



MAP OF CITY OF
COON RAPIDS
ANOKA COUNTY, MINNESOTA

NO.	DATE	REVISIONS	 COON RAPIDS Minnesota	CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.
DRAWING BY: J.W.H.
CHECKED BY: M.C.H.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS
PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY
REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA.

MARK C. HANSEN P.E.
LICENSE # 43920

DATE: 2/7/2023

CITY OF COON RAPIDS, MINNESOTA




































IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE
GOPHER STATE ONE CALL EXCAVATION
NOTICE SYSTEM REQUIRED BY MINNESOTA STATUTE, CHAPTER 216D FOR
ALL UNDERGROUND UTILITY LOCATIONS.












































SHEET INDEX






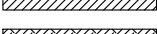
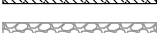
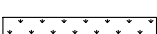
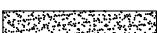
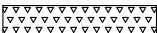



SHEET	SHEET TITLE
1	COVER SHEET
2	LEGEND
3	SHEETS LAYOUT
4	TYPICAL SECTIONS
5 - 7	STANDARD PLATES
8	CONSTRUCTION NOTES
9 - 14	ADA PED RAMP DETAILS
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LINE TYPES		
EXISTING		PROPOSED
	CENTERLINE	
	CURB	
	EDGE OF BUILDING	
	RIGHT-OF-WAY	
	EASEMENT LINE	
	ASPHALT EDGE	
	EXCAVATION EDGE	
	LIMIT OF CONSTRUCTION	
	WATER MAIN	
	SANITARY SEWER	
	STORM DRAIN	
	NATURAL GAS	
	ELECTRIC OVERHEAD	
	ELECTRIC UNDERGROUND	
	CABLE TELEVISION	
	FIBER OPTIC OVERHEAD	
	FIBER OPTIC UNDER GROUND	
	TRAFFIC SIGNAL	
	RETAINING WALL	
	FENCE LINE	
	SILT FENCE	
	EROSION CONTROL LOG BIROL	
	WETLAND	
	TREE LINE	
	CONTOURS	
	MATCH LINE	

SYMBOLS		
EXISTING		PROPOSED
	1-FIRE HYDRANT (ENG DEPT)	
	2-WATER GATE VALVE (ENG DEPT)	
	3-WATER TEE (ENG DEPT)	
	24-WATER CURB STOP (ENG DEPT)	
	4-SANITARY MANHOLE (ENG DEPT)	
	5-STORM MANHOLE (ENG DEPT)	
	6-STORM CATCH BASIN (ENG DEPT)	
	7-INLET PROTECTION (ENG DEPT)	
	8-POLE (ENG DEPT)	
	9-LIGHT POLE (ENG DEPT)	
	10-GUY WIRE (ENG DEPT)	
	12-SIGN (ENG DEPT)	
	13-STREET NAME SIGN (ENG DEPT)	
	11-TRAFFIC SIGNAL (ENG DEPT)	
	14-UTILITY HANDHOLE (ENG DEPT)	
	15-UTILITY MANHOLE (ENG DEPT)	
	16-PEDESTAL (ENG DEPT)	
	17-TREE STUMP (ENG DEPT)	
	18-CONIFEROUS TREE (ENG DEPT)	
	19-DECIDUOUS TREE (ENG DEPT)	
	20-BENCHMARK (ENG DEPT)	
	21-SOIL BORING (ENG DEPT)	
	22-KEY NOTE (ENG DEPT)	
	23-CULVERT (ENG DEPT)	

HATCH PATTERNS	
	REMOVE CONCRETE
	REMOVE ASPHALT
	CONCRETE PAVEMENT
	ASPHALT PAVEMENT
	ASPHALT PATCHING
	ASPHALT SECTION
	COMPACTED FILL / SUB BASE
	GRAVEL
	GRASS
	SAND
	EROSION CONTROL MAT
	CONSTRUCTION ENTRANCE
	PAVERS

- 1

REMOVE & DISPOSE EXISTING SANITARY SEWER MANHOLE CASTING, LID & RINGS. INSTALL NEW CASTING, LID (R-1733-5044) & RINGS. INSTALL I & I BARRIER AROUND THE RINGS. PAYMENT SHALL BE MADE AS
1) REMOVE / DISPOSE SANITARY SEWER CASTING, LID & RINGS.
2) FURNISH & INSTALL SANITARY SEWER CASTING & LID. PLACE I & I BARRIER AROUND THE RINGS.
3) 2" CONCRETE ADJUSTING RINGS (EA)
- 2

REMOVE & DISPOSE EXISTING STORM SEWER MANHOLE CASTING, LID & RINGS. INSTALL NEW CASTING, LID (R-1733-5044) & RINGS. INSTALL FABRIC AROUND THE RINGS. PAYMENT SHALL BE MADE AS
1) REMOVE / DISPOSE STORM SEWER CASTING, LID & RINGS.
2) FURNISH & INSTALL STORM SEWER CASTING & LID. PLACE FABRIC AROUND THE RINGS.
3) 2" CONCRETE ADJUSTING RINGS (EA)
- 3

REMOVE & DISPOSE EXISTING STORM INLET CASTING, GRATE & RINGS. INSTALL NEW INLET CASTING, GRATE & RINGS. INSTALL FABRIC AROUND THE RINGS. SEE GENERAL NOTE 1. PAYMENT SHALL BE MADE AS
1) REMOVE / DISPOSE STORM INLET CASTING, GRATE & RINGS.
2) FURNISH & INSTALL STORM INLET CASTING & GRATE.(R-3067-L) OR (R-3067-L LOW PROFILE, ESS BROS.) PLACE FABRIC AROUND THE RINGS.
3) 2" CONCRETE ADJUSTING RINGS (EA)
- 4

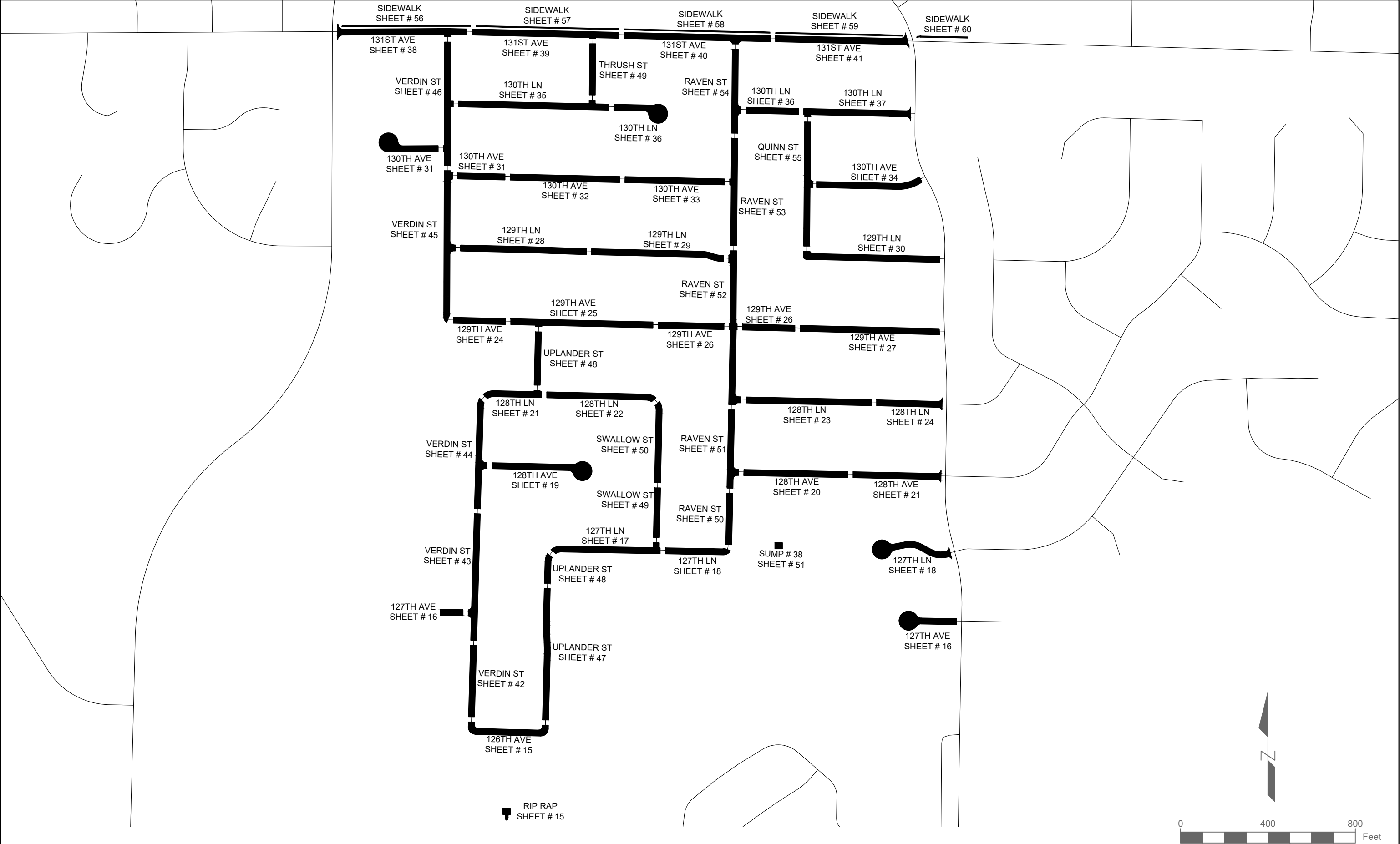
REMOVE & DISPOSE EXISTING STORM INLET CASTING, GRATE & RINGS. INSTALL NEW INLET CASTING, GRATE & RINGS. INSTALL FABRIC AROUND THE RINGS. SEE GENERAL NOTE 1. PAYMENT SHALL BE MADE AS
1) REMOVE / DISPOSE STORM INLET CASTING, GRATE & RINGS.
2) FURNISH & INSTALL STORM INLET CASTING & GRATE. (R-3067-L) OR (R-3067-L LOW PROFILE, ESS BROS.) PLACE FABRIC AROUND THE RINGS.
3) FURNISH & INSTALL 3067-27 ESS BROS. ADAPTER PLATE.
4) 2" CONCRETE ADJUSTING RINGS (EA)
- 5


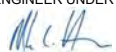
REMOVE & DISPOSE EXISTING STORM INLET CASTING, GRATE & RINGS. INSTALL NEW INLET CASTING, GRATE & RINGS. INSTALL FABRIC AROUND THE RINGS. SEE GENERAL NOTE 1. PAYMENT SHALL BE MADE AS
1) REMOVE / DISPOSE STORM INLET CASTING, GRATE & RINGS.
2) FURNISH & INSTALL STORM INLET CASTING & GRATE. (R-3501-L2) PLACE FABRIC AROUND THE RINGS.
3) 2" CONCRETE ADJUSTING RINGS (EA)

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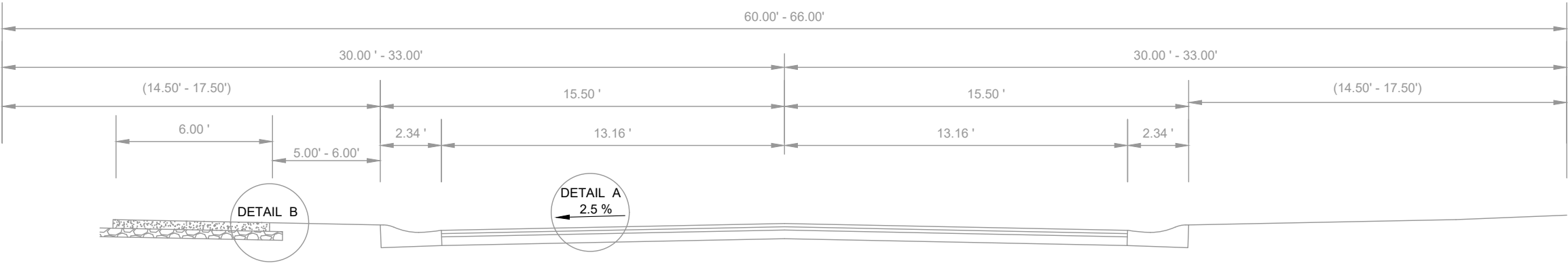


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						DRAWING BY: J.W.H.						63
						CHECKED BY: M.C.H.						

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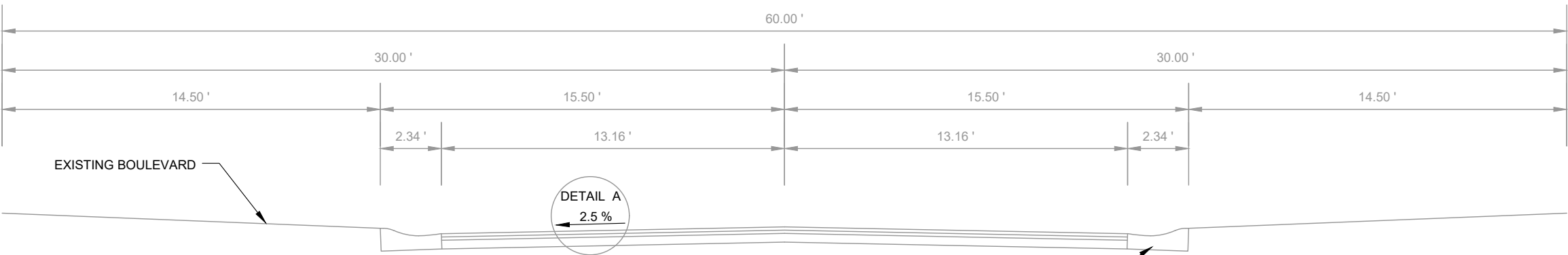
TYPICAL SECTION 1

