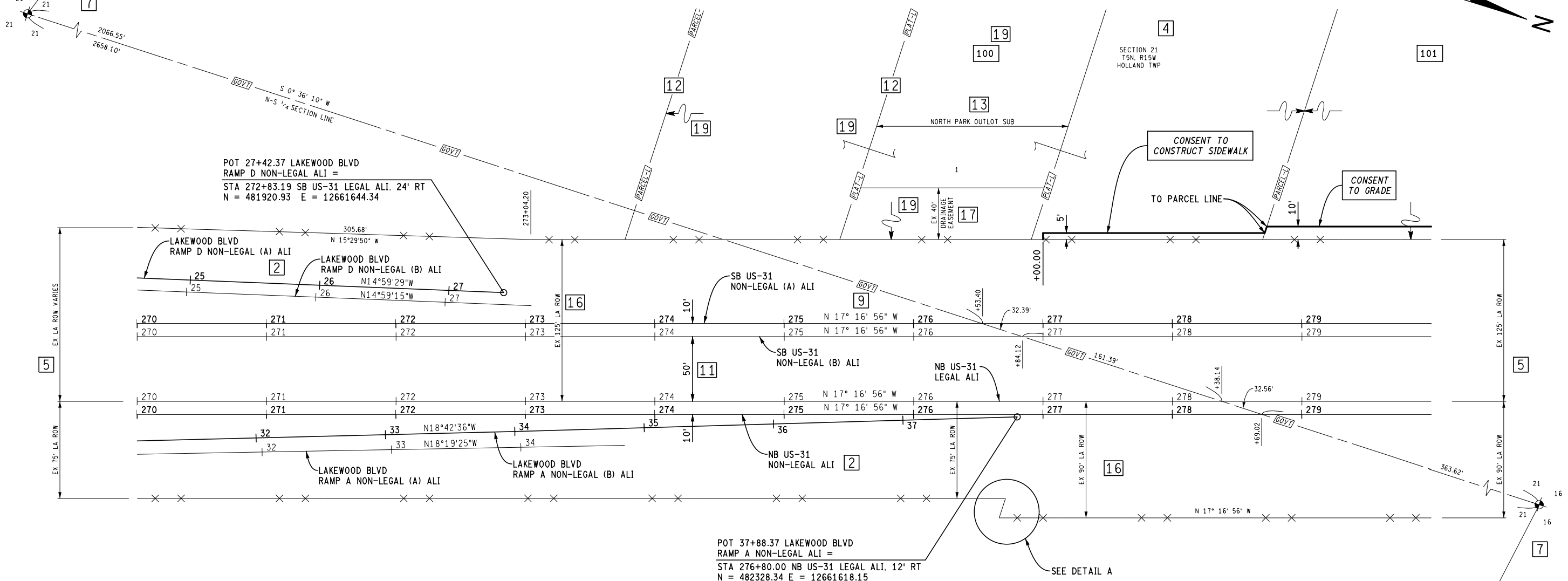
20 SEE RAMP ALIGNMENT SHEETS FOR LAKEWOOD BLVD RAMP ALIGNMENT INFORMATION

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)										DATE: _____ CS: _____ DESIGN UNIT: _____ JN: _____ TSC: _____		ALIGNMENT/ROW SHEET		DRAWING SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			US-31 STA 260+00 TO STA 270+00		US31 ALI 002	SECT 1		
													15		

F8, CENTER CORNER SECTION 21
 N = 480211.82, E = 12661536.58



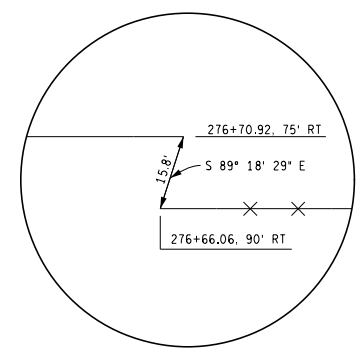
RAMP A NB US-31 SB US-31 RAMP D



POT 27+42.37 LAKEWOOD BLVD
 RAMP D NON-LEGAL ALI =
 STA 272+83.19 SB US-31 LEGAL ALI, 24' RT
 N = 481920.93 E = 12661644.34

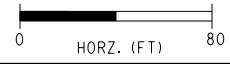
POT 37+88.37 LAKEWOOD BLVD
 RAMP A NON-LEGAL ALI =
 STA 276+80.00 NB US-31 LEGAL ALI, 12' RT
 N = 482328.34 E = 12661618.15

SECTION 21
 T5N, R15W
 HOLLAND TWP



DETAIL A

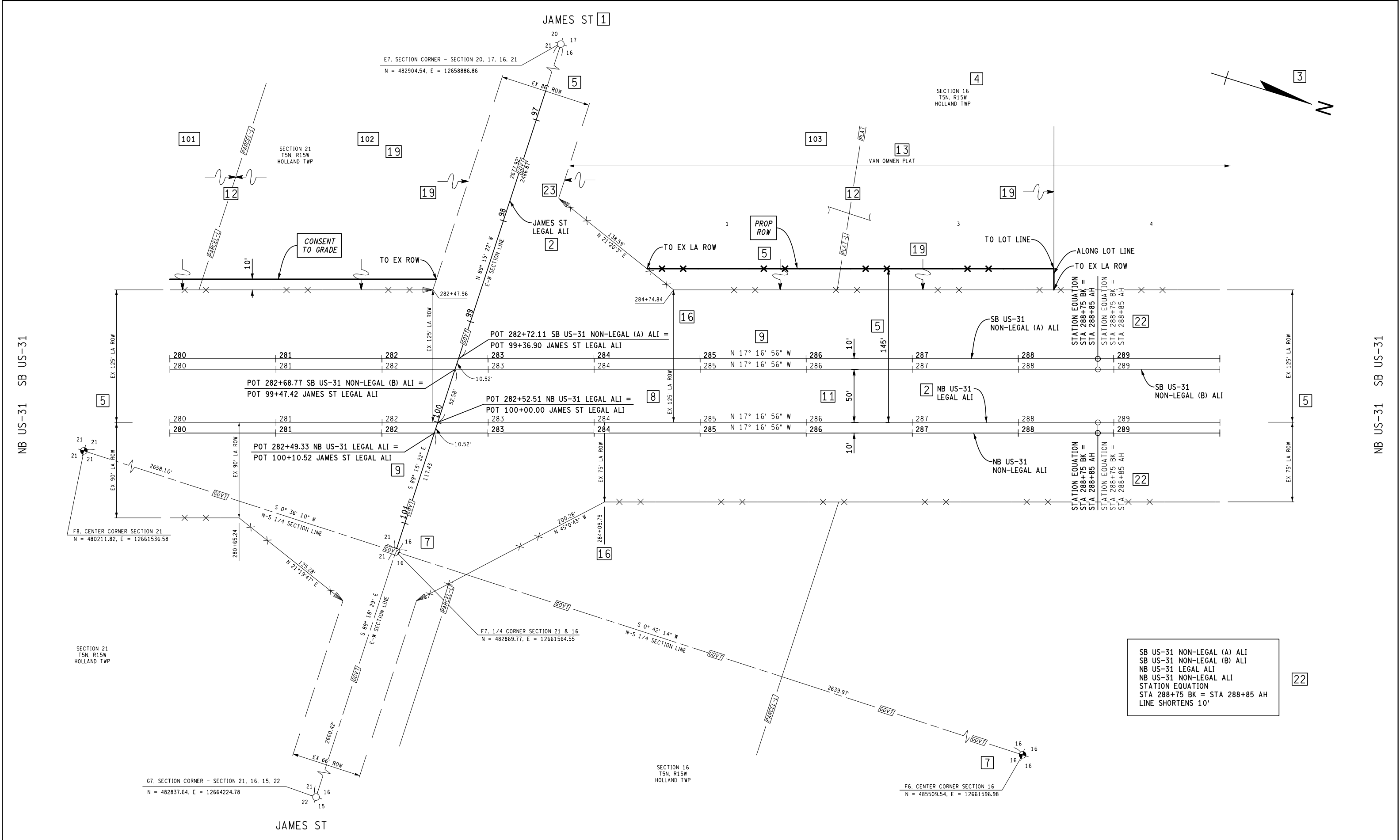
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NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: _____ CS: _____
 DESIGN UNIT: _____ JUN: _____
 TSC: _____ FILE: _____

ALIGNMENT/ROW SHEET
 US-31 STA 270+00 TO STA 280+00

DRAWING SHEET
 US31 ALI 003 16

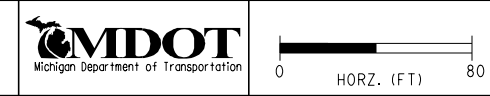


NB US-31 SB US-31

NB US-31 SB US-31

SB US-31 NON-LEGAL (A) ALI
 SB US-31 NON-LEGAL (B) ALI
 NB US-31 LEGAL ALI
 NB US-31 NON-LEGAL ALI
 STATION EQUATION
 STA 288+75 BK = STA 288+85 AH
 LINE SHORTENS 10'

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION




DATE:	CS:
DESIGN UNIT:	JN:
TSC:	
FILE:	

ALIGNMENT/ROW SHEET		DRAWING	SHEET
US-31 STA 280+00 TO STA 290+00		US31 ALI 004	SECT 1 17

REMOVAL AND CONSTRUCTION SHEETS:

1. Label all roadway names and county drains at the outside of the sheet using MDOT Pr x 1.5 text size.
2. Show city limits, township, range and section info. Section corner information is not shown.
3. Only show the alignments that are necessary to construct the roadway. Include stations, bearings and curve points.
4. Curve data is not to be shown on these sheets. Curve data is only shown on the alignment sheets.
5. If there are numerous driveways, sewers or guardrail, use summary tables. Do not duplicate quantities in tables into 'Quantities This Sheet'. The pay items in the tables are to match the MDOT standard pay items and/or the specifications book. If the project has more than one funding category, specify the category number for the quantities.
6. Show all 'Quantities This Sheet' in the lower right hand corner if possible for all quantities not shown in individual tables. If the project has more than one funding category, include the category number above the quantity for which they are included.
7. Show pay items and leaders to specific work types.
8. All bridges/culverts with proposed work will be labeled with a box around the bridge/culvert number. Existing bridges/culverts with no proposed work will only have the bridge/culvert number without the box.
9. Dimension lane and paved shoulder widths within the sheet and when changes in width occur. Do not label widths at the end of the sheet limits.
10. Dimension limits of work on crossroads in proposed text size on the removal sheet only. If crossroad has an alignment, label with station. For crossroads without alignments, label distance from mainline alignment.
11. Show all existing underground utilities. Label underground telephone, water main and fiber optic lines with the 'Caution – Critical Utility' cell. Label underground gas and electric with the 'Hazardous or Flammable Material' cell. Ex sewer, sanitary sewer/sanitary force main only need to be labeled without flagging of a critical utility cell. Overhead utilities are not typically shown. Exceptions would be for high voltage electric transmission lines and other utilities that would impact how the work is completed. Label with the 'Hazardous or Flammable Material' or 'Caution – Critical Utility' cell as appropriate.
12. Include traffic flow arrows to delineate roadway lanes and movements.
13. Label overall ROW dimensions including cross road ROW at the ends of the sheet. Label proposed ROW and all areas where a consent to grade (drive, sidewalk, etc) or an easement is needed.
14. The plat/subdivision lines are shown on these sheets. The parcel lines are not shown. Label the subdivision, plat names and plat numbers on both the removal and construction sheets. House numbers and current business names are desired.
15. If existing trees are to be removed, label with the removal cell and the existing tree size and type if known.
16. On the removal sheet label all driveways with a station to the nearest foot.