131ST AVE

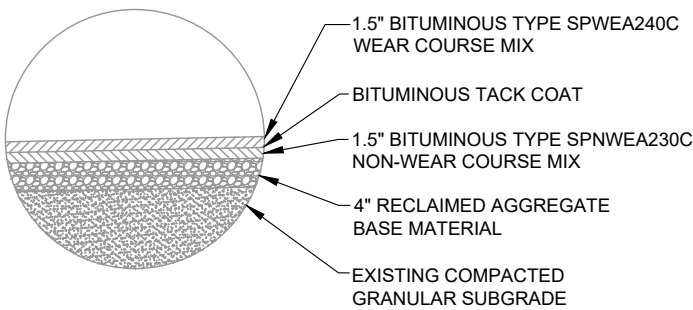


TYPICAL SECTION 2

ALL STREETS EXCEPT FOR 131ST AVE



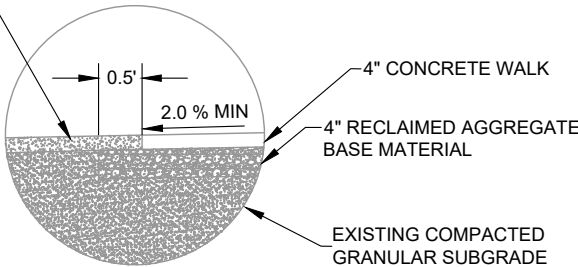
DETAIL A





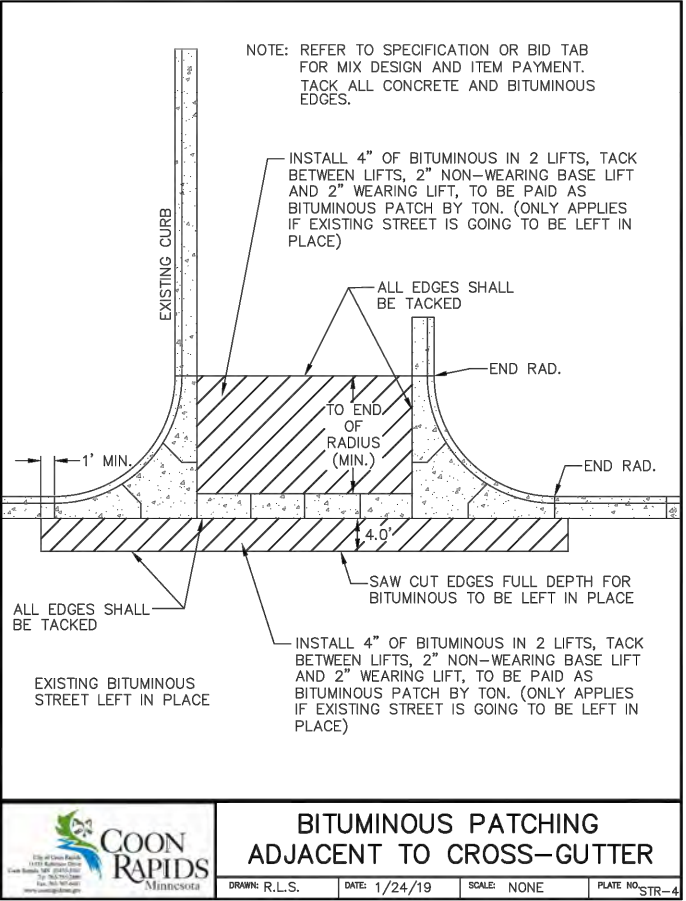
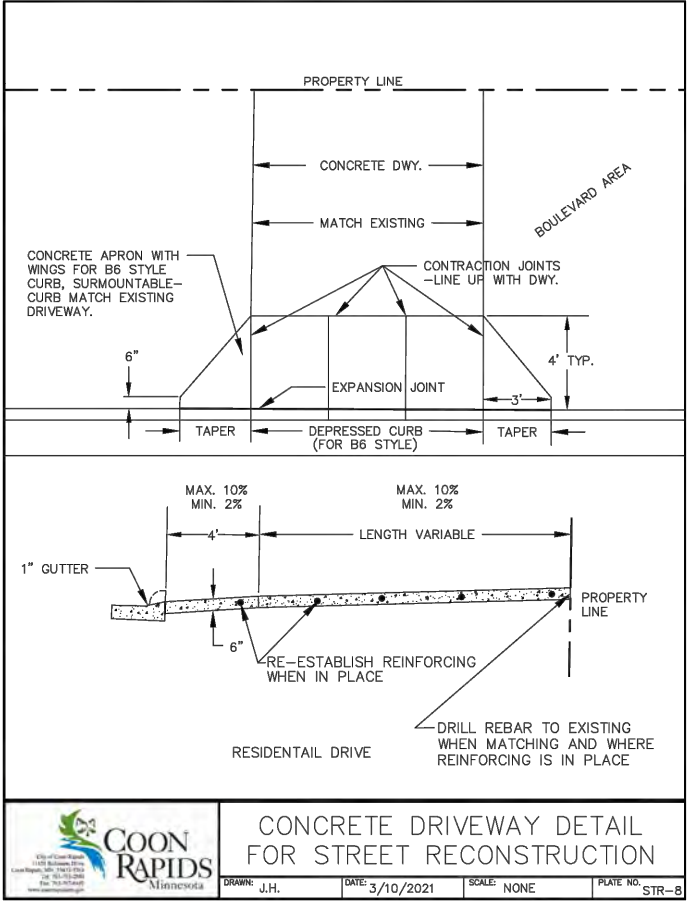
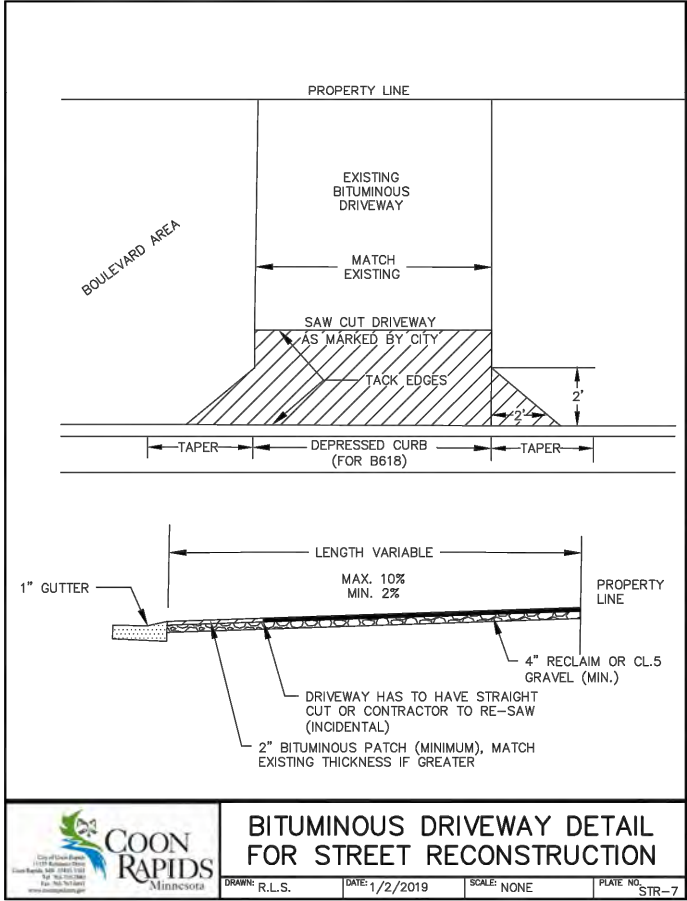
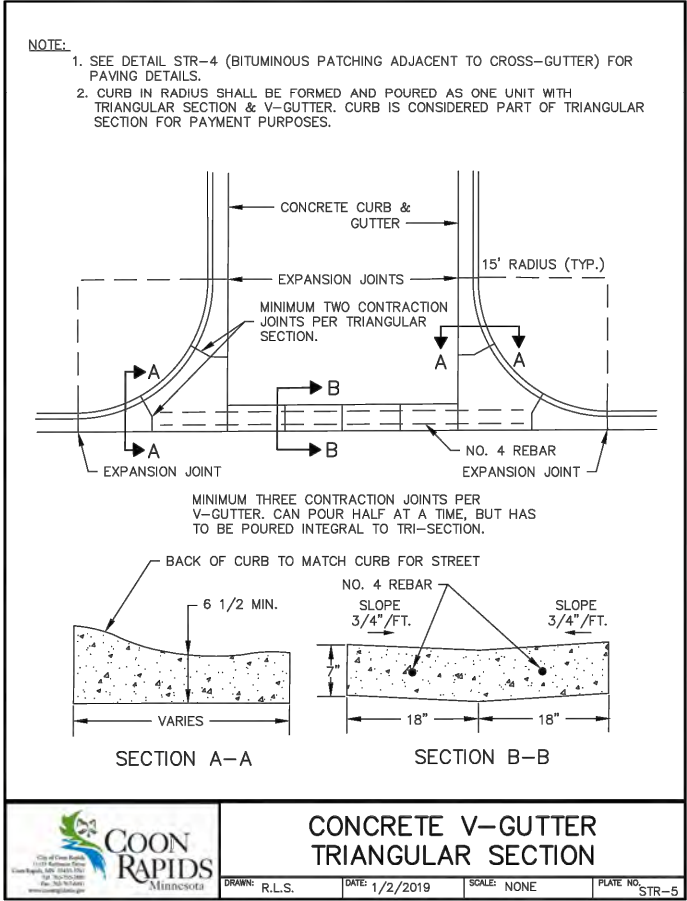
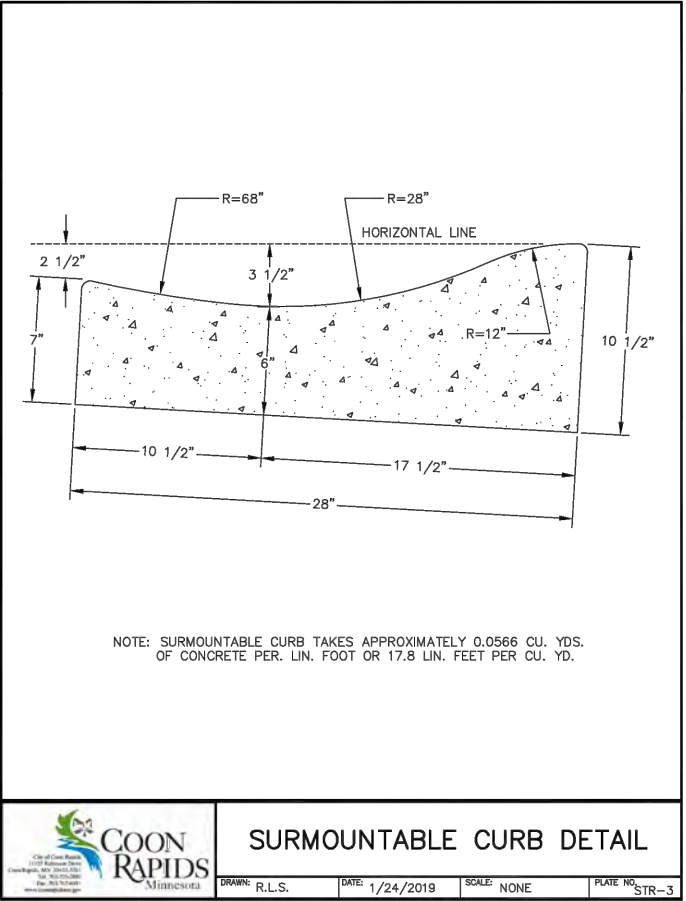
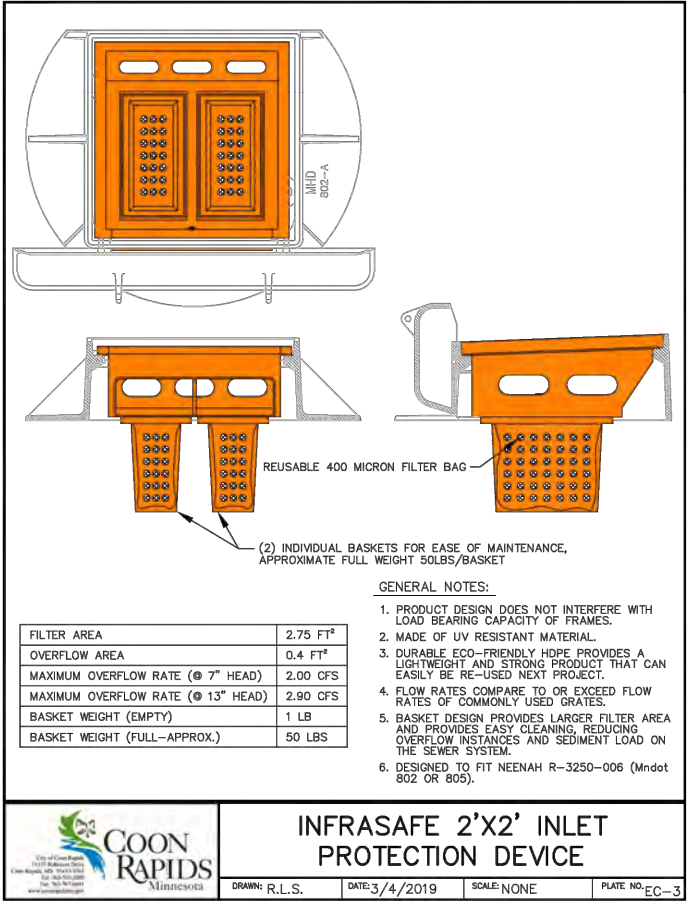
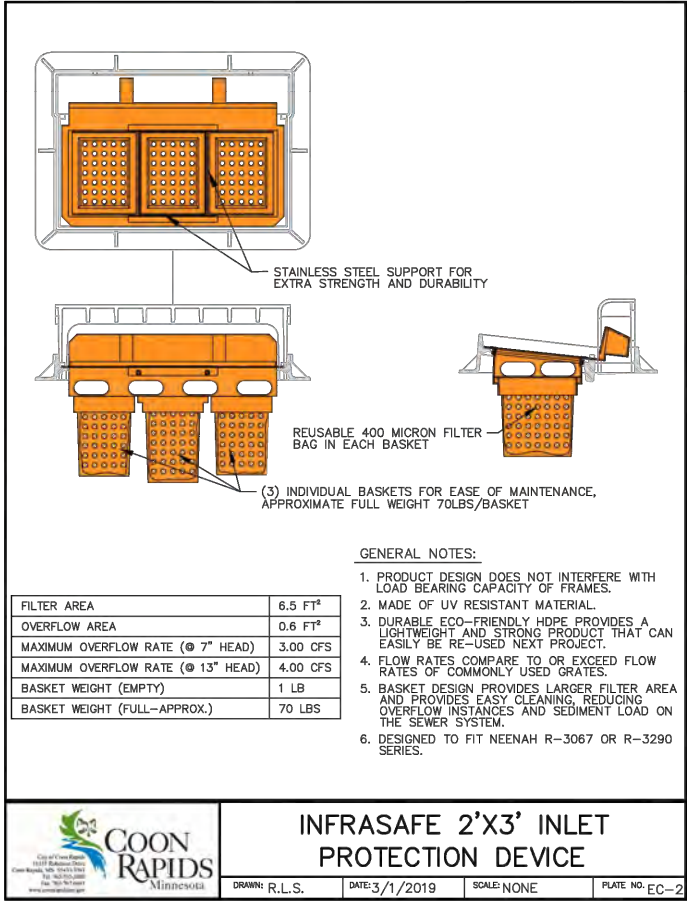
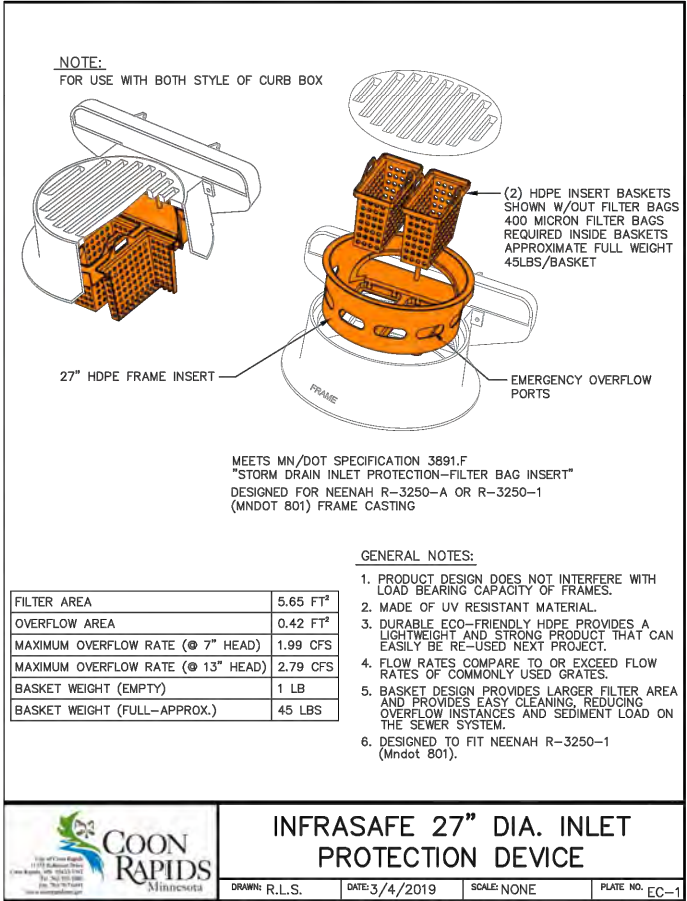
EXISTING CONCRETE CURB & GUTTER (SURMOUNTABLE)

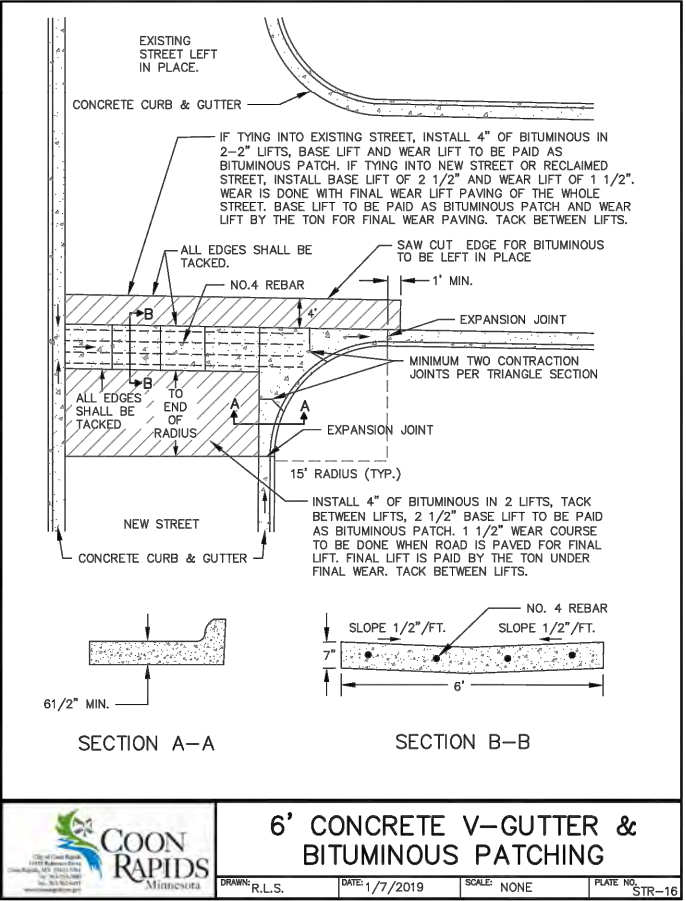
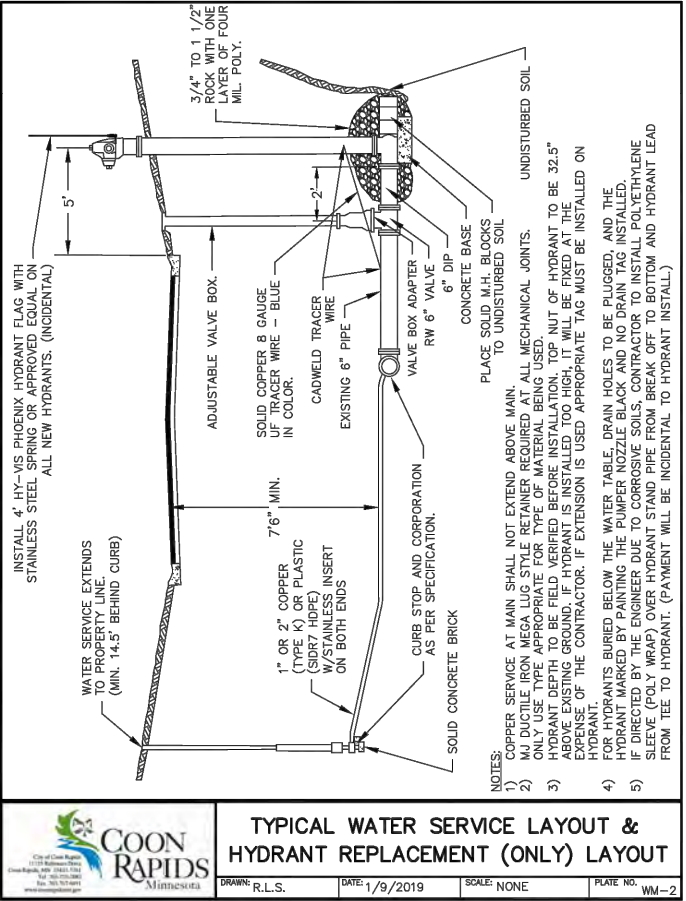
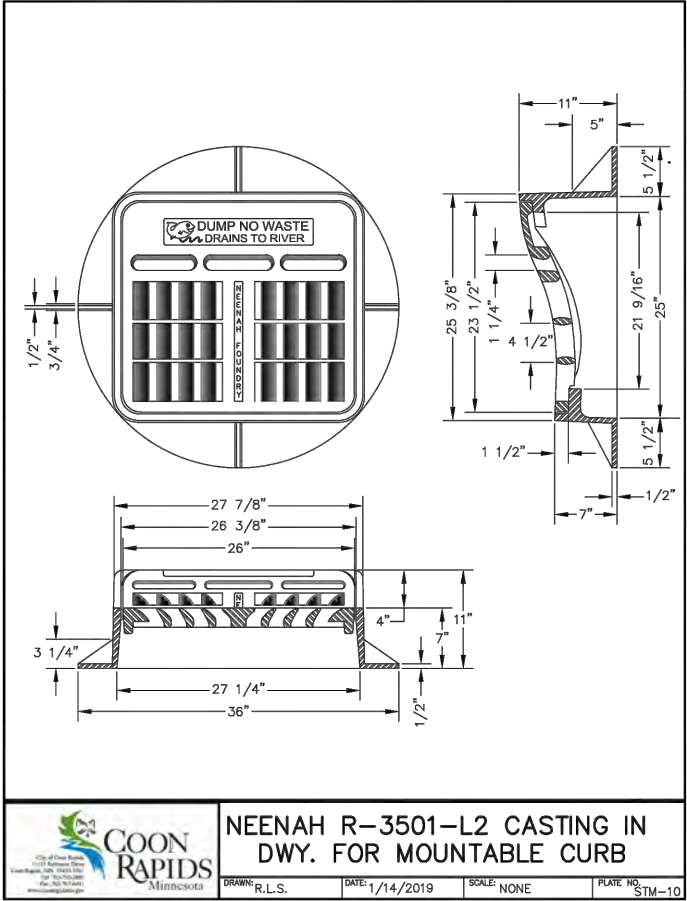
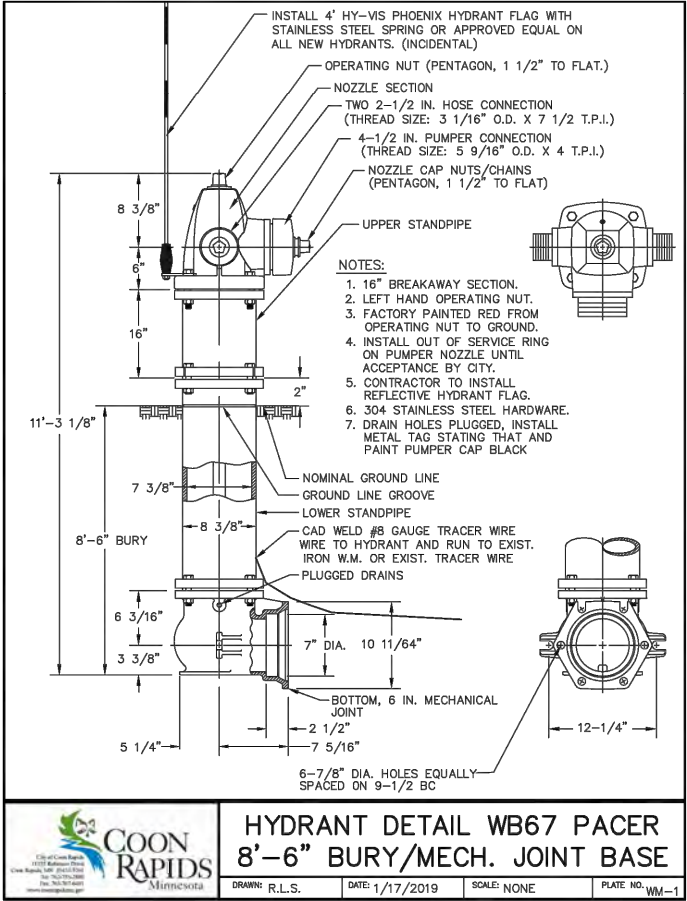
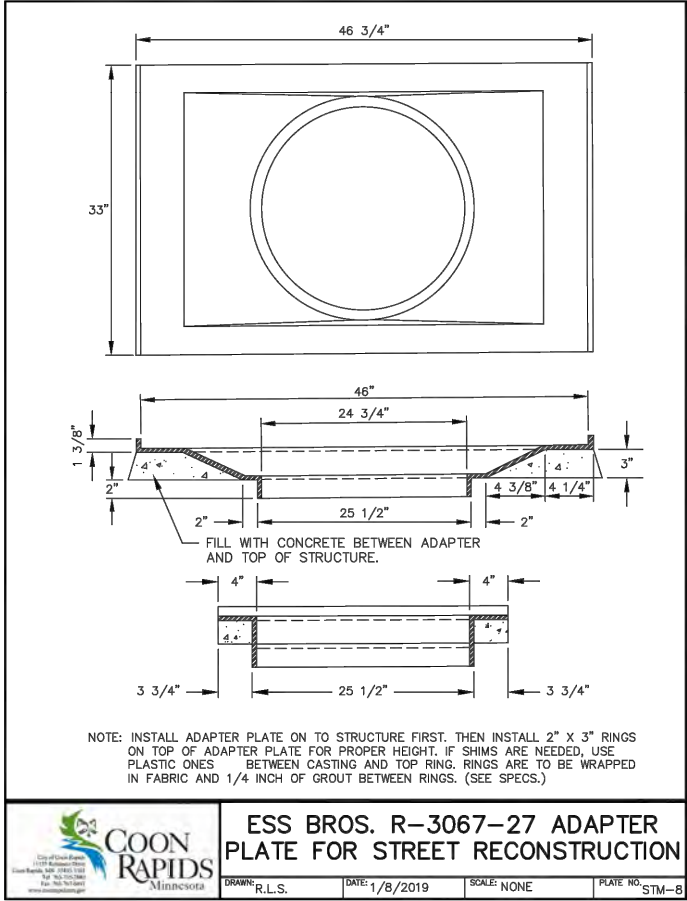
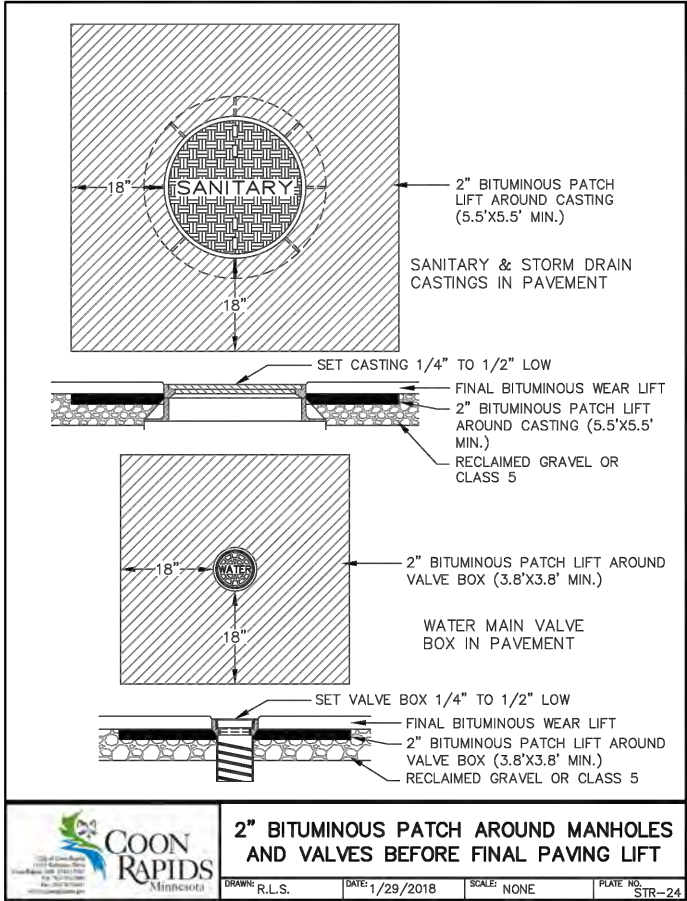
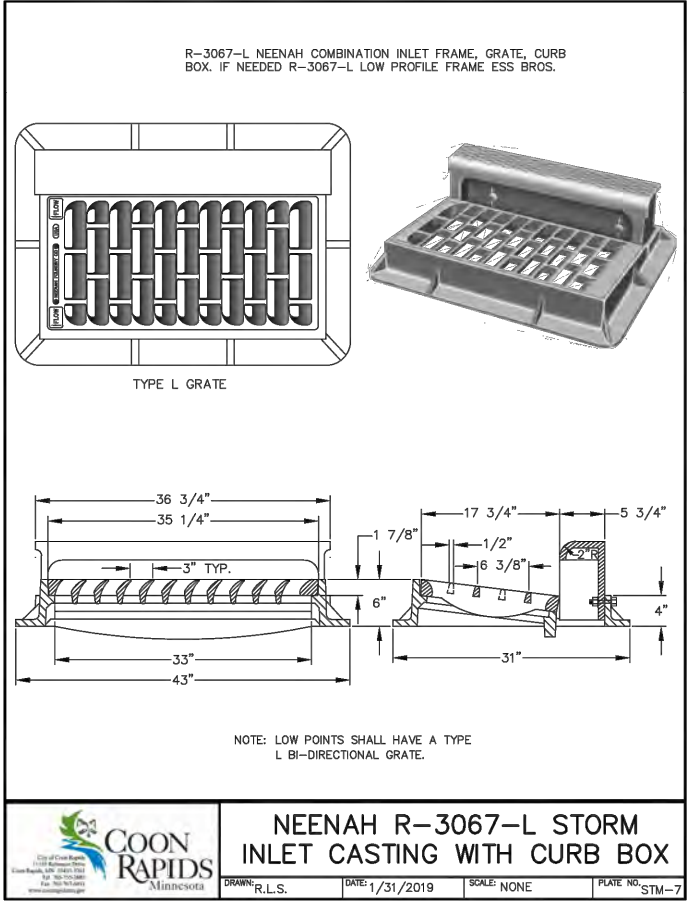
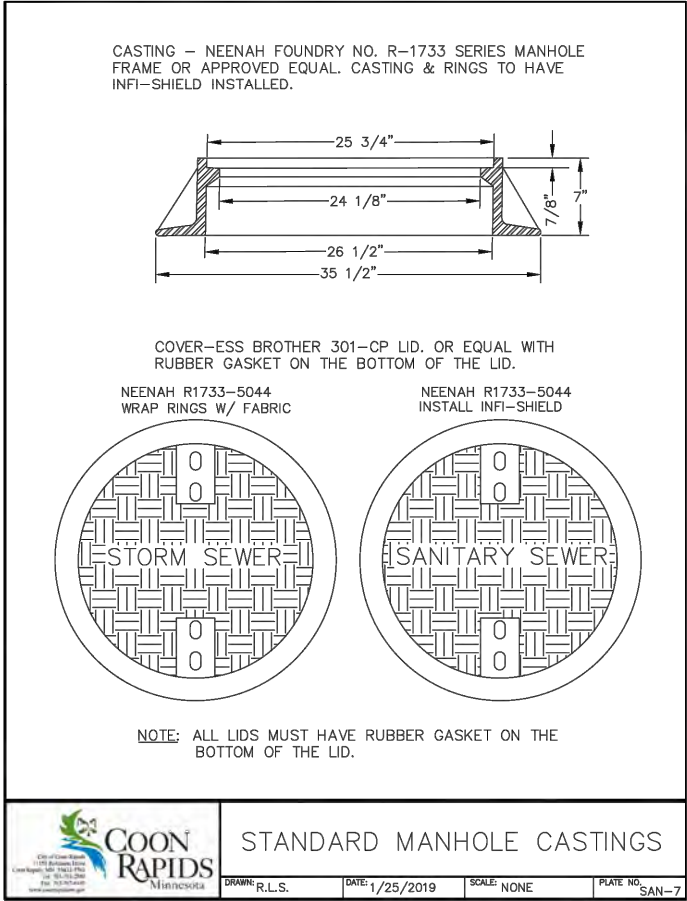
DETAIL B (131ST AVE)

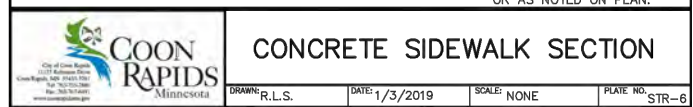
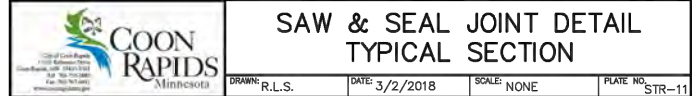
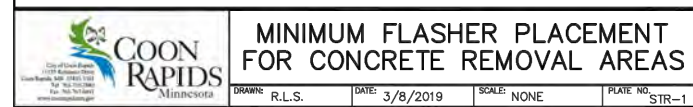
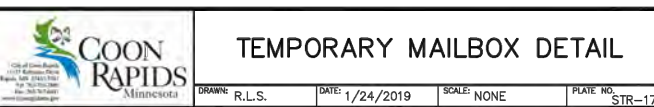
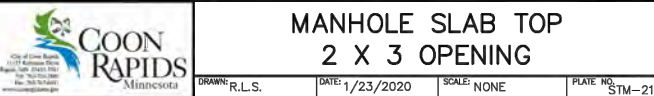
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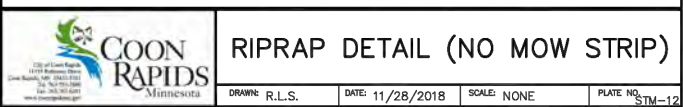
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				DRAWING BY: J.W.H.		CITY OF COON RAPIDS, MINNESOTA		
				CHECKED BY: M.C.H.				









	SAFL BAFFLE DETAIL UPSTREAM TECHNOLOGIES INC.			
	DRAWN: R.L.S.	DATE: 1/21/2020	SCALE: NONE	PLATE NO. STM-20



NO.	DATE	REVISIONS	 <div>CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491</div>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E. LICENSE # 43920  DATE: 2/7/2023	23-1 STREET RECONSTRUCTION	STANDARD PLATES
				DRAWING BY: J.W.H.			
						CHECKED BY: M.C.H.	
						CITY OF COON RAPIDS, MINNESOTA	

GENERAL NOTES:

1.

INLET PROTECTION REQUIRED ON ALL CATCH BASINS - SEE SWPPP & DETAILS IN SPECS.
2.

ALL CURB, BITUMINOUS AND CONCRETE REMOVALS SHALL BE SAW CUT FULL DEPTH TO PROVIDE A CLEAN EDGE FOR NEW JOINT. EXISTING PAVEMENT SHALL BE BUTT-JOINTED AT ALL INTERSECTIONS.
3.

CURB IS CONCRETE SURMOUNTABLE AND B6-18 (SEE TYPICAL SECTIONS ON PAGE 4 OF THIS PLAN FOR LOCATIONS). STREET WITH SURMOUNTABLE CURB WILL HAVE B6-18 CURB TRANSITIONS AT CATCH BASINS (SEE DETAIL STM-15).
4.

ALL CURB LENGTHS OVER 50' IDENTIFIED FOR REPLACEMENT SHALL BE MACHINED POURED. 5' ON EACH SIDE OF CATCH BASINS, TO BE PAID AS HAND PLACED.
5.