17. Use the SAVE symbol on the removal and construction sheets to identify important items that need to be saved that are close to the slope stake line or that need to be saved within the construction limits.
18. Show the slope stake line.
19. Drainage structures, sewers, culverts and/or end sections being removed will be tagged with the removal cell. If end section is part of a culvert/sewer that is being removed, it does not need to be tagged separately.
20. Show existing and proposed storm and sanitary sewers with sizes and flow arrows. Show existing culverts with sizes, flow arrows and material type. In areas where there are several drainage structures an additional drainage sheet may be required to clarify the details of the proposed drainage system. If a separate drainage sheet is used, it will follow the construction sheet in the plan set. When additional drainage sheets are used the proposed storm sewer size labels can be omitted from the construction sheets. Flow arrows on existing and proposed ditch bottoms are required.
21. Label the existing roadway and driveway pavement materials on the removal sheets and outside the limits of work on the construction sheets. If text cannot fit within the pavement then a leader may be used.
22. Label and station all proposed lane and shoulder tapers and changes in width.
23. Label the 2' and 22' gore points and equate the ramp and mainline alignments at the specified locations.
24. Tag utilities that need to be relocated with the REL B/O cell. These cells should show up on the removal and construction sheet in the same location if possible.
25. Structures that need to be adjusted will need to be tagged with the ADJ or ADJ B/O cells. These cells should show up only on the construction sheets.
26. Only tag items with the removal cell that are not included in a removal hatching pattern. Fence and guardrail are examples of items that should be tagged with the removal cell on the removal sheets. If the item is identifiable by a linestyle or a cell, only the removal cell is required.
27. Place north arrow in upper right corner.
28. Saw cut locations are not labeled on the removal sheets.
29. The proposed driveway slopes shown in the driveway table are per MDOT Standard Plan/Special Detail R-29 series.
30. The proposed driveway width is measured along the back of the driveway where proposed ties into existing.
31. Show benchmarks and control points (cell and number) on both the removal and construction sheets.
32. Show soil borings and pavement cores on the removal sheets only.
33. Label all government corners and property corners with the "Protect Corners" cell. These should be shown on both removal and construction sheets.
34. Identify erosion control measures on the construction sheet with the 'Erosion Control Number' cell. Pay for erosion control items in the main list of 'Quantities This Sheet'. Do not show key number next to pay item.

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:				REMOVAL & CONSTRUCTION SHEETS
										FILE:	TSC:				
											18				

17 MILE RD

27



SECTION 21
T2N, R12E
CITY OF STERLING HEIGHTS

SECTION 16
T2N, R12E
CITY OF STERLING HEIGHTS

SOMERSET MEADOWS SUB.

#39151
BASKIN ROBBINS

#39245
WOODCRAFT

#39393
FITNESS USA

HAZARDOUS OR
FLAMMABLE MATERIAL

CAUTION - CRITICAL
UTILITY

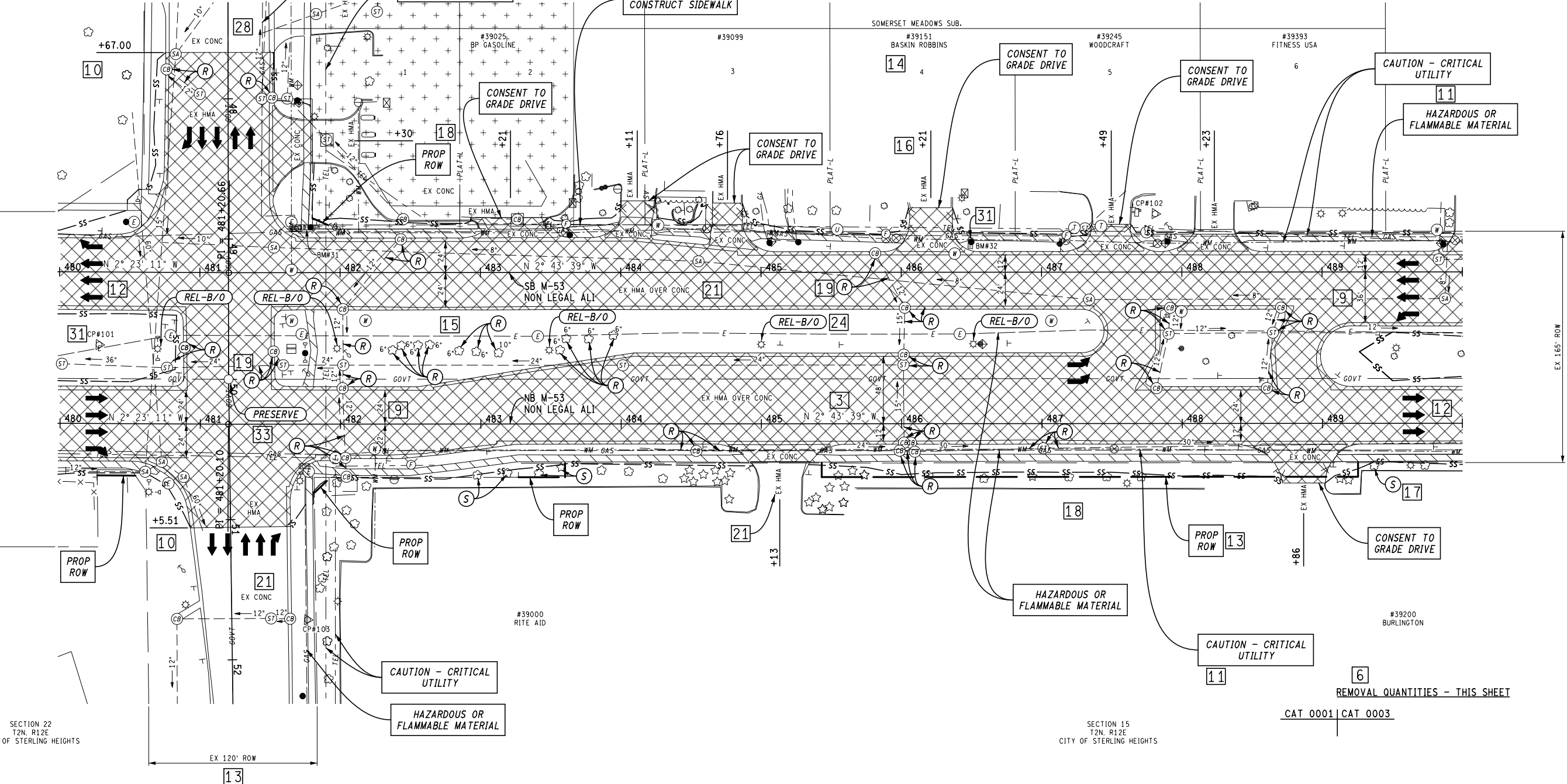
CONSENT TO
CONSTRUCT SIDEWALK

CONSENT TO
GRADE DRIVE

CONSENT TO
GRADE DRIVE

CAUTION - CRITICAL
UTILITY

HAZARDOUS OR
FLAMMABLE MATERIAL



SECTION 22
T2N, R12E
CITY OF STERLING HEIGHTS

SECTION 15
T2N, R12E
CITY OF STERLING HEIGHTS

17 MILE RD

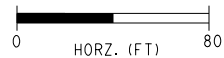
SB M-53

NB M-53

SB M-53

NB M-53

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



FILE:

DATE:
DESIGN UNIT:
TSC:

CS:
JN:

REMOVAL SHEET
M-53 STA 480+00 TO STA 490+00

DRAWING SHEET
M53
REM
010
SECT 1

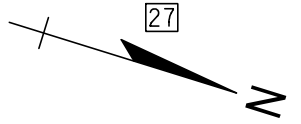
REMOVAL QUANTITIES - THIS SHEET

CAT 0001 | CAT 0003

LAKWOOD BLVD
RAMP D

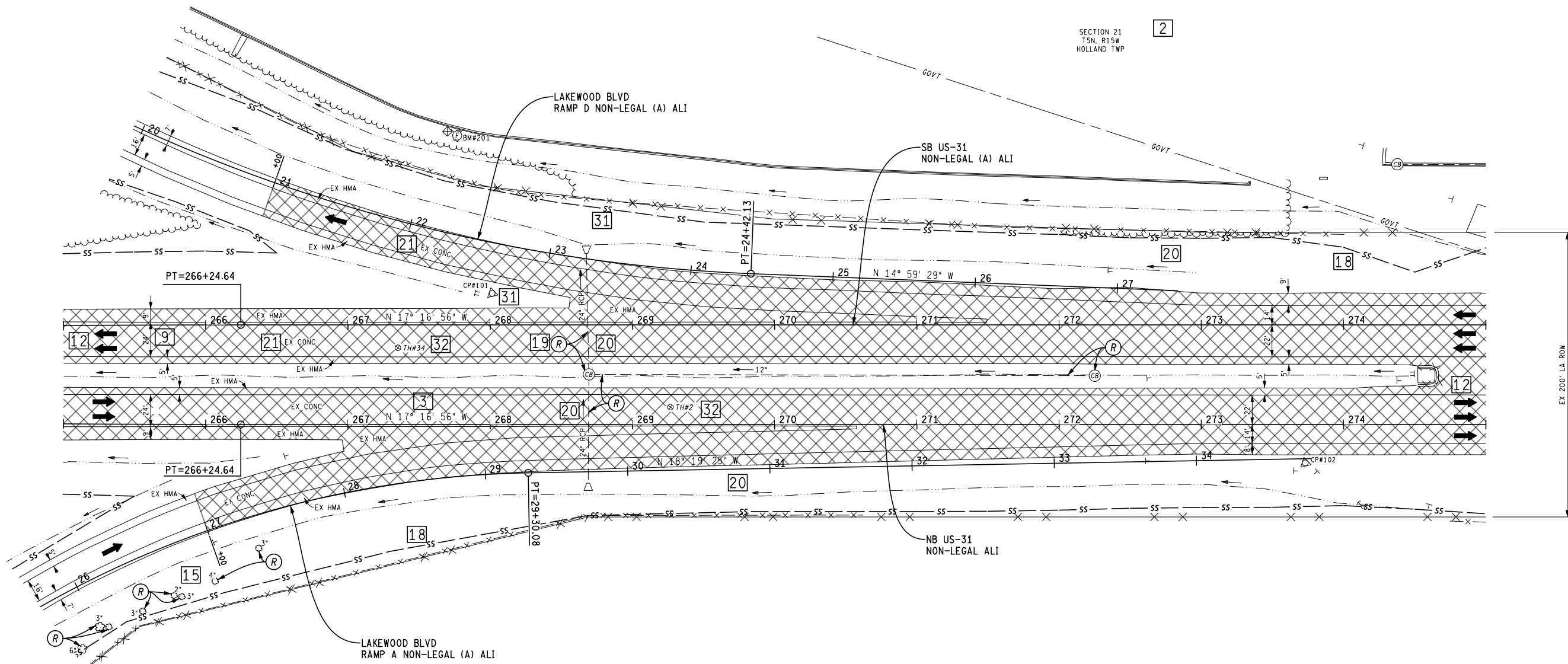
NB US-31 SB US-31

LAKWOOD BLVD
RAMP A



SECTION 21
T5N. R15W
HOLLAND TWP

SECTION 21
T5N. R15W
HOLLAND TWP

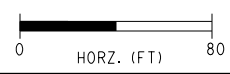


EX. LA. ROW VARIES

EX. 200' LA. ROW

REMOVAL QUANTITIES - THIS SHEET
NB | SB

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE:	CS:
DESIGN UNIT:	JN:
TSC:	
FILE:	