CURB REMOVAL SHALL BE MARKED IN THE FIELD BY THE ENGINEER. CONTRACTOR NOT TO REMOVE ANY CURB UNTIL STAKED BY THE CITY FOR GRADES. OTHERWISE IT WILL BE CONTRACTORS RESPONSIBLY TO STAKE IT AT NO COST TO THE CITY.
6.

ALL PEDESTRIAN RAMPS WILL HAVE TRUNCATED DOMES INSTALLED, ALL PEDESTRIAN RAMPS WILL BE POURED 6" THICK, GRAY IN COLOR, AND BE ADA COMPLIANT.
7.

CONTRACTOR SHALL PROVIDE A MINIMUM 24 HRS NOTICE TO RESIDENTS PRIOR TO REMOVING AND REPLACING CONCRETE THAT WILL AFFECT THEIR ABILITY TO ACCESS THEIR PROPERTY. CONCRETE WORK SHALL NOT BE ALLOWED IN DRIVEWAY AREA PRIOR TO 8 A.M.
8.

EXPANSION JOINTS IN CURB SHALL BE PLACED EVERY 100 LF AND 5' ON EACH SIDE OF CATCH BASINS AND AT RADIUS POINTS.
9.

SIDEWALK SHALL HAVE EXPANSION PLACED IN EVERY LOCATION WHERE SIDEWALK AND PEDESTRIAN RAMPS ARE REPLACED. PLACE EXPANSION BETWEEN SIDEWALK AND CURB FOR PEDESTRIAN RAMP. NEW SIDEWALK WILL HAVE EXPANSION EVERY 50 LF. EXPANSION WILL BE PLACED AT DRIVEWAYS ON EACH SIDE WHERE SIDEWALK MEETS DRIVEWAY.
10.

THE CONTRACTOR SHALL REPAIR AND MAINTAIN ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT THE PROJECT.

11.

CONTRACTOR TO USE EXISTING RECLAIM MATERIAL FROM SITE OR CITY YARD AS NEEDED TO FILL CURB AND GUTTER EDGE TO PROVIDE A REASONABLE SURFACE FOR PUBLIC SAFETY (INCIDENTAL).
12.

CONTRACTOR TO COORDINATE ANY LANDSCAPING REMOVAL, INCLUDING ROCK, PLANTS, TIMBERS, EDGING, ETC. WITH HOMEOWNER (INCIDENTAL). IF THE HOMEOWNER DOES NOT PERFORM THE REMOVALS, THE CONTRACTOR SHALL CAREFULLY MOVE THESE ITEMS OUT OF THE WAY OF CONSTRUCTION (INCIDENTAL).
13.

STABILIZING VEGETATION SHALL BE PLACED ON ALL DISTURBED AREAS WITHIN SEVEN (7) DAYS OF ROUGH GRADING.
14.

THE CITY WILL NOT BE STAKING SUB-GRADE OR RECLAIM MATERIAL CENTERLINE FINISHED GRADE EXCEPT IN THE AREAS WHERE NEW WATERMAIN IS BEING INSTALLED.
15.

STREET SWEEPING WILL TAKE PLACE DAILY OR AS DIRECTED BY THE CITY.
16.

PERIMETER SEDIMENT CONTROL TO BE INSTALLED AS NEEDED (INCIDENTAL).
17.

INSTALL NEW RINGS AND INSTALL I & I BARRIER (SEE DETAIL) ON ALL EXISTING AND NEW SANITARY CASTINGS & WRAP WITH FABRIC ALL STORM DRAIN CASTINGS. PLACE 4" THICK BIT AROUND ALL SANITARY AND STORM DRAIN MANHOLES THAT ARE IN THE ROAD. SEE DETAIL.
18.

PAYMENT FOR ALL STORM AND SANITARY SEWER STRUCTURE REPLACEMENTS TO BE PAID AS MEASURED FROM LOWEST INVERT TO TOP OF STRUCTURE (LF), BOTTOM OF RINGS. RINGS ARE PAID SEPARATELY AND BY THE EACH.
19.

ALL ITEMS SALVAGED FOR RE-USE SHALL BE STORED AND PROTECTED BY THE CONTRACTOR. ANY ITEMS DAMAGED OR LOST DURING THE STORAGE PERIOD SHALL BECOME THE CONTRACTOR'S RESPONSIBILITY TO REPLACE WITH NEW AT NO ADDITIONAL COMPENSATION.
20.

ROCK CONSTRUCTION ENTRANCES TO BE INSTALLED AT THE DIRECTION OF THE ENGINEER.
21.

SOIL STOCKPILES WILL BE FITTED WITH APPROVED SEDIMENT-TRAPPING MEASURES AND BE STABILIZED WITHIN 7 DAYS OF INACTIVITY.
22.

COMMERCIAL & RESIDENTIAL CONCRETE DRIVEWAYS THAT CONTAIN REBAR SHALL HAVE REBAR INCLUDED IN THE REPLACEMENT SECTION. REBAR SHALL BE DRILLED INTO EXISTING CONCRETE DRIVEWAYS.

GENERAL CONSTRUCTION NOTES

1.

THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
2.

THE EXISTING SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS QUALITY LEVEL "D" UNLESS OTHERWISE NOTED. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38/02, ENTITLED STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF SUBSURFACE QUALITY DATA BY THE FHWA. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE ENGINEER.
3.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT GOPHER STATE ONE CALL. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE BEFORE COMMENCING WORK.
5.

ANY SITE FEATURES NOT NOTED FOR REMOVAL SHALL BE PROTECTED BY THE CONTRACTOR. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALK DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER AND OWNER.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED.

GENERAL EROSION CONTROL NOTES

1.

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED COVERING CONSTRUCTION ACTIVITIES. THE SWPPP IS INCLUDED IN THE PROJECT SPECIFICATIONS.
2.

THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THIS DRAWING, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
3.

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.
4.

THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
5.

ALL STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THESE AREAS WITH SOME PROTECTIVE MEASURE WILL BE NECESSARY.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
7.

ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
8.

TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF ROUGH GRADING OR INACTIVITY.
9.

EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE INSTALLED. PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES.
10.

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION AS REQUIRED BY ALL JURISDICTIONS UNTIL NO LONGER REQUIRED OR COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENT CONTROL SHALL BE CHECKED BUY A CERTIFIED PERSON AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
- 10.1.

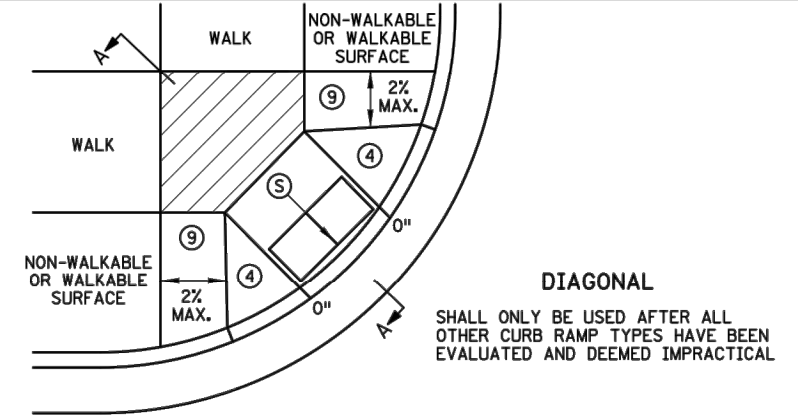
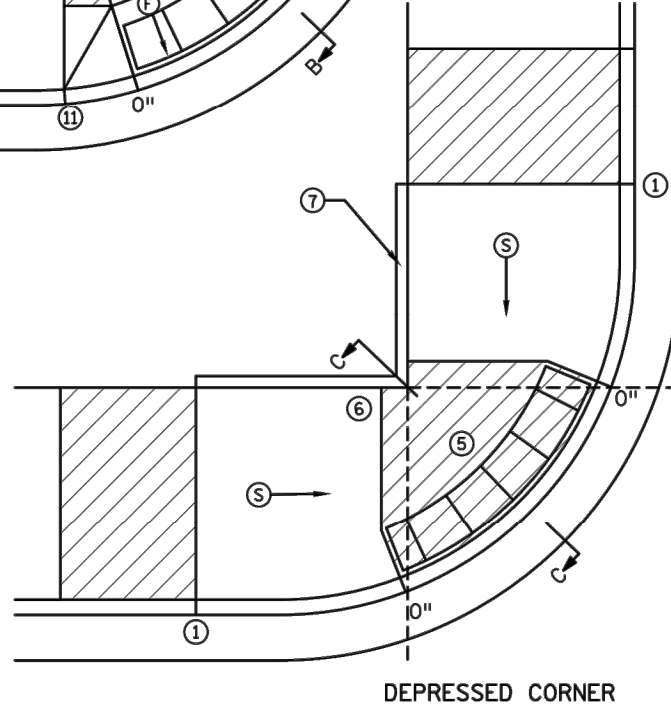
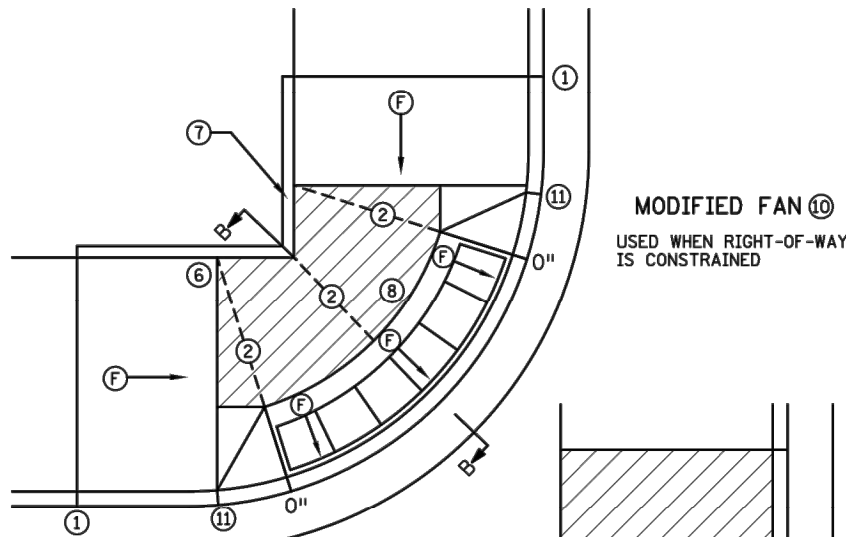
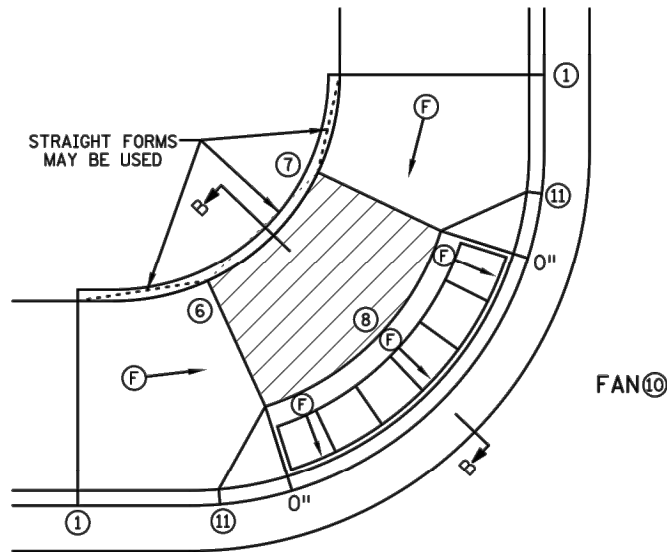
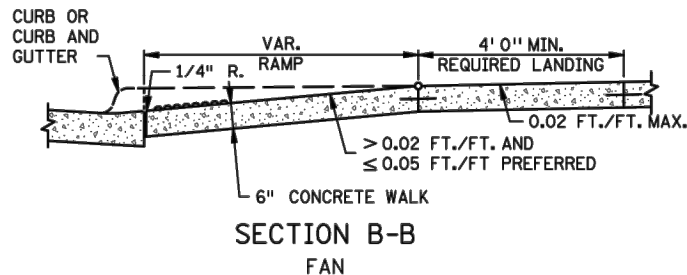
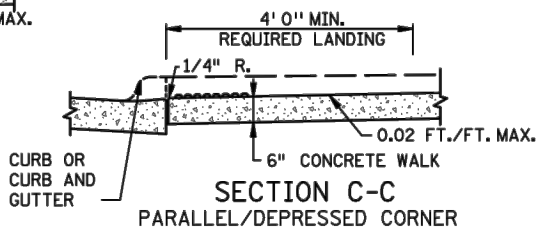
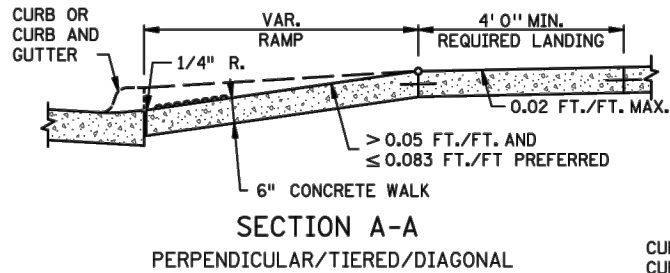
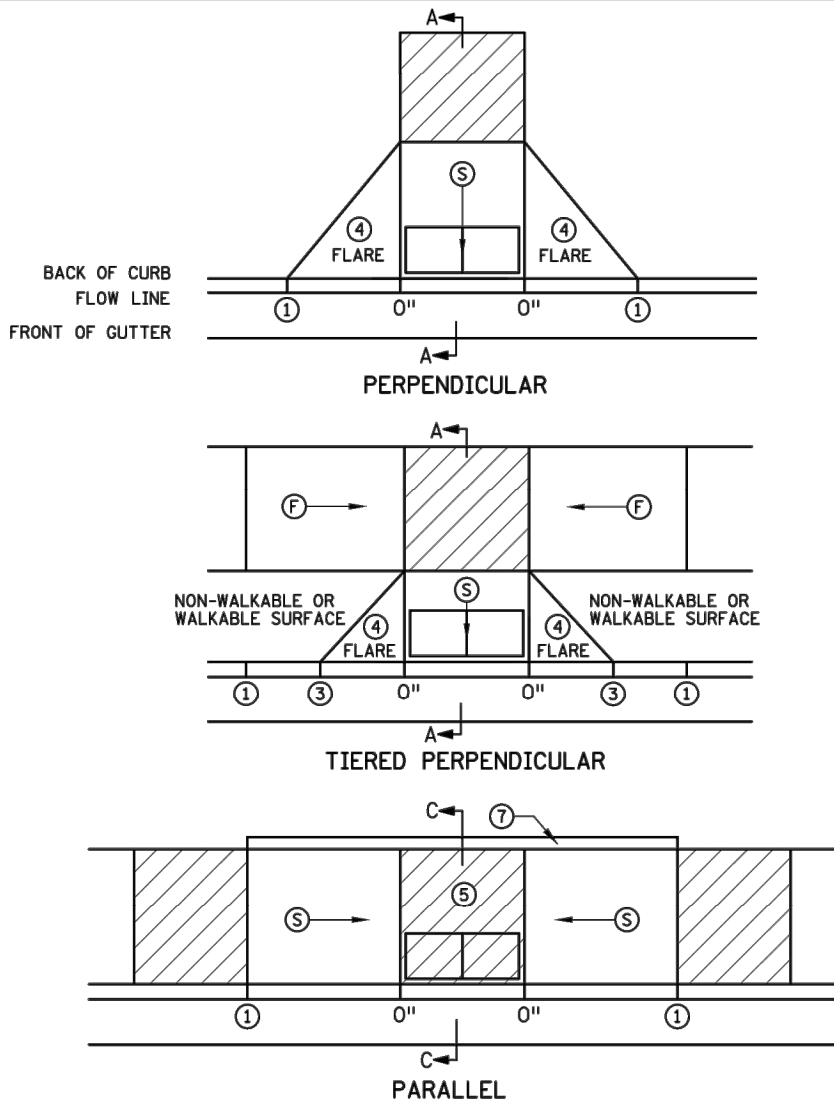
INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
- 10.2.

ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD GROWTH IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO THE STANDARD SPECIFICATIONS.
- 10.3.

SILT FENCE SHOULD BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE THIRD THE HEIGHT OF THE SILT FENCE.
- 10.4.

THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY.
- 10.5.

ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.