REMOVAL SHEET	
US-31 STA 265+00 TO STA 275+00	

DRAWING	SHEET
US31 REM 002	SECT 1

107TH AVE

HADAWAY CO DRAIN

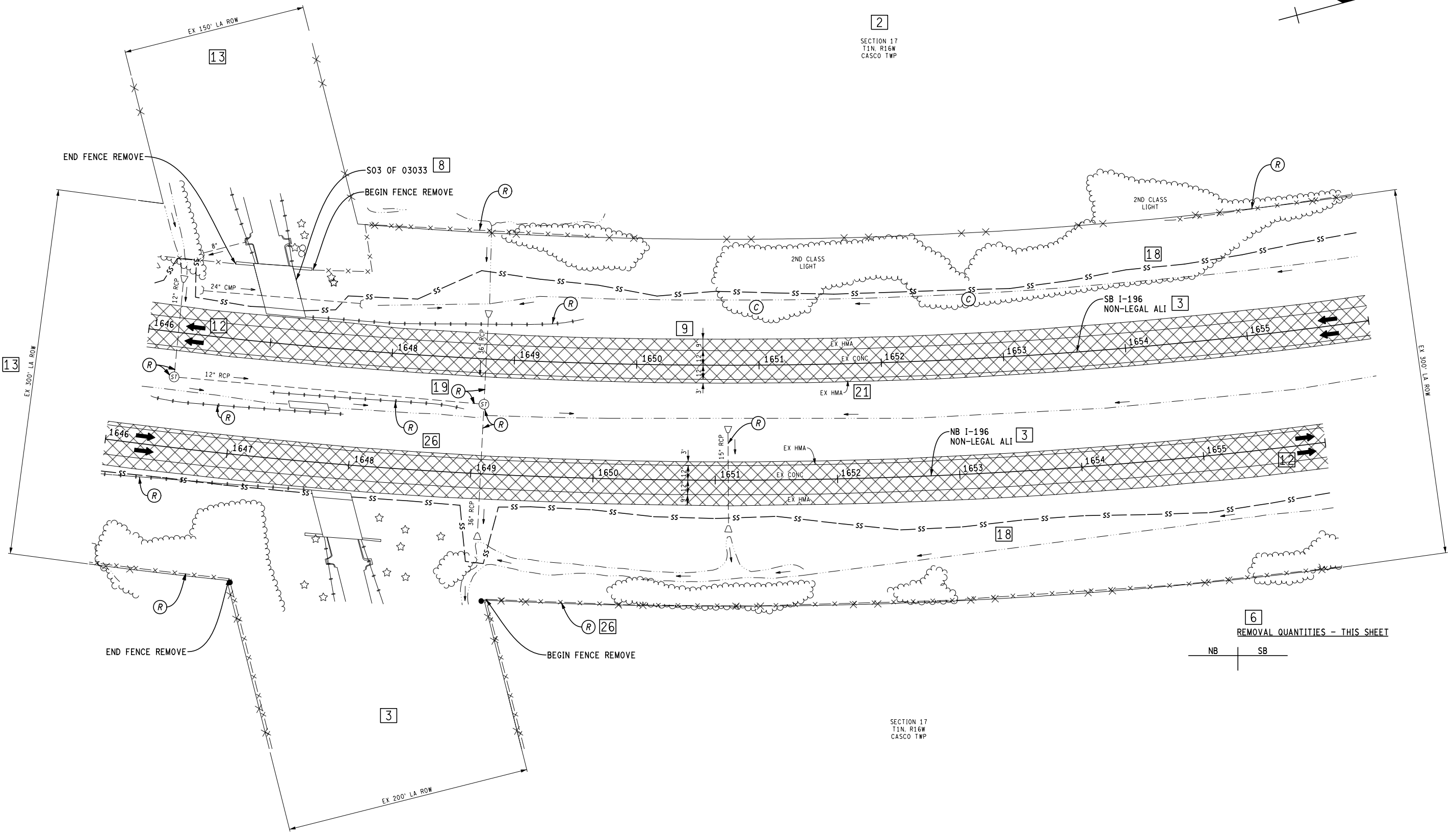
27



2
SECTION 17
T1N, R16W
CASCO TWP

NB I-196
SB I-196

NB I-196
SB I-196

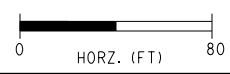


6
REMOVAL QUANTITIES - THIS SHEET
NB | SB

SECTION 17
T1N, R16W
CASCO TWP

107TH AVE HADAWAY CO DRAIN 1

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: _____
DESIGN UNIT: _____
TSC: _____
FILE: _____

CS: _____
JN: _____

REMOVAL SHEET
I-196 STA 1646+00 TO STA 1656+00

DRAWING SHEET
I196
REM
009
SECT 1

17 MILE RD

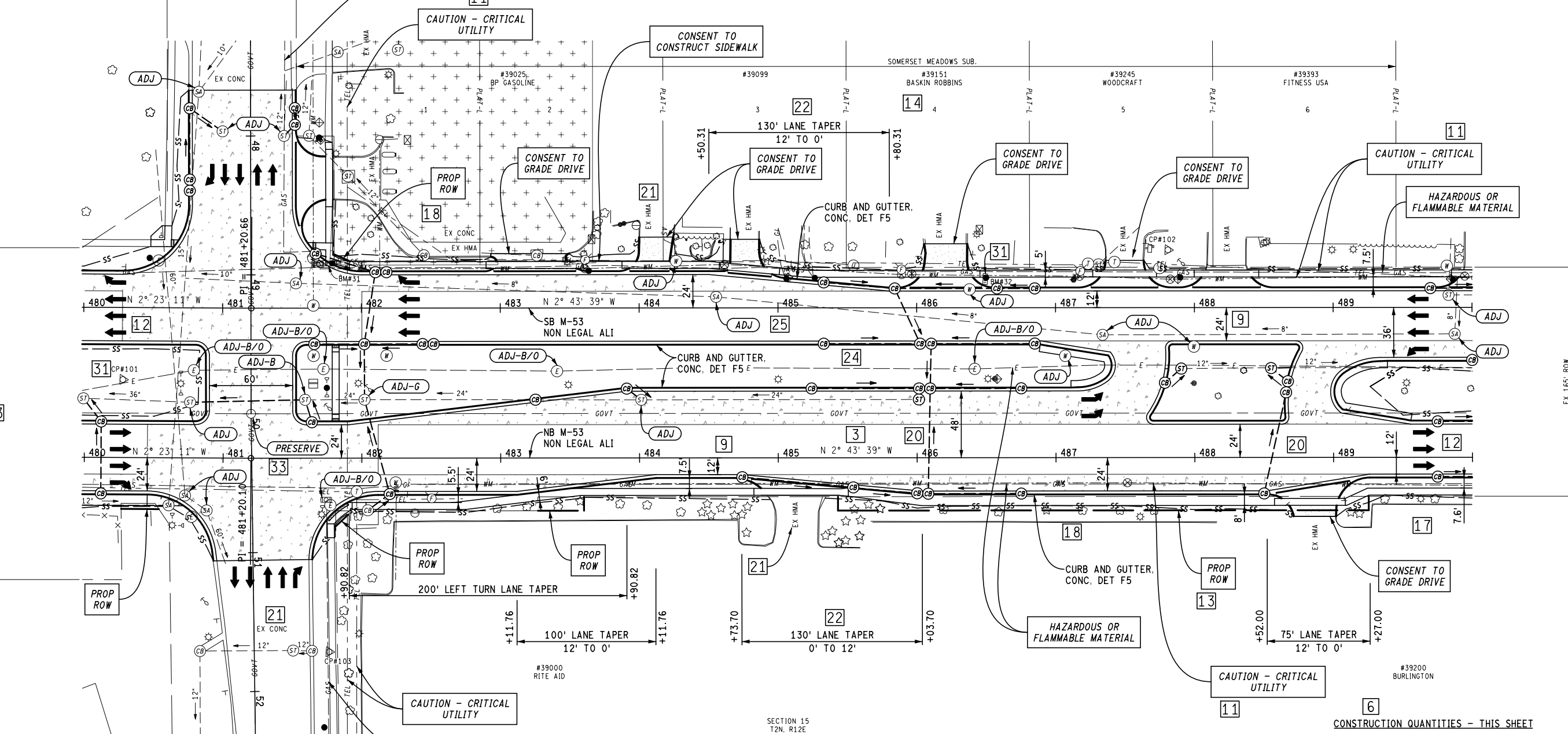
2

27



SECTION 21
T2N, R12E
CITY OF STERLING HEIGHTS

SECTION 16
T2N, R12E
CITY OF STERLING HEIGHTS



SECTION 22
T2N, R12E
CITY OF STERLING HEIGHTS

SECTION 15
T2N, R12E
CITY OF STERLING HEIGHTS

CONSTRUCTION QUANTITIES - THIS SHEET

CAT 0001 | CAT 0003

STATION	BACK OF DRIVE OFFSET FROM ALI	PROPOSED DRIVEWAY WIDTH	PROPOSED DRIVEWAY SLOPE	RADIUS		Conc. Curb, Det E1	Conc. Curb, Det E2	Driveway Opening, Conc. Det M	Driveway, Nonreinf Conc. 8 inch	HMA Approach	Aggregate Base, 6 inch	Sidewalk, Conc. 8 inch
				ENTERING	EXITING							
17 MILE 48+30 LT	54.0	30.1	8.0	20	20	51	-	82	96	-	100	-
SB M-53 483+21 LT	39.1	54.9	6.9	20	10	1	13	75	13	9	42	351
SB M-53 484+11 LT	51.0	23.5	6.7	5	15	1	25	41	6	9	40	199
SB M-53 484+76 LT	49.4	19.6	7.1	20	5	1	37	43	7	11	50	217
NB M-53 485+13 RT	27.0	57.0	2.1	30	0	9	-	72	26	-	22	333
SB M-53 486+21 LT	46.0	30.1	7.1	20	20	18	14	70	38	7	63	246
SB M-53 487+49 LT	34.0	26.4	7.0	20	20	18	14	66	35	6	58	229
SB M-53 488+23 LT	27.0	34.8	6.2	20	20	18	-	67	35	-	34	232
NB M-53 488+86 RT	42.5	29.4	7.3	20	25	19	17	75	42	8	76	257
TOTALS (CAT 0001)						136	120	591	298	50	485	2064

17 MILE RD 1

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE:	CS:
DESIGN UNIT:	JN:
TSC:	

CONSTRUCTION SHEET		DRAWING	SHEET
M-53 STA 480+00 TO STA 490+00		M53 CON 010	SECT 1

LAKWOOD BLVD
RAMP D

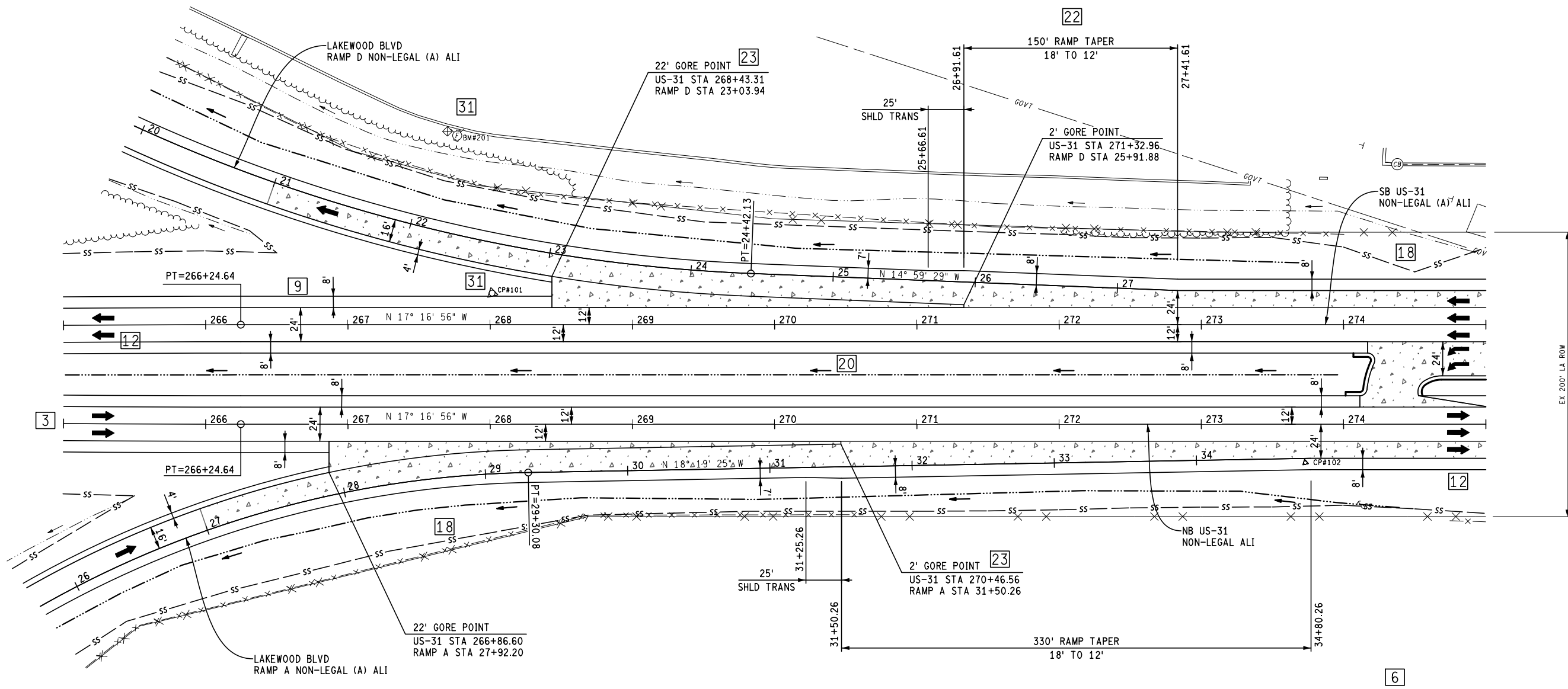
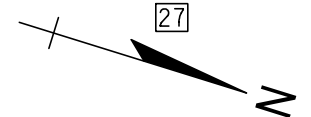
SB US-31

NB US-31

LAKWOOD BLVD
RAMP A

SECTION 21
T5N, R15W
HOLLAND TWP

27



EX. LA. ROW VARIES

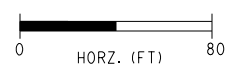
EX. 200' LA. ROW

CONSTRUCTION QUANTITIES - THIS SHEET

NB | SB

SECTION 21
T5N, R15W
HOLLAND TWP

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: _____
 DESIGN UNIT: _____
 TSC: _____
 FILE: _____

CS: _____
 JN: _____

CONSTRUCTION SHEET
 US-31 STA 265+00 TO STA 275+00

DRAWING SHEET
 US31 CON 002 SECT 1

107TH AVE

HADAWAY CO DRAIN

27



EX 150' LA ROW

13

INSTALL NEW SEWER AND END SECTION
 80 Ft Sewer, CI A, 24 inch, Tr Det B
 1 Ea Culv. Slp End Sect. 1 on 4, 24 inch, Transv
 21 Syd Riprap, Plain
 1 Ea Dr Marker Post

INSTALL NEW SEWER AND END SECTION
 256 Ft Sewer, CI A, 30 inch, Tr Det A
 1 Ea Dr Structure, 48 inch dia
 1 Ea Dr Structure Cover, Type B

SECTION 17
T1N, R16W
CASCO TWP

2

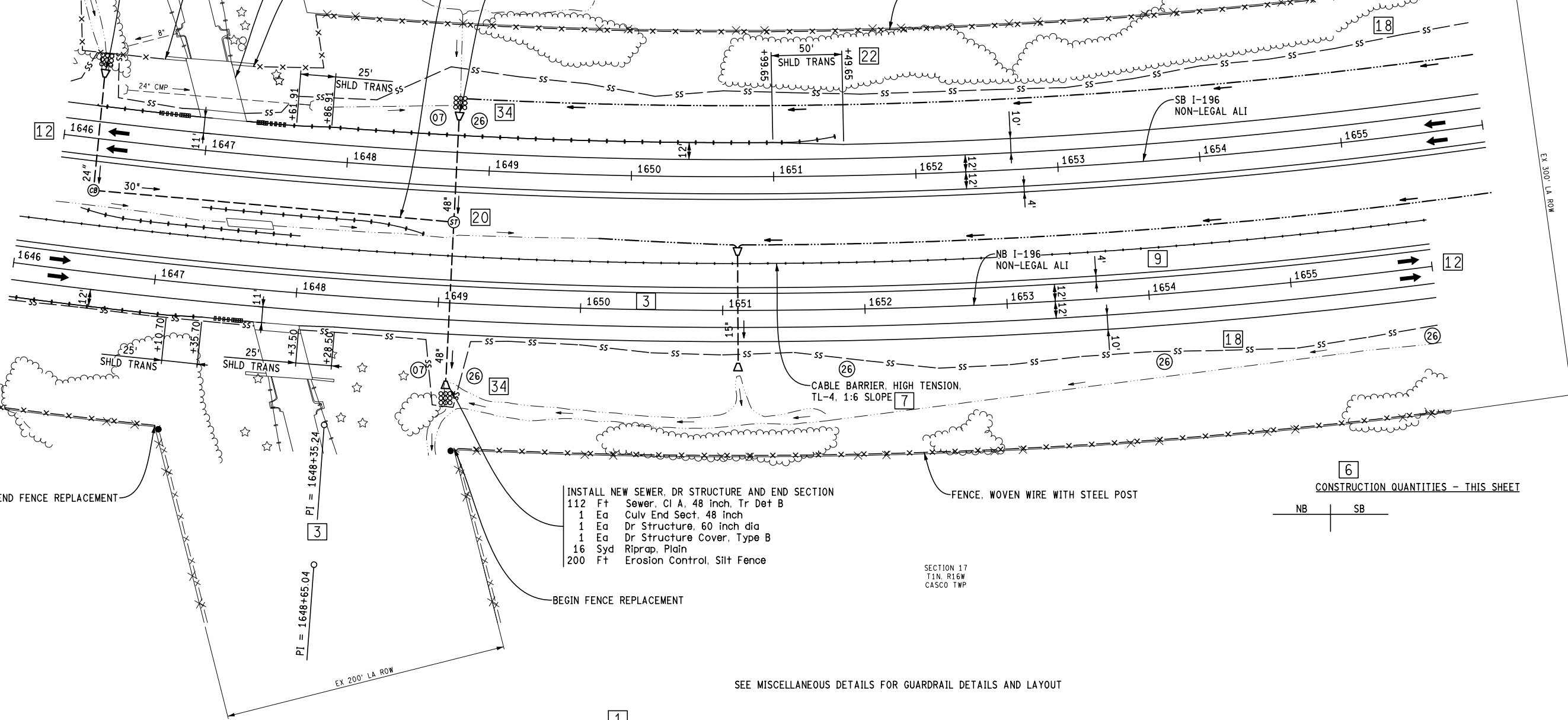
INSTALL NEW SEWER AND END SECTION
 72 Ft Sewer, CI A, 48 inch, Tr Det B
 1 Ea Culv End Sect. 48 inch
 16 Syd Riprap, Plain
 200 Ft Erosion Control, Silt Fence

END FENCE REPLACEMENT
 S03 OF 03033

8

7

FENCE, WOVEN WIRE WITH STEEL POST



SB I-196

NB I-196

SB I-196

NB I-196

13

EX 300' LA ROW

END FENCE REPLACEMENT

3

3

PI = 1648+35.24

PI = 1648+65.04

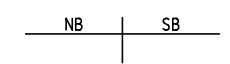
INSTALL NEW SEWER, DR STRUCTURE AND END SECTION
 112 Ft Sewer, CI A, 48 inch, Tr Det B
 1 Ea Culv End Sect, 48 inch
 1 Ea Dr Structure, 60 inch dia
 1 Ea Dr Structure Cover, Type B
 16 Syd Riprap, Plain
 200 Ft Erosion Control, Silt Fence