- NOTES:
- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMP THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH, EXCEPT AS STATED IN 6 BELOW.
- TO ENSURE RAMP AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR, FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE. MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.
- ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMP. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.
- WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.
- RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
- 1 MATCH FULL HEIGHT CURB.
 - 2 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
 - 3 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
 - 4 SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
 - 5 DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
 - 6 THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
 - 7 WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
 - 8 A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
 - 9 PAVE FULL WALK WIDTH.
 - 10 "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
 - 11 INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
	LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
	CURB HEIGHT

REVISION:
APPROVED: 11-04-2021
JEFFREY PERKINS OPERATIONS DIVISION



STANDARD PLAN 5-297.250	1 OF 6
APPROVED: 11-04-2021	
REVISED:	
STATE PROJ. NO.	(TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

23-1 STREET RECONSTRUCTION

CITY OF COON RAPIDS, MINNESOTA

PEDESTRIAN CURB RAMP DETAILS

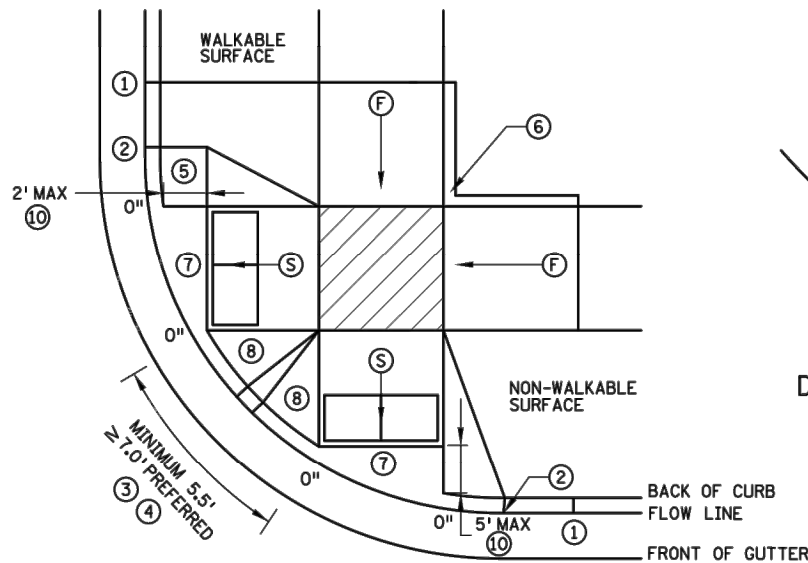
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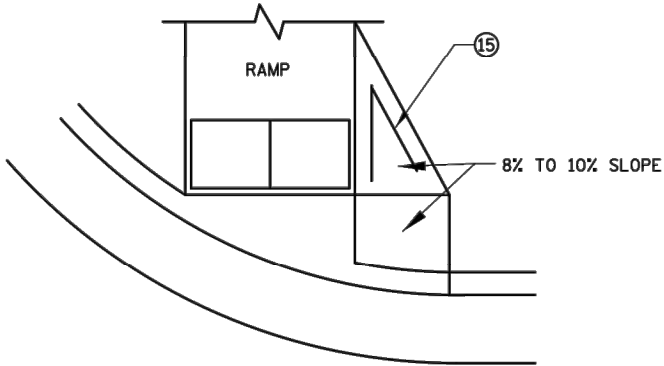
NO	DATE	REVISIONS

CITY OF COON RAPIDS
ENGINEERING DEPARTMENT
11155 ROBINSON DRIVE
COON RAPIDS, MN. 55433-3761
763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA.
DRAWING BY: J.W.H.	MARK C. HANSEN P.E. LICENSE # 43920
CHECKED BY: M.C.H.	DATE: 2/7/2023

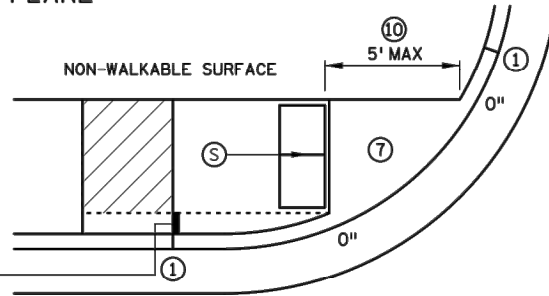


COMBINED DIRECTIONAL

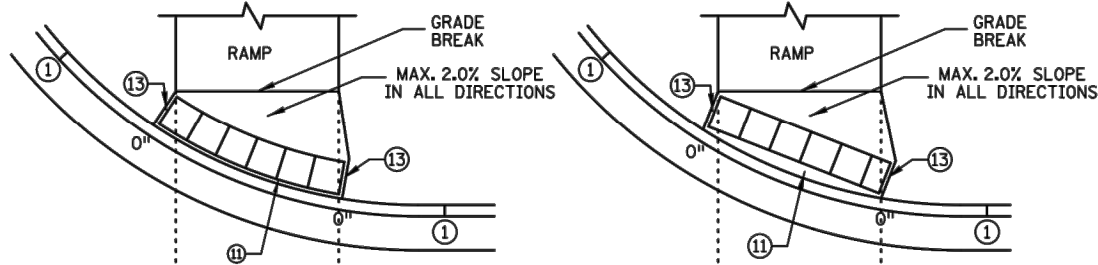


DIRECTIONAL RAMP WALKABLE FLARE

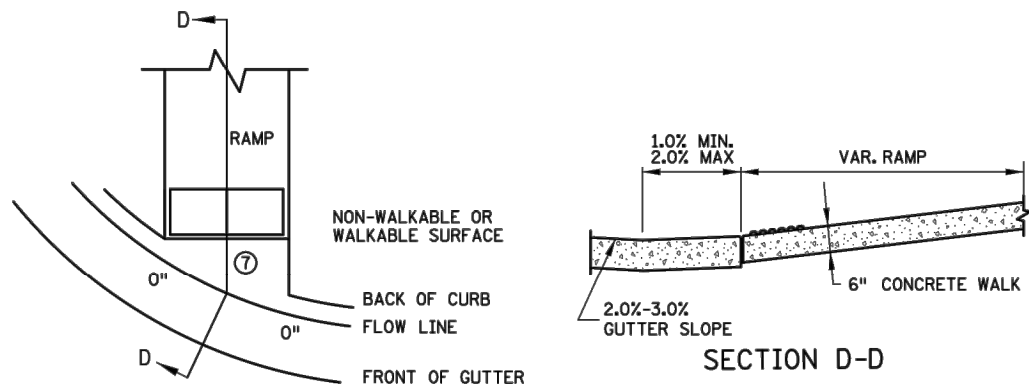
IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



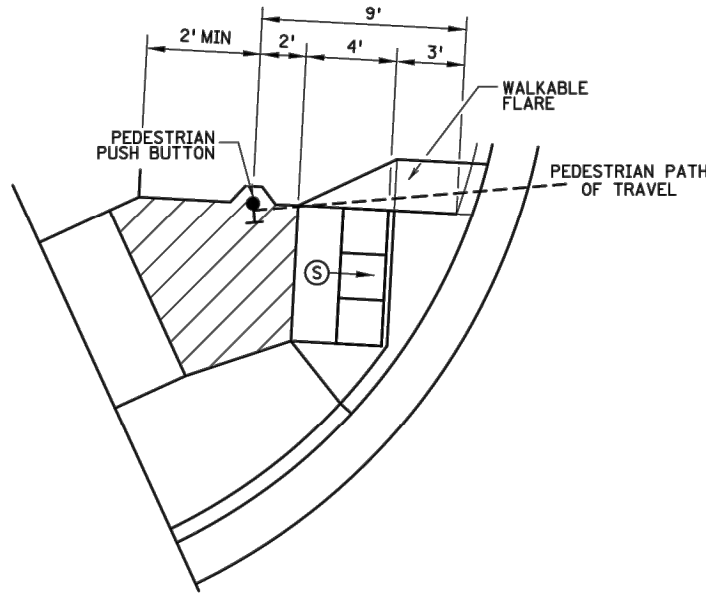
STANDARD ONE-WAY DIRECTIONAL ⑨



ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB



CURB FOR DIRECTIONAL RAMPS ⑭



SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB
PRIMARYLY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR, 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

- ① MATCH FULL CURB HEIGHT.
- ② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.
- ③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).
- ④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.
- ⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.
- ⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
- ⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- ⑧ 8% TO 10% WALKABLE FLARE.
- ⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- ⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
- ⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
- ⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.
- ⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.
- ⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

⑥ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

⑦ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX. 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021

Jeffrey J. Perkins
JEFFREY PERKINS
OPERATIONS DIVISION



STANDARD PLAN 5-297.250

2 OF 6

APPROVED: 11-04-2021

REVISED:

STATE PROJ. NO.

PEDESTRIAN CURB RAMP DETAILS

(T.H.) SHEET NO. OF SHEETS

NO	DATE	REVISIONS

COON RAPIDS
MINNESOTA
CITY OF COON RAPIDS
ENGINEERING DEPARTMENT
11155 ROBINSON DRIVE
COON RAPIDS, MN. 55433-3761
763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.
DRAWING BY: J.W.H.
CHECKED BY: M.C.H.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA.
MARK C. HANSEN P.E.
LICENSE # 43920
DATE: 2/7/2023

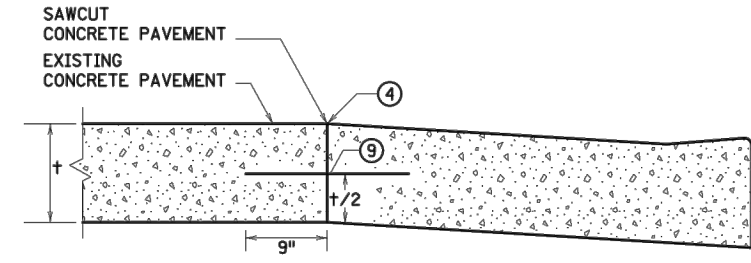
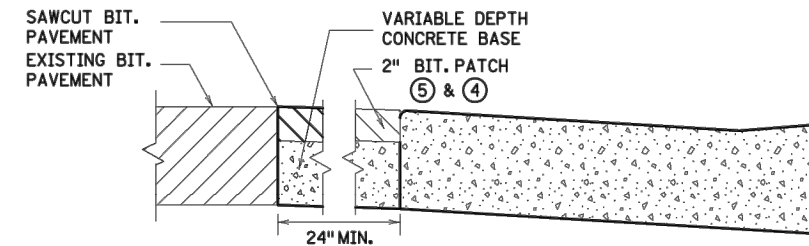
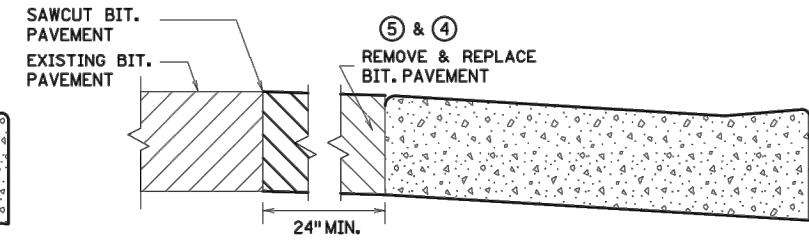
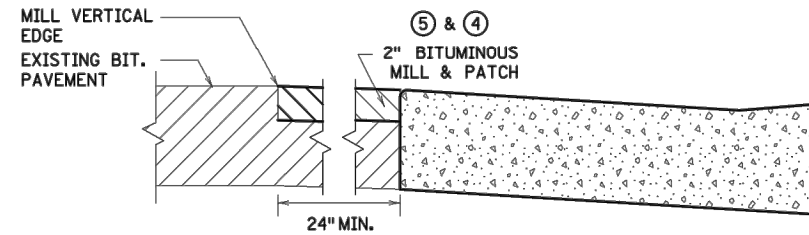
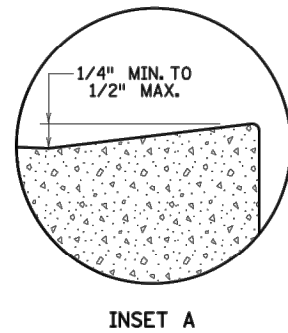
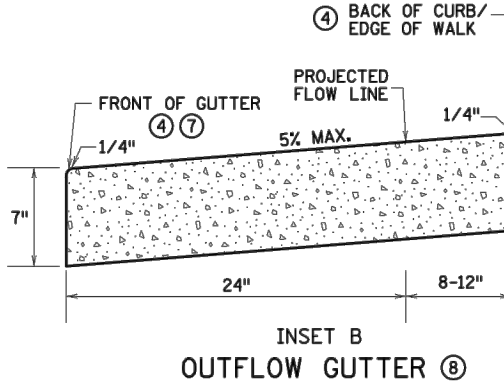
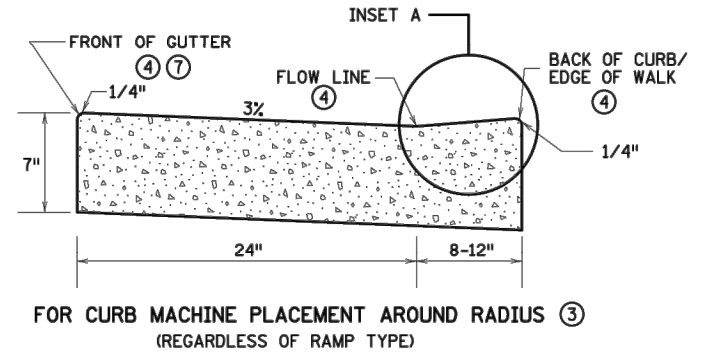
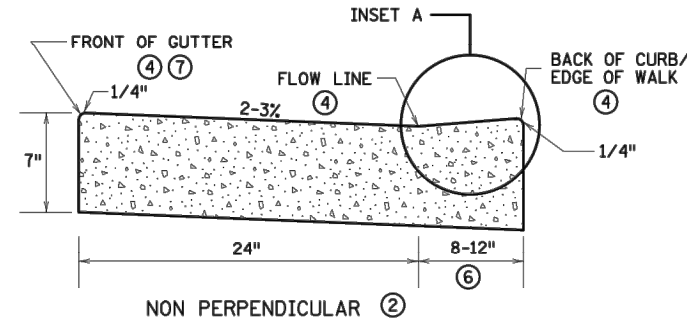
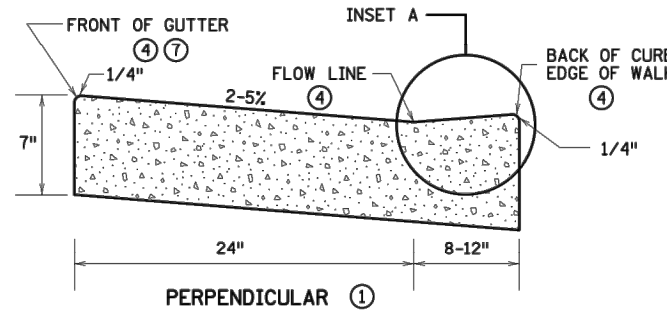
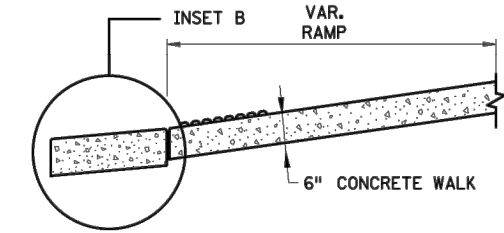
23-1 STREET RECONSTRUCTION