BEGIN FENCE REPLACEMENT

SECTION 17
T1N, R16W
CASCO TWP

6

CONSTRUCTION QUANTITIES - THIS SHEET

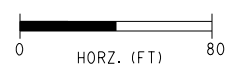


SEE MISCELLANEOUS DETAILS FOR GUARDRAIL DETAILS AND LAYOUT

107TH AVE HADAWAY CO DRAIN

1

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



HORZ. (FT)

80

FILE:

DATE:
 DESIGN UNIT:
 TSC:


CS:
 JN:

CONSTRUCTION SHEET
 I-196 STA 1646+00 TO STA 1656+00

DRAWING SHEET
 I196 CON 009 SECT 1

DRAINAGE SHEETS:

1. Label all roadway names and county drains at the outside of the sheet using MDOT Pr x 1.5.
2. Show north arrow in upper right corner.
3. Label overall ROW dimensions including cross road ROW at the ends of the sheet. These labels and dimensions should be in the same location as the construction sheet.
4. Show city limits, township, range and section info. Section corner information is not shown.
5. Only show the alignments that are necessary to construct the roadway and drainage. Include stations, bearings and curve points.
6. Show all existing underground utilities. Label underground telephone, water main and fiber optic lines with the 'Caution – Critical Utility' cell. Label underground gas and electric with the 'Hazardous or Flammable Material' cell. Ex sewer, sanitary sewer/sanitary force main only need to be labeled without flagging of a critical utility cell. Overhead utilities are not typically shown. Exceptions would be for high voltage electric transmission lines and other utilities that would impact how the work is completed. Label with the 'Hazardous or Flammable Material' or 'Caution – Critical Utility' cell as appropriate.
7. Structure numbers are required on all proposed drainage structures. Existing drainage structures will require a structure number if the proposed drainage system is connecting into the existing system.
8. Show the proposed drainage layout and the existing drainage that is remaining including existing drainage that is being abandoned in place. Do not show any existing drainage systems that are being removed.
9. Show existing and proposed pipes with sizes and flow arrows.
10. A drainage table is needed for each drainage sheet and includes all drainage related pay items and quantities. If the drainage table is too large then an additional sheet may be required to display all information. The drainage table sheet follows the corresponding drainage sheet.
11. Show the slope stake line.
12. Adjusting drainage structure covers within the roadway are considered part of the paving operation and should be shown and paid for on the construction sheet.
13. The plat/subdivision lines are shown on these sheets. The parcel lines are not shown. Label the subdivision, plat names and plat numbers on both the removal and construction sheets. House numbers and current business names are desired.

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:				DRAINAGE SHEETS
										FILE:	TSC:				
											25				

17 MILE RD



SECTION 21
T2N, R12E
CITY OF STERLING HEIGHTS

SECTION 16
T2N, R12E
CITY OF STERLING HEIGHTS

SECTION 22
T2N, R12E
CITY OF STERLING HEIGHTS

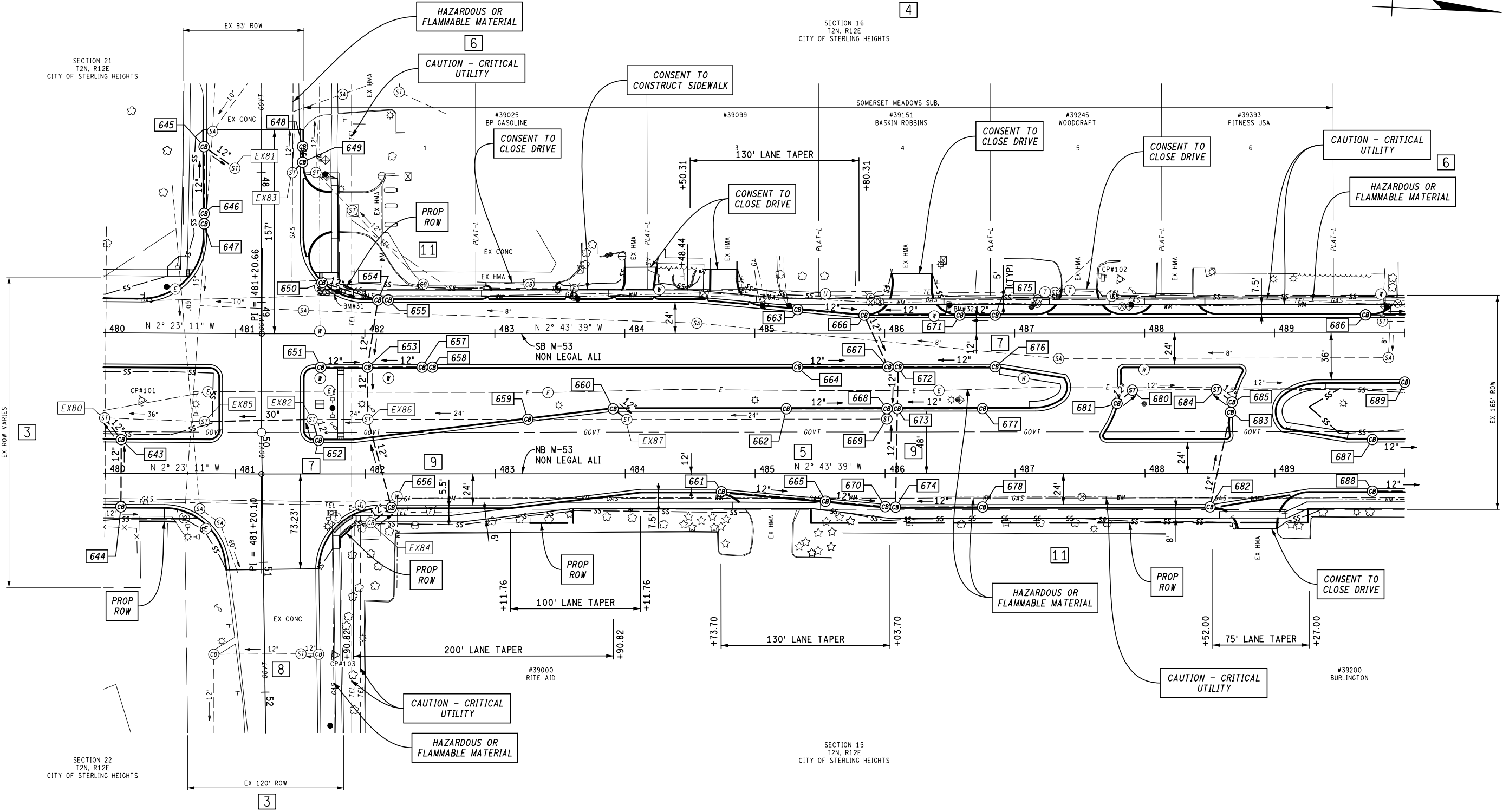
SECTION 15
T2N, R12E
CITY OF STERLING HEIGHTS

SB M-53

NB M-53

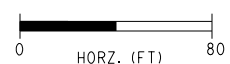
SB M-53

NB M-53



17 MILE RD

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: _____
 DESIGN UNIT: _____
 TSC: _____
 FILE: _____

CS: _____
 JN: _____


DRAINAGE SHEET
 M-53 STA 480+00 TO STA 490+00

DRAWING SHEET
 M53 DRAIN 010
 SECT 1

10


STRUCT NO.	STATION	OFFSET*	RIM** ELEV	Dr Structure, 48 inch dia	Dr Structure Cover, Type		Sewer, CI A, -- inch, Tr Det B			Sewer, CI B, -- inch, Tr Det B		Sewer Tap, -- inch		Dr Structure Tap, 12 Inch
					B	K	12	15	30	12	15	12	24	
7				Ea	Ea	Ea	Ft	Ft	Ft	Ft	Ft	Ea	Ea	Ea
EX80	480+00.00 NB M-53	42.56 LT	614.01											1
EX85	480+76.01 NB M-53	40.03 LT	614.01											1
643	480+12.00 NB M-53	25.89 LT	612.72	1		1	21							
644	480+12.00 NB M-53	25.89 RT	612.42	1		1	52							
EX82	481+58.87 NB M-53	42.01 LT	613.84						83					
EX81	47+96.61 17 MILE	20.19 RT	612.40											1
EX83	48+00.00 17 MILE	24.02 LT	612.35											1
645	47+80.00 17 MILE	31.89 RT	612.30	1		1	29							
646	48+32.00 17 MILE	31.89 RT	612.40	1		1				51				
647	48+40.00 17 MILE	31.89 RT	612.44	1		1				8				
648	47+80.00 17 MILE	31.89 LT	612.51	1		1				12				
649	47+92.00 17 MILE	31.89 LT	612.53	1		1				11				
650	481+67.00 SB M-53	41.17 LT	613.28	1		1	45							
651	481+66.00 SB M-53	25.89 RT	613.98	1		1				36				
652	481+64.00 NB M-53	25.89 LT	613.17	1		1	17							
EX86	482+01.96 NB M-53	42.05 LT	614.85											2
EX84	482+04.27 NB M-53	37.57 RT	614.12							20				
653	482+02.00 SB M-53	25.89 RT	614.01	1		1	40							
654	482+10.00 SB M-53	25.89 LT	613.92	1		1	52							
655	482+18.00 SB M-53	25.89 LT	613.92	1		1				8				
656	482+20.00 NB M-53	25.89 RT	613.45	1		1	70							
657	482+52.00 SB M-53	25.89 RT	614.09	1		1				42				
658	482+60.00 SB M-53	25.89 RT	614.10	1		1				8				
659	483+25.00 NB M-53	40.19 LT	613.61	1		1						1		
660	483+91.00 NB M-53	49.89 LT	613.71	1		1	13							
EX87	484+01.30 NB M-53	41.80 LT	614.13											1
661	484+74.00 NB M-53	13.92 RT	614.37	1		1				80				
662	485+24.00 NB M-53	49.89 LT	613.50	1		1				78				
663	485+33.00 SB M-53	18.26 LT	614.19	1		1				51				
664	485+33.00 SB M-53	25.89 RT	614.03	1		1				69				
665	485+54.00 NB M-53	21.30 RT	614.00	1		1				46				
666	486+16.00 SB M-53	13.89 LT	614.14	1		1	44							
667	486+08.00 SB M-53	25.89 RT	613.90	1		1				8				
668	486+00.00 NB M-53	49.89 LT	613.38	1		1		8						
669	486+01.30 NB M-53	41.95 LT	613.51	1		1								
670	486+00.00 NB M-53	25.55 RT	613.87	1		1				8				
671	486+24.00 SB M-53	13.89 LT	614.14	1		1				74				
672	486+16.00 SB M-53	25.89 RT	613.90	1		1	32							
673	486+08.00 NB M-53	49.89 LT	613.38	1		1				8				
674	486+08.00 NB M-53	25.89 RT	613.86	1		1	76							
675	486+85.00 SB M-53	13.89 LT	614.28	1		1				27				
676	486+85.00 SB M-53	25.89 RT	614.04	1		1				75				
677	486+75.00 NB M-53	49.89 LT	613.50	1		1				66				
678	486+75.00 NB M-53	25.89 RT	613.98	1		1				67				
679	487+75.00 NB M-53	25.89 LT	614.23	1		1	41							
680	487+90.56 SB M-53	43.96 RT	615.75	1		1								
681	487+87.00 SB M-53	25.89 RT	614.28	1		1	18							
682	488+50.00 NB M-53	25.89 RT	614.19	1		1	52							
683	488+55.00 NB M-53	25.89 LT	614.18	1		1	38							
684	488+55.24 SB M-53	43.62 RT	615.95	1		1					1			
685	488+68.00 SB M-53	25.89 RT	614.19	1		1	22							
686	489+70.00 SB M-53	13.89 LT	614.10	1		1				103				
687	489+75.00 NB M-53	25.89 LT	613.83	1		1				72				
688	489+75.00 NB M-53	13.89 RT	614.07	1		1				72				
689	490+00.00 SB M-53	37.89 RT	613.53	1		1				73				
TOTALS				47	3	44	682	8	83	1145	8	1	1	7

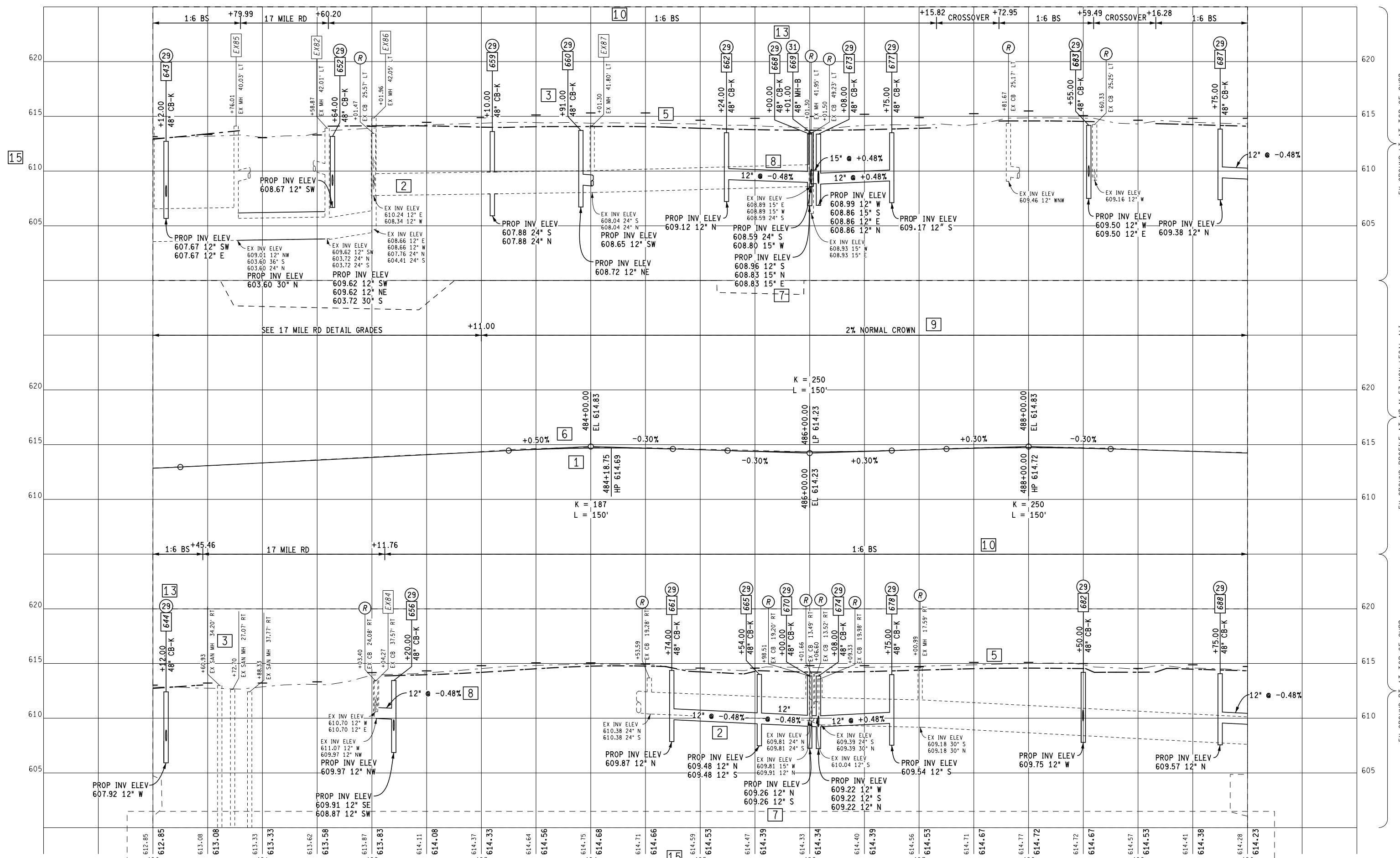
* OFFSETS ARE MEASURED TO CENTER OF STRUCTURE
 ** RIM ELEV SHOWN IS AT EDGE OF PAVEMENT FOR CATCH BASINS AND AT CENTER OF COVER FOR MANHOLES

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	DRAINAGE SHEET		DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:	M-53 STA 480+00 TO STA 490+00		M53 DRTAB 010	SECT 1
										TSC:					27

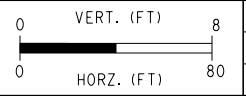
PROFILE SHEETS:

1. Show vertical curve PI stations and elevations, curve lengths, tangent grades, high points, low points, and K values. Use standard GEOPAK labeling.
2. Show all existing and proposed drainage features.
3. Show all existing drainage structures with +STA, size, type, and structure number, if applicable. Label structures to be removed with removal cell. Show all proposed drainage structures with +STA, size, cover, and structure number. If a drainage table is not used, add offset and rim elevation to proposed structure label.
4. Show the invert, station, and offset at proposed storm sewer or culvert outlets. Station and offset should represent the end of the pipe not end section.
5. Show existing ground profile and existing ground points both left and right (space existing ground points at 50' increments for all scales except 200 scale profiles use 100' increments). Rural sections should show existing ground profiles at an offset that closely represents the location of the existing ditch bottom, and existing ground points at an offset that closely represents the location of the existing ROW. Urban sections should show existing ground profiles at an offset that closely represents the location of the existing or proposed top of curb and gutter, and existing ground points at an offset that closely represents the location of the existing ROW. Show proposed top of curb profile for urban sections. Show proposed sidewalk profile if independent.
6. Show proposed plan grade line to nearest 0.01%.
7. Show existing and proposed invert elevations to the nearest 0.01 ft.
8. Show plan, ditch and sewer grades as +% or -% in the direction of stationing.
9. Show location of superelevation including transition and crown run out locations on type line directly above the plan grade.
10. Show type lines describing the proposed grading of the ditches, fore slopes, or back slopes. Show these type lines directly above the right and left edge profiles.
11. Show rock, peat, muck and undercut limits and treatments.
12. Show water table elevations, if known.
13. Show erosion control items that apply on the profile sheet. Items are paid for on the construction sheet.
14. Show existing or proposed bridge or box/slab culvert profile if applicable and underclearances.
15. Show elevations along the side of the profile grid at 5' increments (use 10' increments if using 200 scale). Show existing and proposed strip grade elevations at 50' increments (use 100' increments for 200 scale). Show proposed stationing at 100' intervals.
16. Label station equations on profile sheets.
17. Quantities are not shown on profile sheets. Excavation quantities are shown on the removal sheet, and embankment and subbase quantities are shown on the construction sheet.
18. Critical private or municipal utilities should be shown in the profile. These would be utilities that require protection, temporary support, or monitoring during construction.

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:	PROFILE SHEETS		
										FILE:	TSC:			28



FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



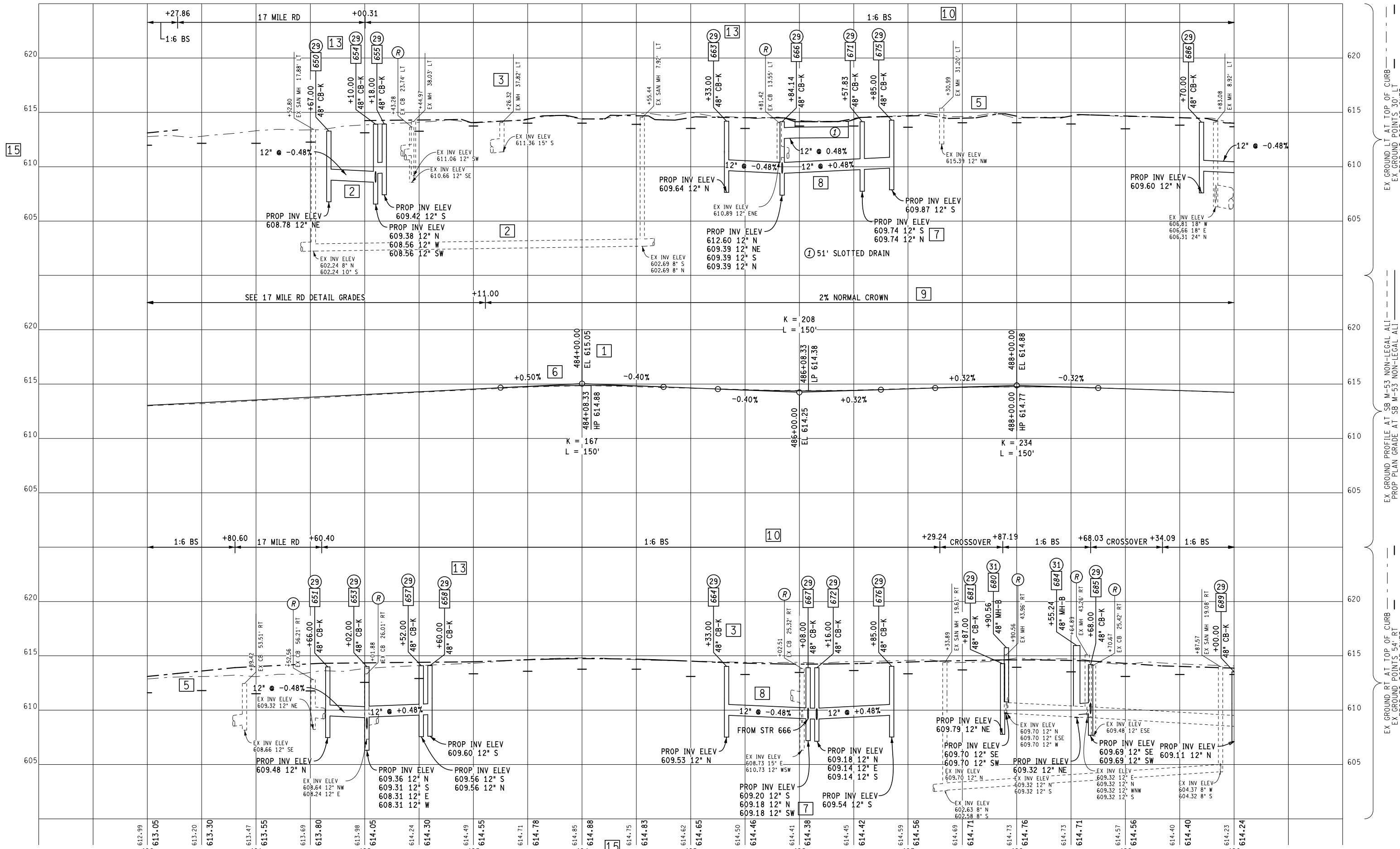
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CS: _____
JN: _____