CITY OF COON RAPIDS, MINNESOTA

PEDESTRIAN CURB RAMP DETAILS

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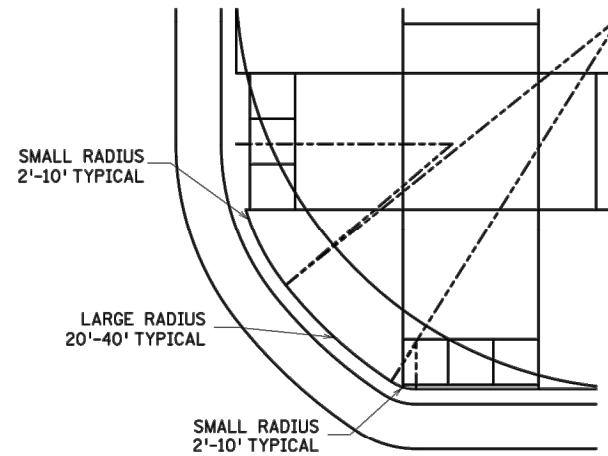
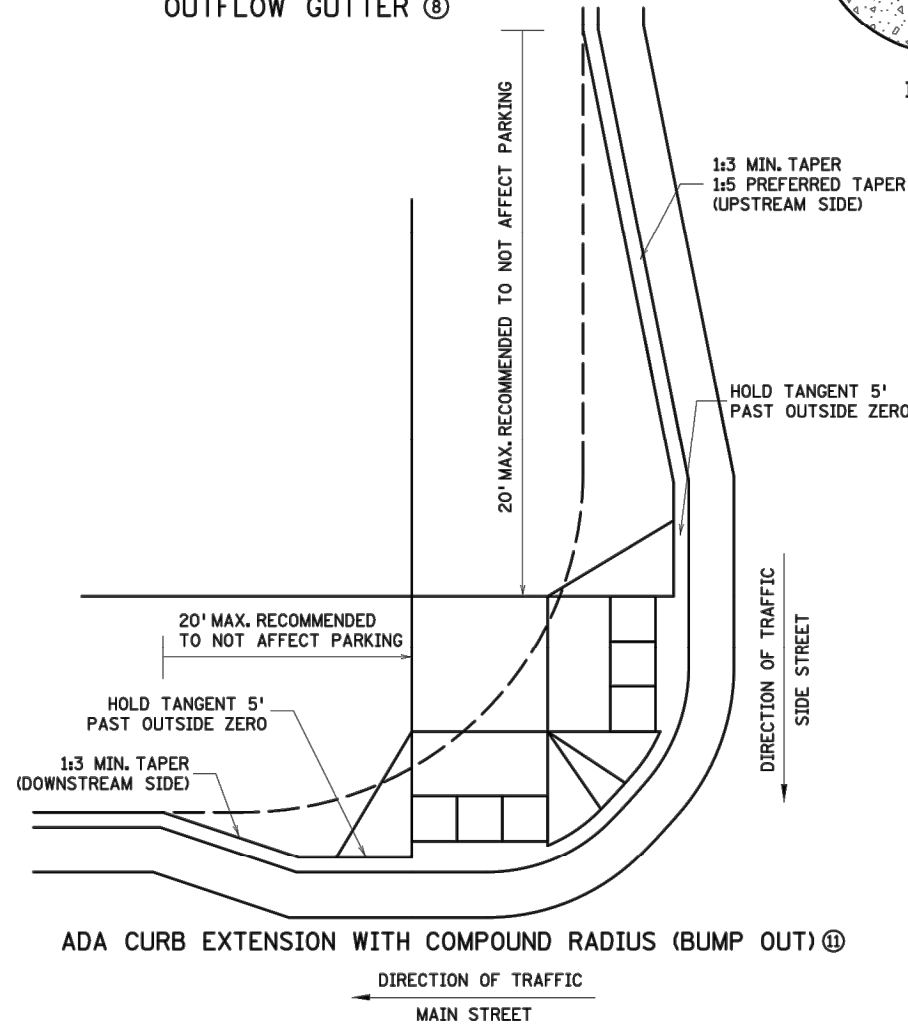


ONLY ALLOWED PER ENGINEER'S APPROVAL

PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER FOR USE ON CURB RAMP RETROFITS

NOTES:

- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM. NO PONDING SHALL BE PRESENT IN THE PAR.
- ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
- FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMP.
- FOR USE AT CURB RAMP WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.
- BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMP.
- THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".
- ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
- VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.
- TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.
- SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.
- DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1' MINIMUM FROM ALL JOINTS.
- HELPS PROVIDE TWO SEPARATE RAMPS, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.
- CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED. PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.



COMBINED DIRECTIONAL (COMPOUND RADIUS)

REVISION:
APPROVED: 11-04-2021
<i>Jeffrey J. Perkins</i>
JEFFREY PERKINS
OPERATIONS DIVISION



STANDARD PLAN 5-297.250	3 OF 6
APPROVED: 11-04-2021	REVISED:
STATE PROJ. NO.	(TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

NO	DATE	REVISIONS

COON RAPIDS
CITY OF COON RAPIDS
ENGINEERING DEPARTMENT
11155 ROBINSON DRIVE
COON RAPIDS, MN. 55433-3761
763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA.
DRAWING BY: J.W.H.	MARK C. HANSEN P.E. LICENSE # 43920
CHECKED BY: M.C.H.	DATE: 2/7/2023

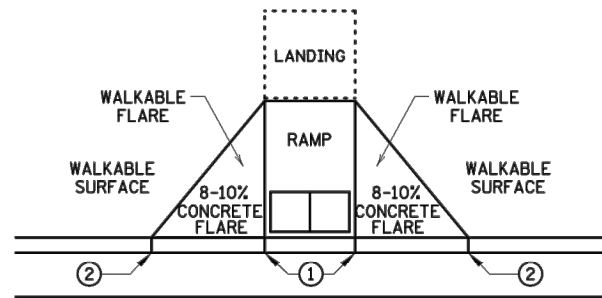
23-1 STREET RECONSTRUCTION

CITY OF COON RAPIDS, MINNESOTA

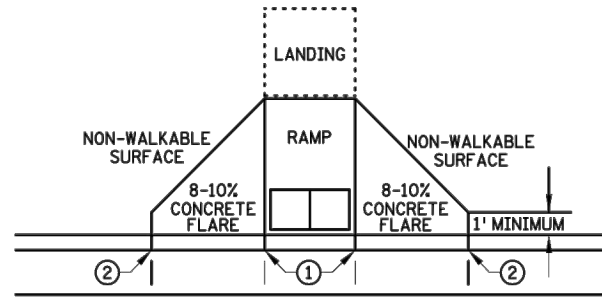
PEDESTRIAN CURB RAMP DETAILS

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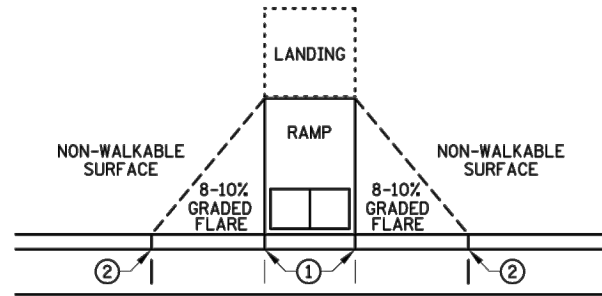
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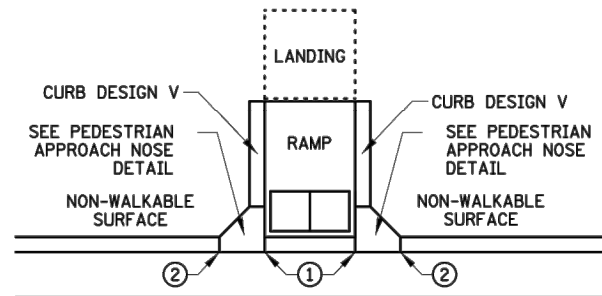
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

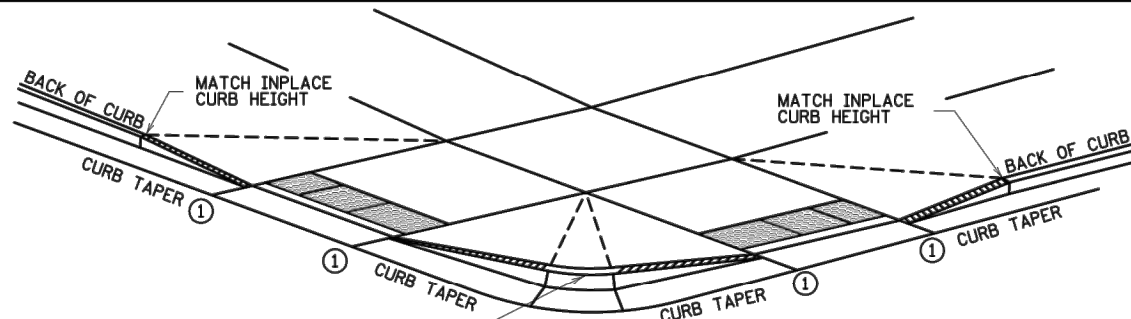


GRADED FLARES



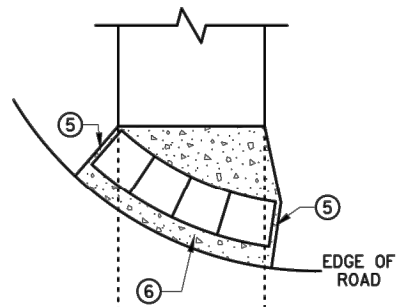
RETURNED CURB ④

TYPICAL SIDE TREATMENT OPTIONS ③ ⑩

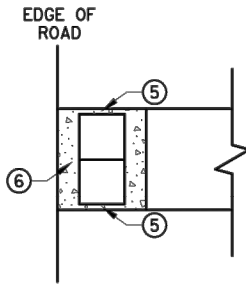


3" MINIMUM CURB HEIGHT, 4" PREFERRED
(MEASURED AT FRONT FACE OF CURB)
FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH CURB AND GUTTER ⑦

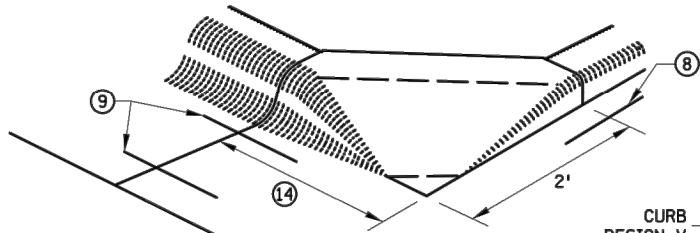


RADIAL DETECTABLE WARNING

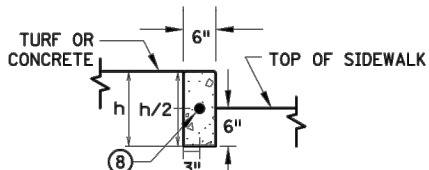


RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

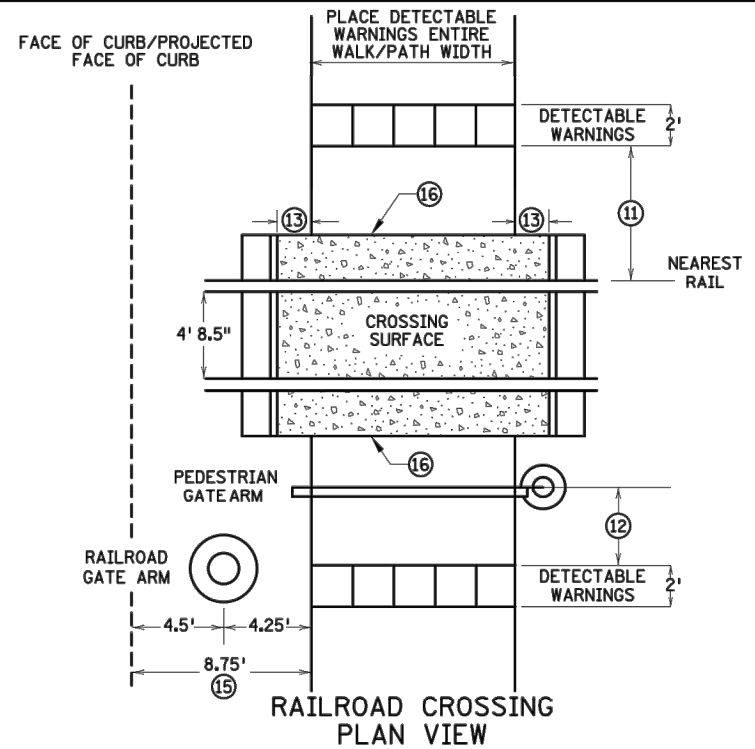


SECTION A-A



SECTION B-B

PEDESTRIAN APPROACH
NOSE DETAIL
(FOR RETURNED CURB
SIDE TREATMENT)



NOTES:

INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3 INCH CURB HEIGHT. INCREASE CURB TAPER LENGTH AT LESS THAN 8% OR REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

① 0" CURB HEIGHT. SEE INSET A ON SHEET 3 OF 6.

② FULL CURB HEIGHT.

③ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.

④ TYPICALLY USED FOR MEDIANS AND ISLANDS.

⑤ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑥ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.

⑦ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS, AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

⑧ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.

⑨ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.

⑩ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6" LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE. CONSTRUCT THESE TAPERS AT 0"-3" AT 8-10%, THEN LESS THAN 5% FROM 3" CURB TO FULL CURB HEIGHT.

⑪ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.

⑫ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑪.

⑬ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.

⑭ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.

⑮ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.

⑯ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

REVISION:

APPROVED: 11-04-2021

Jeffrey J. Perkins

JEFFREY PERKINS

OPERATIONS DIVISION

MINNESOTA

DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 4 OF 6

APPROVED: 11-04-2021

REVISED:

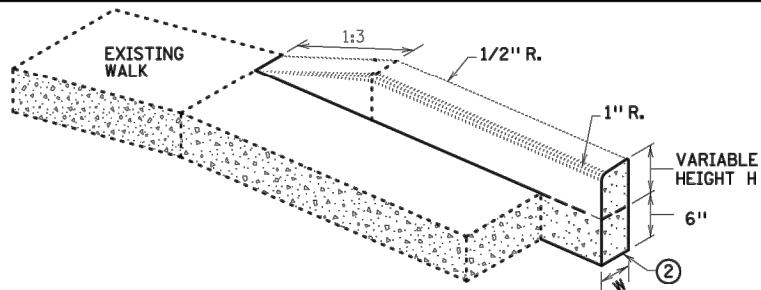
THOMAS STYBICKI

STATE DESIGN ENGINEER

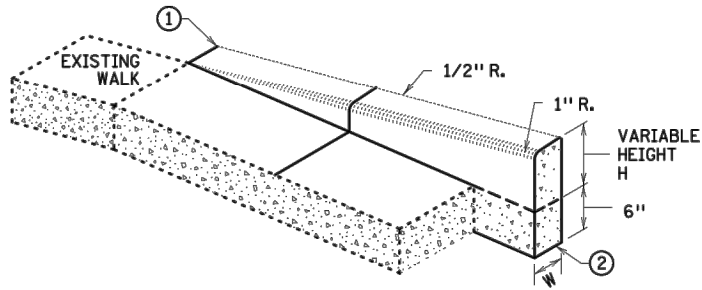
PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

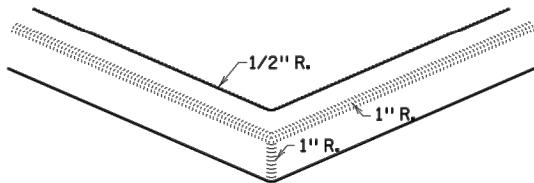
NO	DATE	REVISIONS	COON RAPIDS	CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491	DESIGNED BY: J.W.H. DRAWING BY: J.W.H. CHECKED BY: M.C.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E. LICENSE # 43920	DATE: 2/7/2023	23-1 STREET RECONSTRUCTION CITY OF COON RAPIDS, MINNESOTA	PEDESTRIAN CURB RAMP DETAILS	12 63
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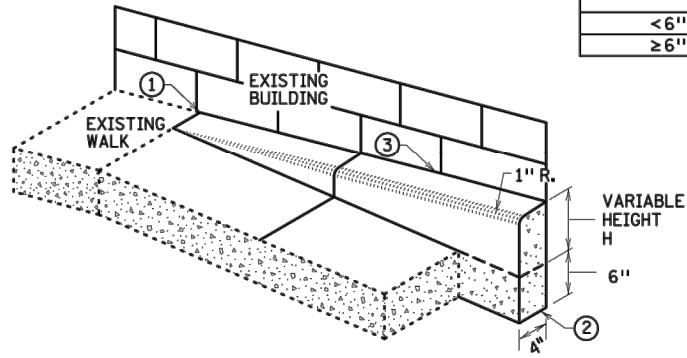
V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS



V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS

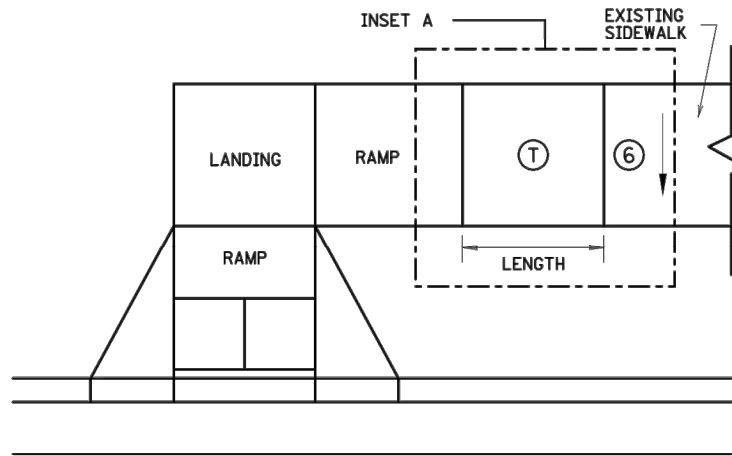


V CURB INTERSECTION

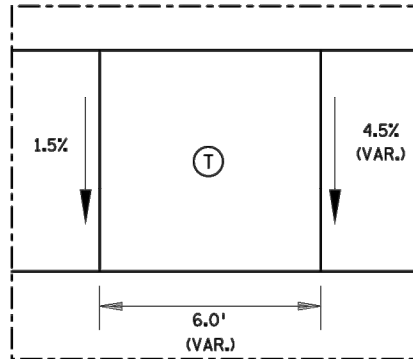


V CURB ADJACENT TO BUILDING
OR BARRIER

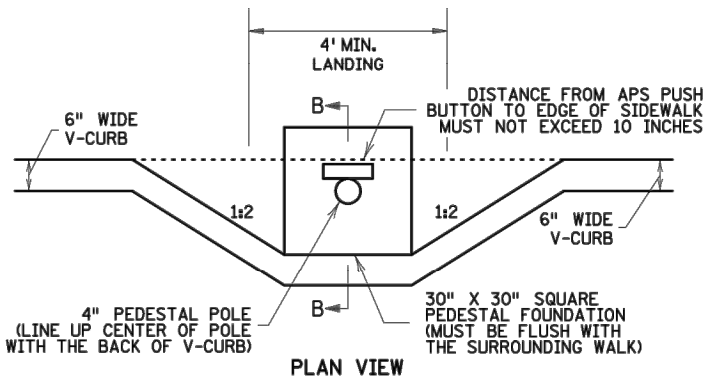
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