PROFILE SHEET
NB M-53 STA 480+00 TO STA 490+00

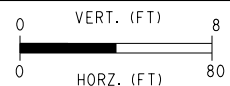
DRAWING SHEET
NB M53 SECT 1
PROF 010 29

EX GROUND LT AT TOP OF CURB
EX GROUND POINTS 54" LT
PROP LT TOP OF CURB
EX GROUND PROFILE AT NB M-53 NON-LEGAL ALI
EX GROUND POINTS 30" RT
PROP RT TOP OF CURB
EX GROUND PROFILE AT NB M-53 NON-LEGAL ALI
EX GROUND POINTS 54" LT
PROP LT TOP OF CURB



FINAL ROW PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

(SUBMITTAL DATE:)



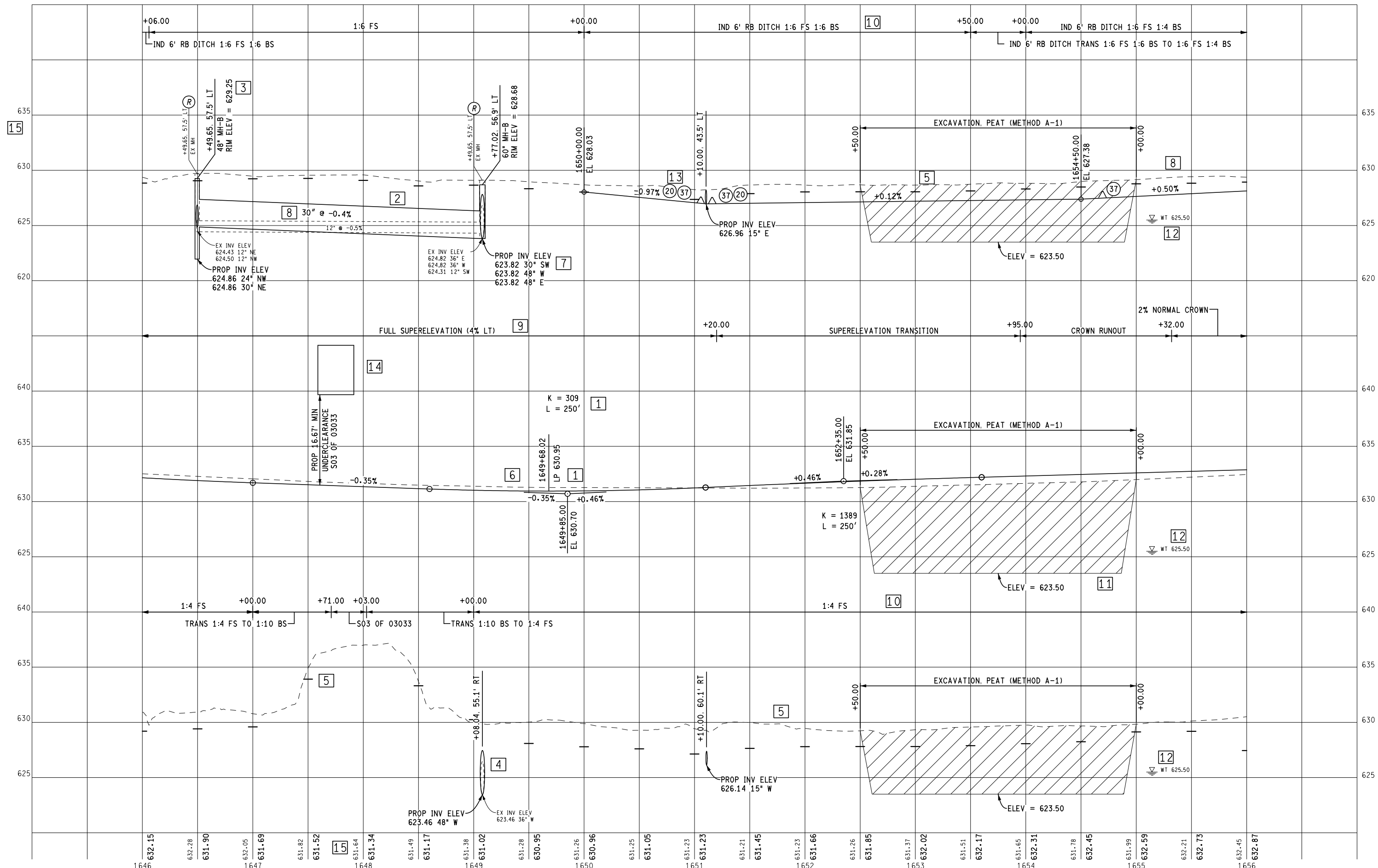
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 DESIGN UNIT: _____
 TSC: _____

CS: _____
 JN: _____

PROFILE SHEET
 SB M-53 STA 480+00 TO STA 490+00

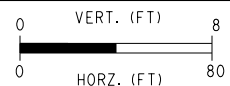
DRAWING SHEET
 SB M53 SECT 1
 PROF 010 30

EX GROUND LT AT TOP OF CURB
 EX GROUND POINTS 30' LT
 PROP LT TOP OF CURB
 EX GROUND PROFILE AT SB M-53 NON-LEGAL ALI
 EX GROUND POINTS 54' RT
 PROP PLAN GRADE AT SB M-53 NON-LEGAL ALI
 EX GROUND RT AT TOP OF CURB
 EX GROUND POINTS 30' RT
 PROP RT TOP OF CURB



EX GROUND PROFILE AT NB I-196 NON-LEGAL ALI
 PROP PLAN GRADE AT NB I-196 NON-LEGAL ALI

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

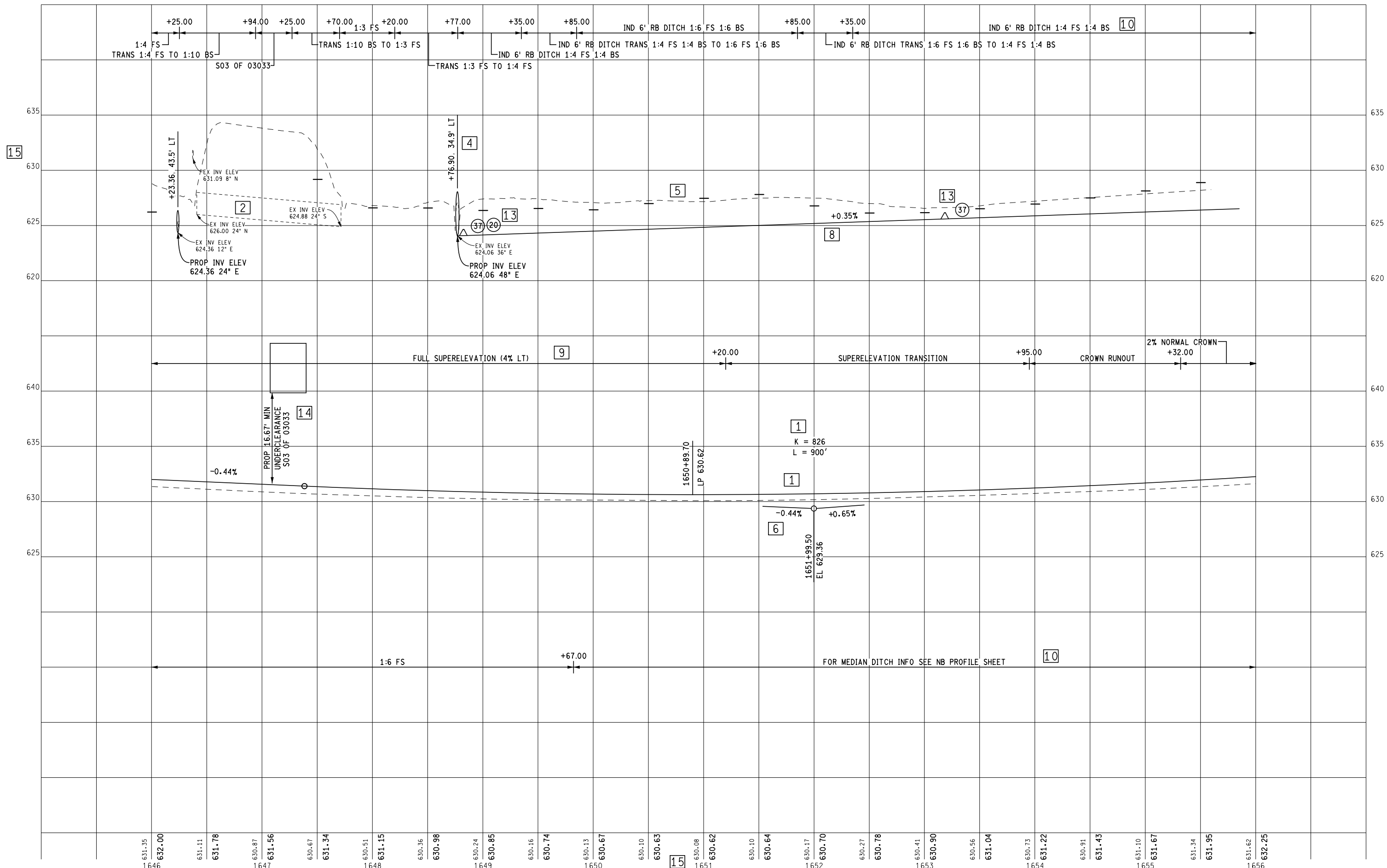


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 TSC: _____

CS: _____
 JN: _____

PROFILE SHEET
 NB I-196 STA 1646+00 TO STA 1656+00

DRAWING SHEET
 NB196 PROF 009 SECT 1
31



EX GROUND PROFILE AT SB I-196 NON-LEGAL ALI
 PROP PLAN GRADE AT SB I-196 NON-LEGAL ALI

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION


0 VERT. (FT) 8
 0 HORZ. (FT) 80

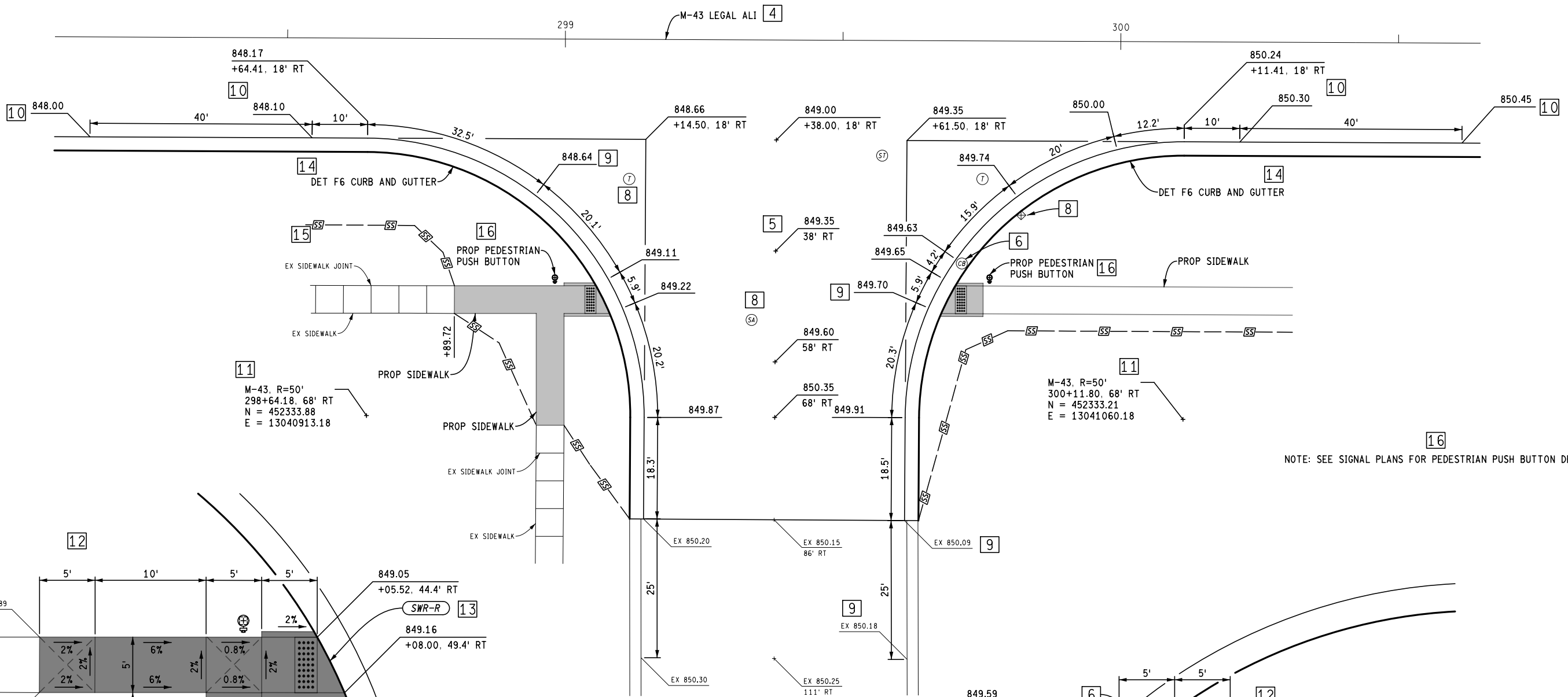
DATE: _____ CS: _____
 DESIGN UNIT: _____ JN: _____
 TSC: _____

PROFILE SHEET
 SB I-196 STA 1646+00 TO STA 1656+00

DETAIL GRADE AND SIDEWALK RAMP SHEETS:

1. If possible combine the intersection detail grades and sidewalk ramp details.
2. If a stand-alone CPM project or a sidewalk ramp project, the sidewalk details may be combined with the removal and construction sheets.
3. Place north arrow in upper right corner.
4. Show mainline roadway alignment with stationing only, bearings and curve points are not needed.
5. Show elevations and offsets along the alignment of the crossroad\ramps at key locations such as pavement joint lines or wherever necessary to accurately convey the intent of the design.
6. Show all sanitary and storm manholes and catch basins, but not the sewer pipes.
7. Show existing sidewalk joints if available.
8. Show all utilities.
9. Dimension and give proposed elevations around proposed radii. Include grade elevations at sidewalk ramp locations. Provide existing elevations at the tie in locations, and an additional elevation 10'-20' beyond to show the existing slope of the road.
10. Provide mainline roadway station, offset and elevation at radii spring points. Show at least one elevation beyond the spring point to show the proposed slope of the road.
11. At the center point of the radius identify the roadway name, radius, station, offset and the northing and easting.
12. If sidewalk ramps are present, show each quadrant at large scale to provide details with elevations, slopes and dimensions to ensure they comply with ADA standards. Show details by quadrant and at a larger scale than the detail sheet to show the sidewalk ramp details.
13. Label sidewalk ramp type with appropriate cell.
14. Label proposed curb type.
15. Show the slope stake line.
16. Show pedestrian signals and push buttons. Detail push button locations or reference signal plans if applicable.
17. For the first station/elevation label in a row, use the whole station to help identify the corresponding alignment.

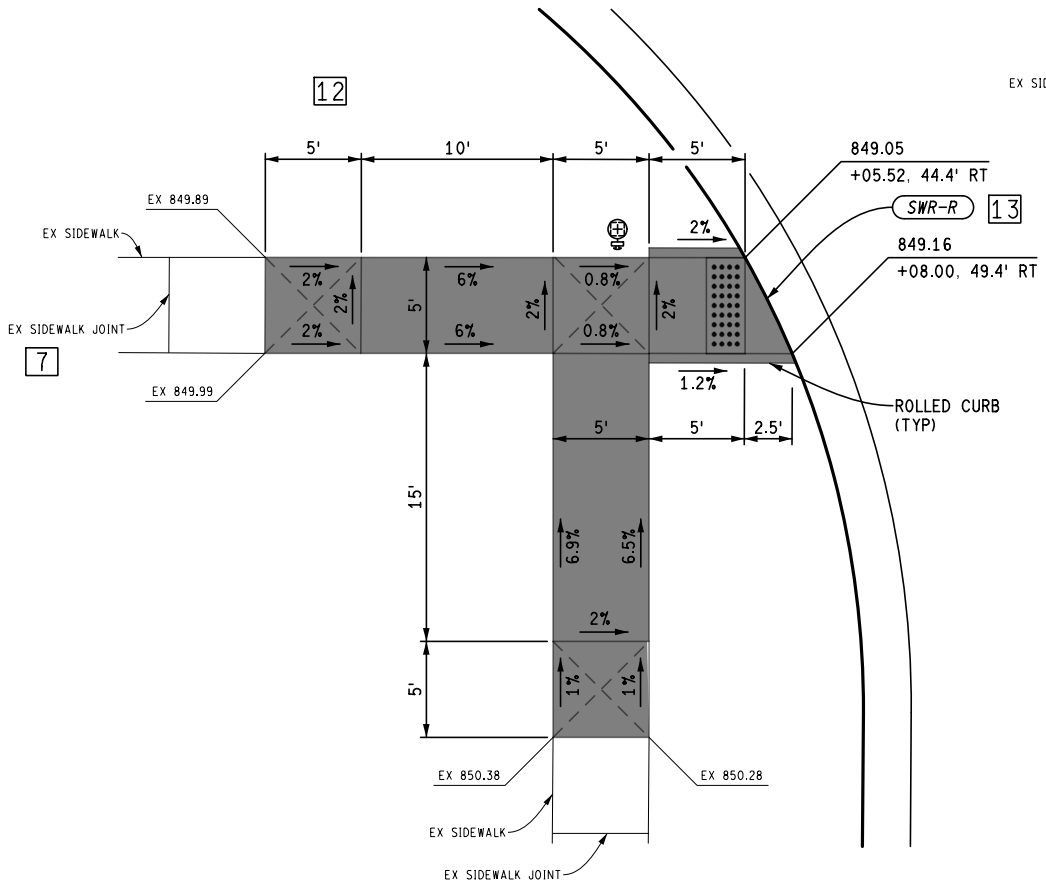
FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)									NO SCALE	DATE:	CS:	PLAN GUIDELINES	DRAWING	SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION			DESIGN UNIT:	JN:				DETAIL GRADES
										FILE:	TSC:				
											33				



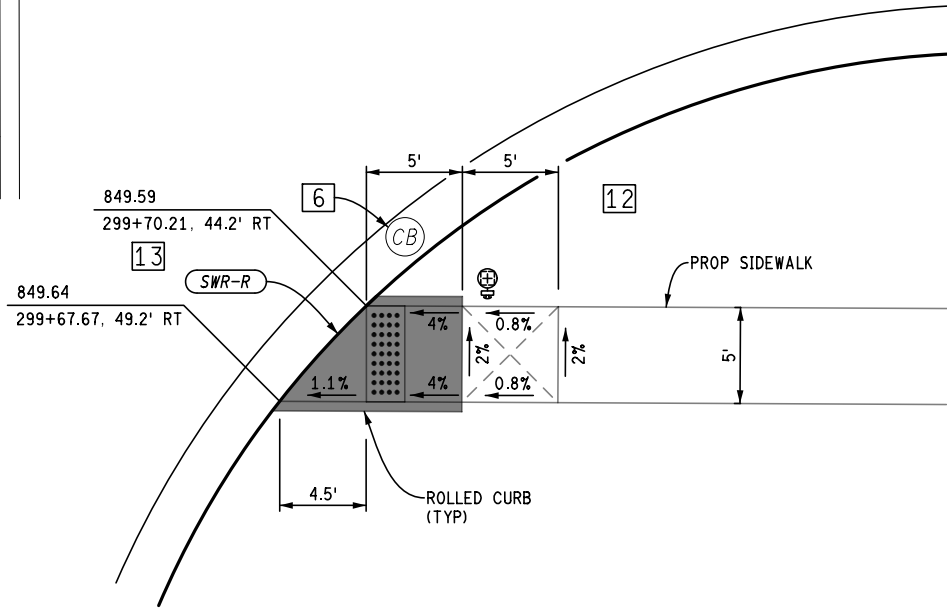
M-43, R=50'
298+64.18, 68' RT
N = 452333.88
E = 13040913.18

M-43, R=50'
300+11.80, 68' RT
N = 452333.21
E = 13041060.18

NOTE: SEE SIGNAL PLANS FOR PEDESTRIAN PUSH BUTTON DETAILS

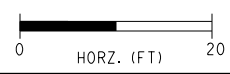


SIDEWALK RAMP DETAIL - SW QUADRANT
NOT TO SCALE



SIDEWALK RAMP DETAIL - SE QUADRANT
NOT TO SCALE

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE:	CS:
DESIGN UNIT:	JN:
TSC:	
FILE:	

DETAIL GRADES		DRAWING	SHEET
M-43		M43 DETGRD 001	SECT 1 35