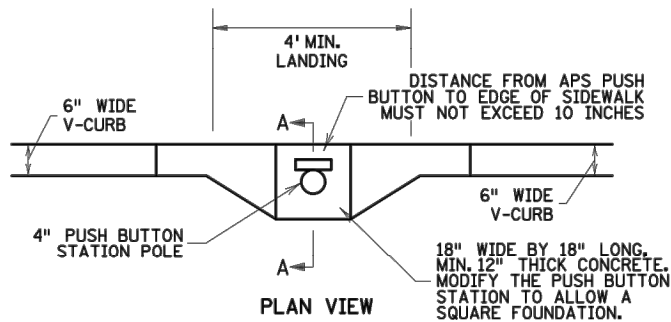
TRANSITION PANEL ④ ⑤



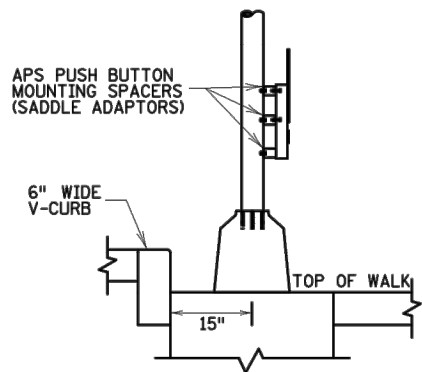
INSET A



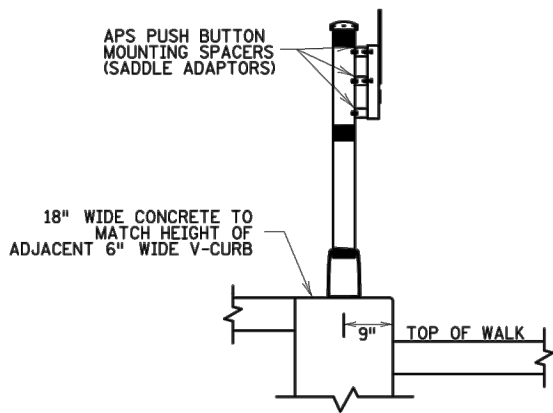
PLAN VIEW



PLAN VIEW



SECTION B-B
SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



SECTION A-A
PUSH BUTTON STATION (V-CURB)

NOTES:

- A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.
- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- ① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- ③ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM 1/2" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.
- ④ THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.
- ⑤ TRANSITION PANELS ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).
- ⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

- ⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- ④ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.
- ① TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

REVISION:
APPROVED: 11-04-2021 <i>Jeffrey J. Perkins</i> JEFFREY PERKINS OPERATIONS DIVISION



STANDARD PLAN 5-297.250	5 OF 6
APPROVED: 11-04-2021 REVISOR: <i>Tom Styrbicki</i> THOMAS STYRBICKI STATE DESIGN ENGINEER	STATE PROJ. NO.

PEDESTRIAN CURB RAMP DETAILS

(TH) SHEET NO. OF SHEETS

NO	DATE	REVISIONS

COON RAPIDS
MINNESOTA
CITY OF COON RAPIDS
ENGINEERING DEPARTMENT
11155 ROBINSON DRIVE
COON RAPIDS, MN. 55433-3761
763-755-2880 FAX 163-767-6491

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CHECKED BY: M.C.H.	DATE: 2/7/2023

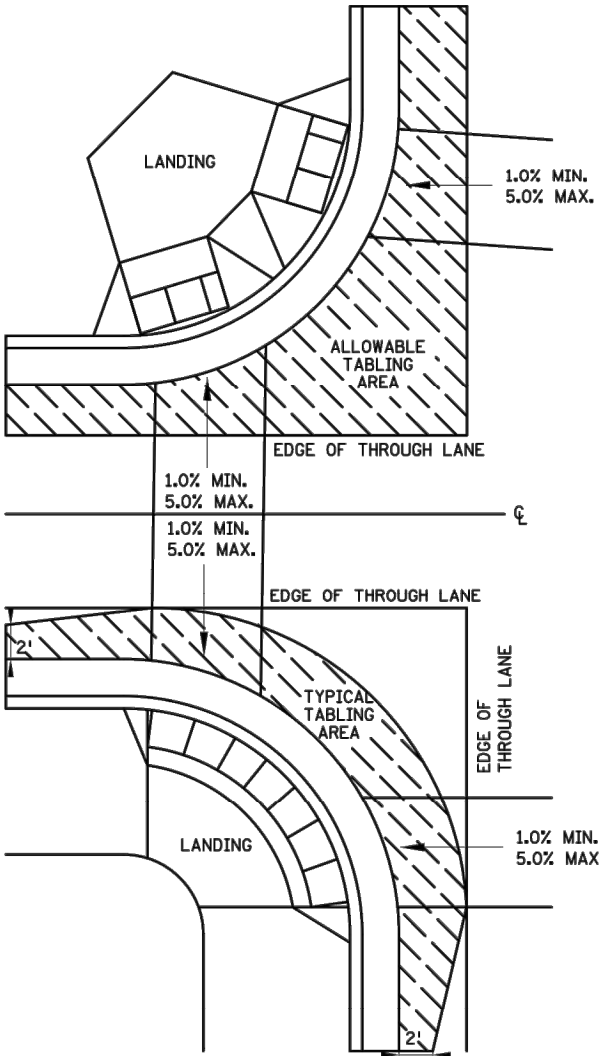
23-1 STREET RECONSTRUCTION

CITY OF COON RAPIDS, MINNESOTA

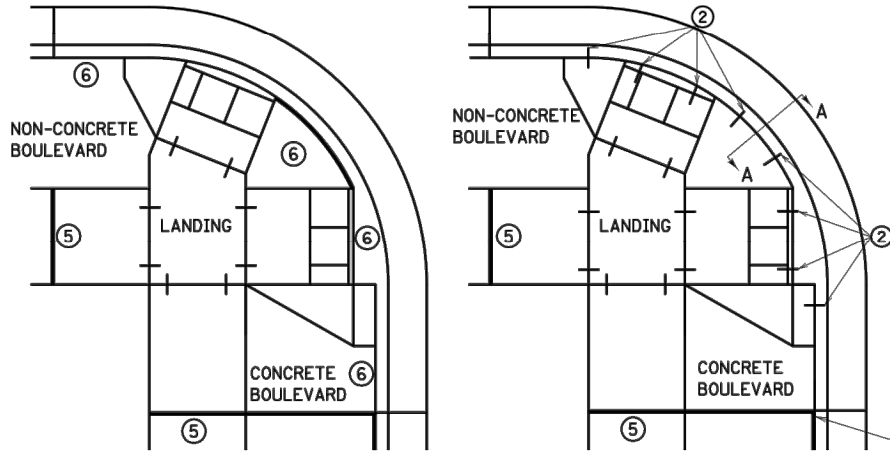
PEDESTRIAN CURB
RAMP DETAILS

13

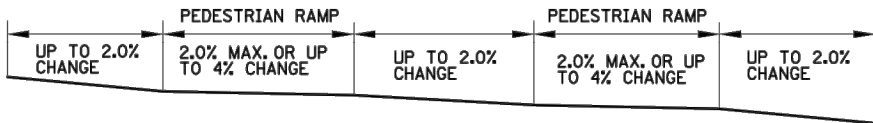
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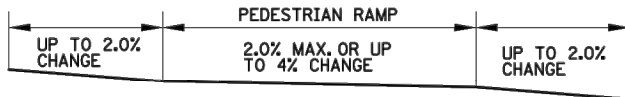
CURB LINE AND ROAD CROSSING ADJUSTMENTS



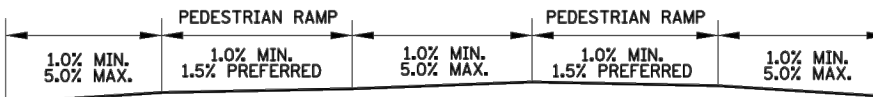
EXPANSION MATERIAL PLACEMENT FOR CONCRETE ROADWAYS
CURB LINE REINFORCEMENT ④
PLACEMENT ON BITUMINOUS ROADWAYS



FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



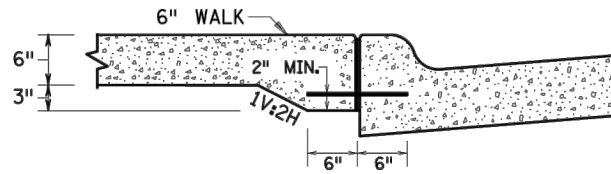
FLOW LINE PROFILE "TABLE" - FAN



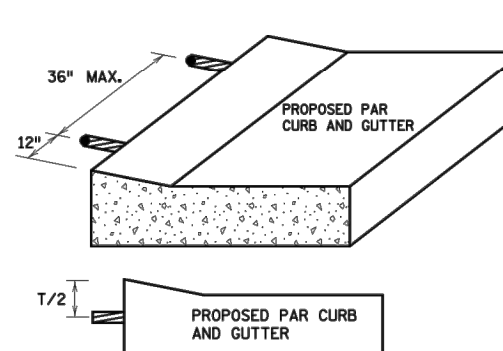
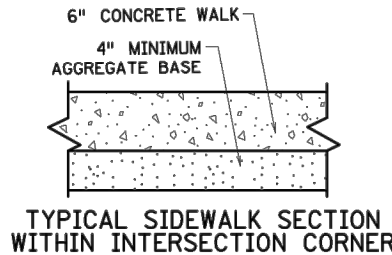
FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS



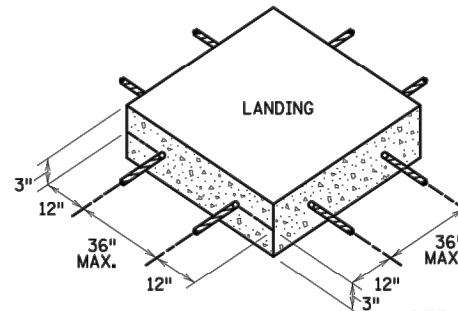
FLOW LINE PROFILE RAISE - FAN



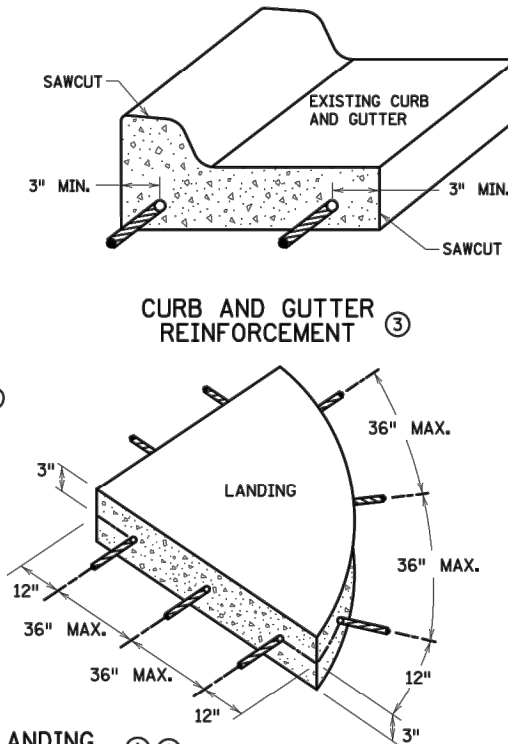
SECTION VIEW A-A
THICKENED SECTION
THROUGH CURB RAMP FLARES



CURB RAMP REINFORCEMENT DETAILS ② ④



SEPARATE LANDING
POUR REINFORCEMENT ① ②



CURB AND GUTTER
REINFORCEMENT ③

GENERAL NOTES:

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK, IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
- 2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
- 3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
- 4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
- 2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
- 3) 5.0% RECOMMENDED MAX. FLOW LINE
- 4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

REVISION:

APPROVED: 11-04-2021

Jeffrey J. Perkins
JEFFREY PERKINS
OPERATIONS DIVISION



STANDARD PLAN 5-297.250

6 OF 6

PEDESTRIAN CURB RAMP DETAILS

APPROVED: 11-04-2021
REVISED:

Thomas J. Tyrbicki
THOMAS TYRBIICKI
STATE DESIGN ENGINEER

STATE PROJ. NO.

(TH)

SHEET NO. OF SHEETS

23-1 STREET RECONSTRUCTION

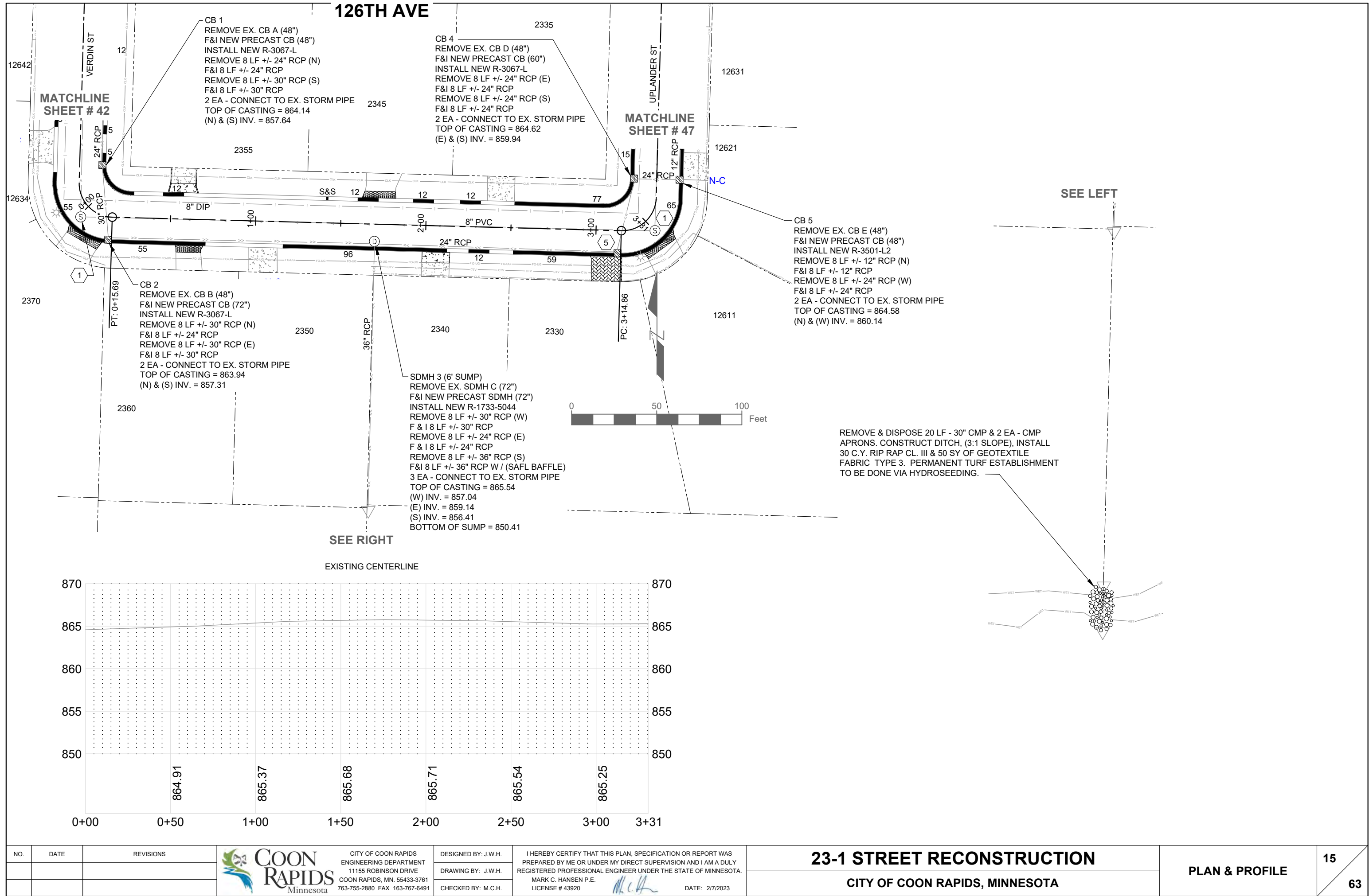
CITY OF COON RAPIDS, MINNESOTA

PEDESTRIAN CURB
RAMP DETAILS

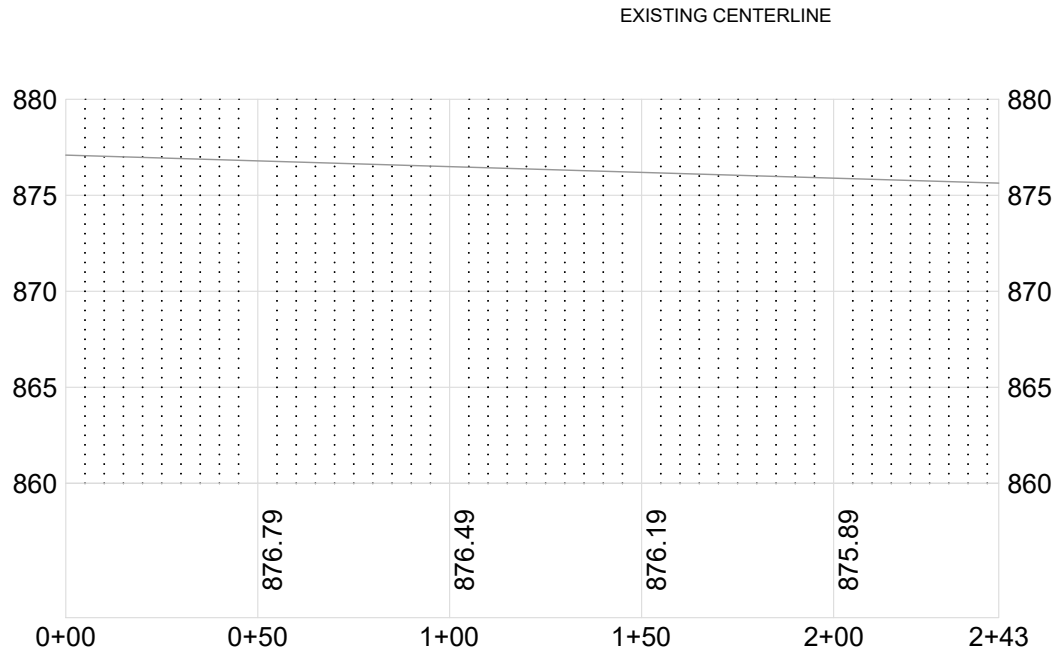
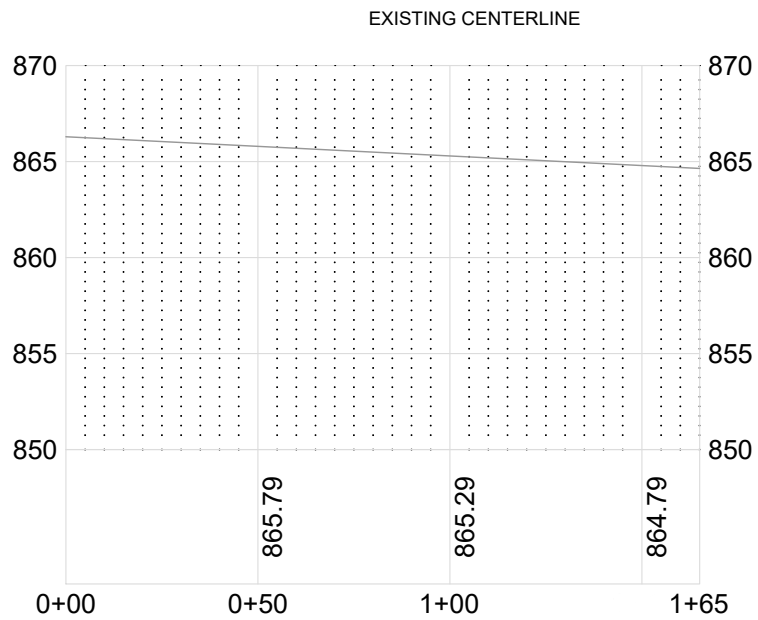
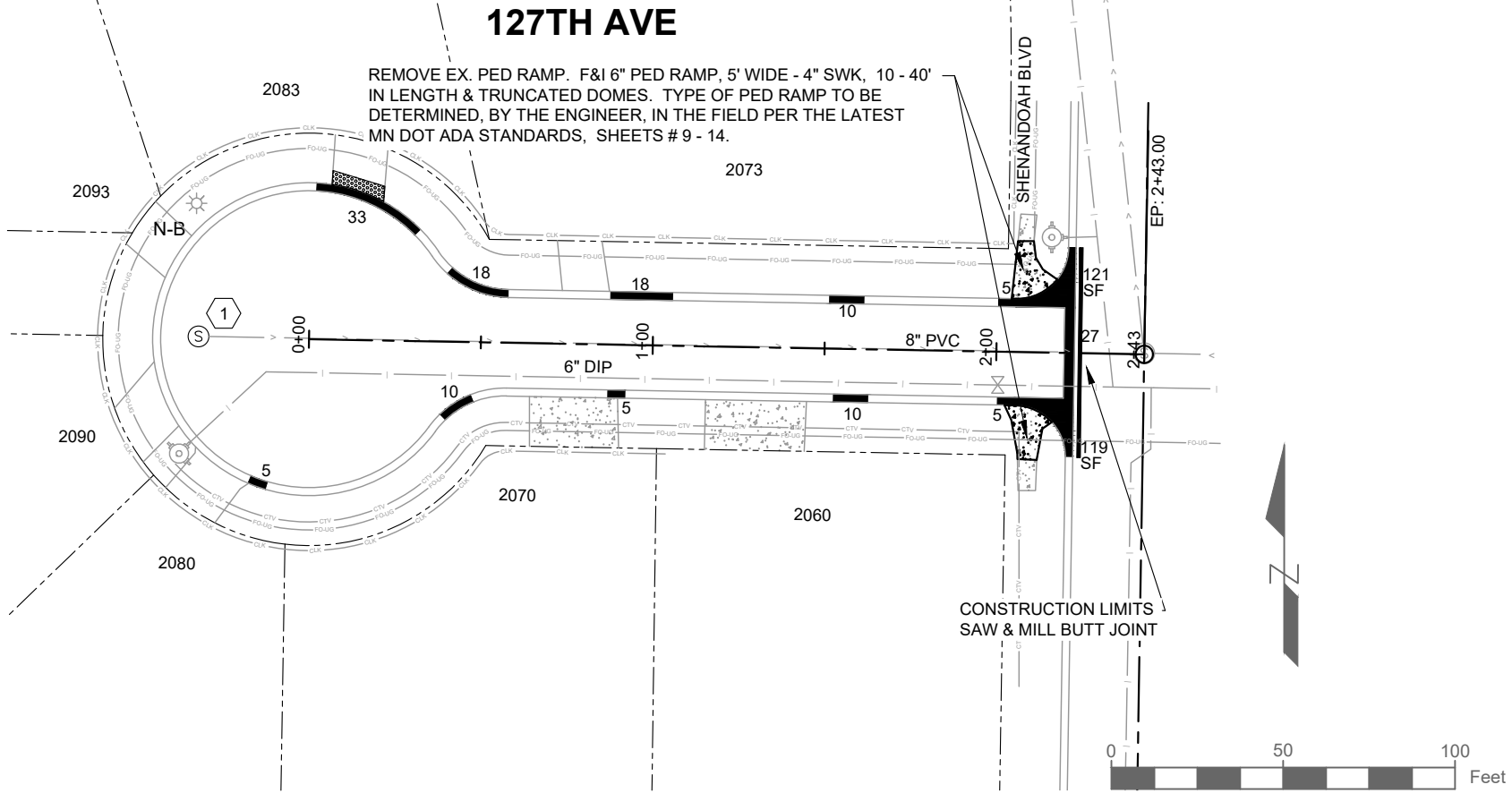
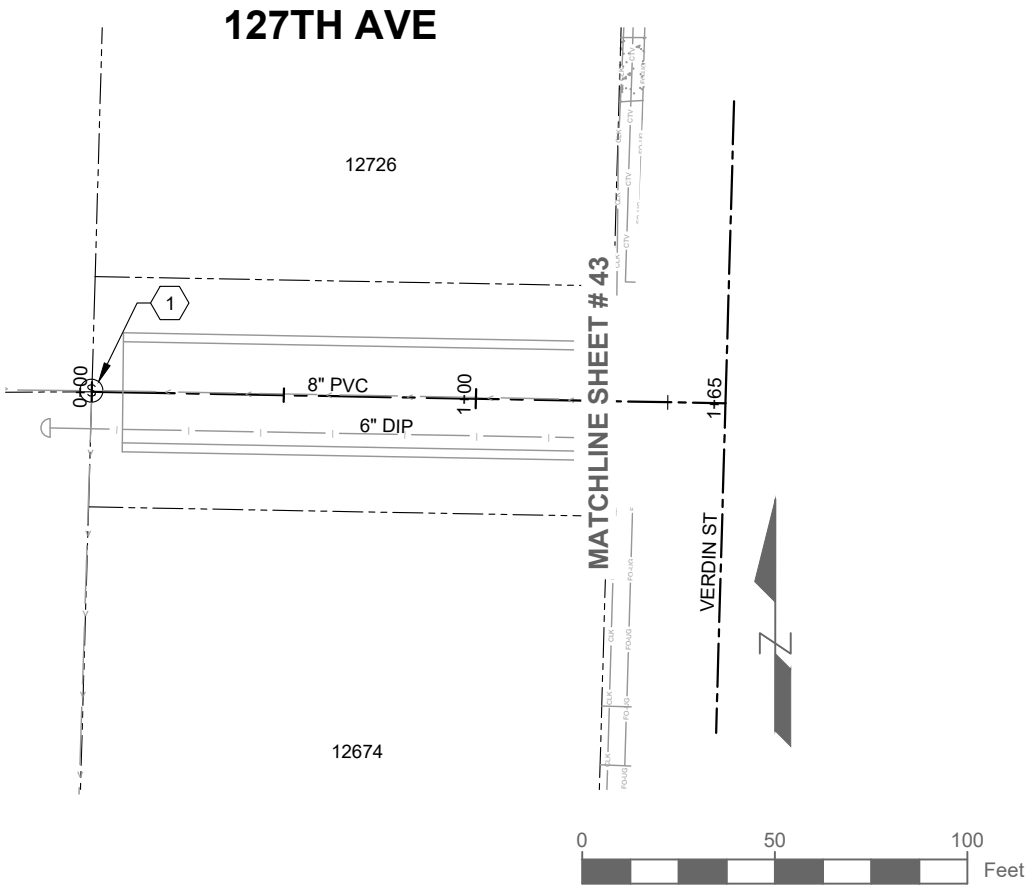
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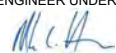
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ENGINEERING DEPARTMENT

11155 ROBINSON DRIVE

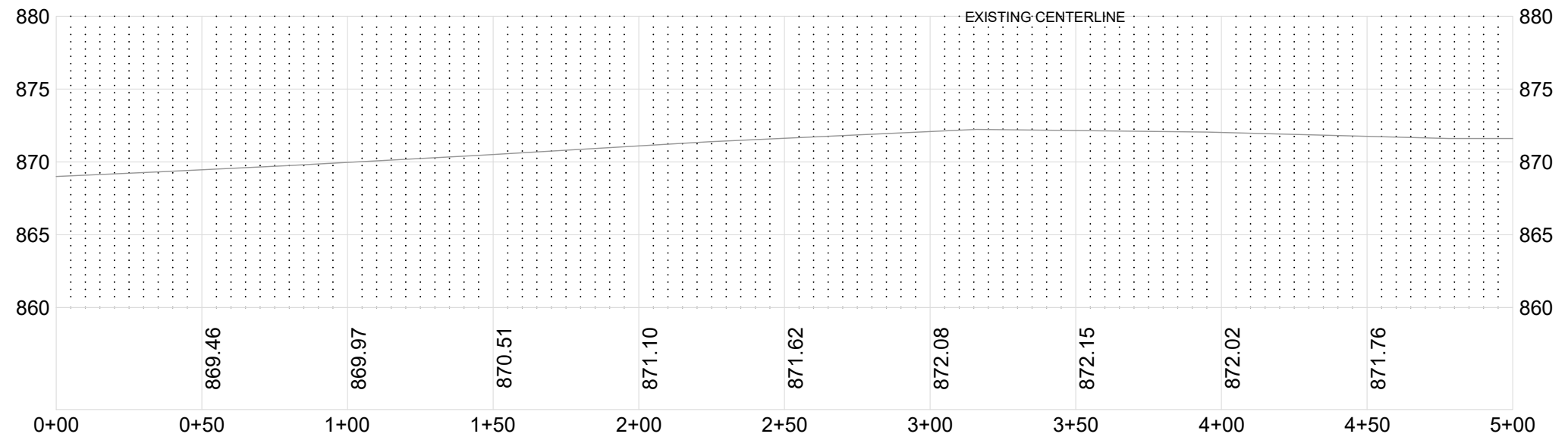
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763-755-2880 FAX 163-767-6491

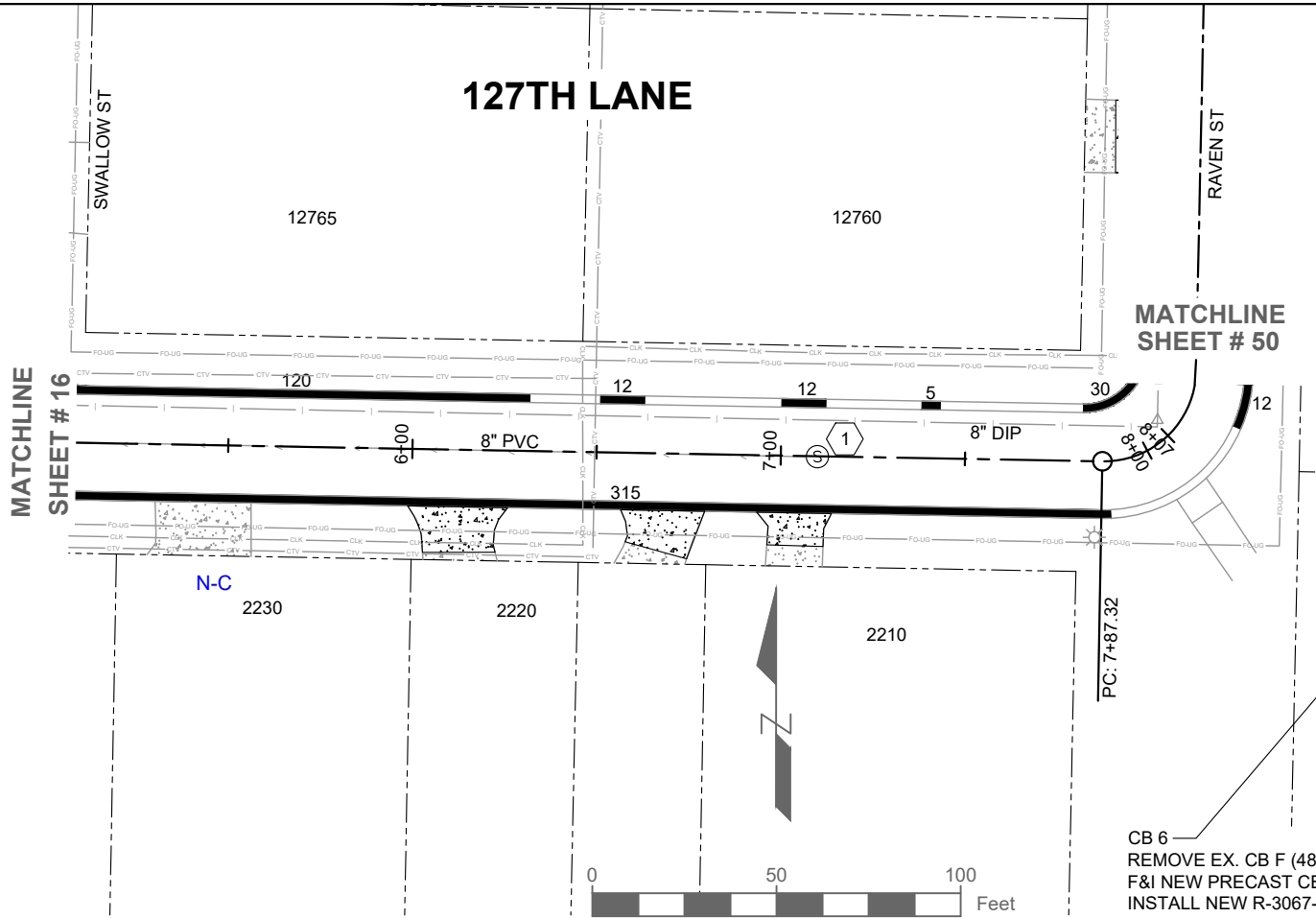
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23-1 STREET RECONSTRUCTION		PLAN & PROFILE	16 63
CITY OF COON RAPIDS, MINNESOTA			

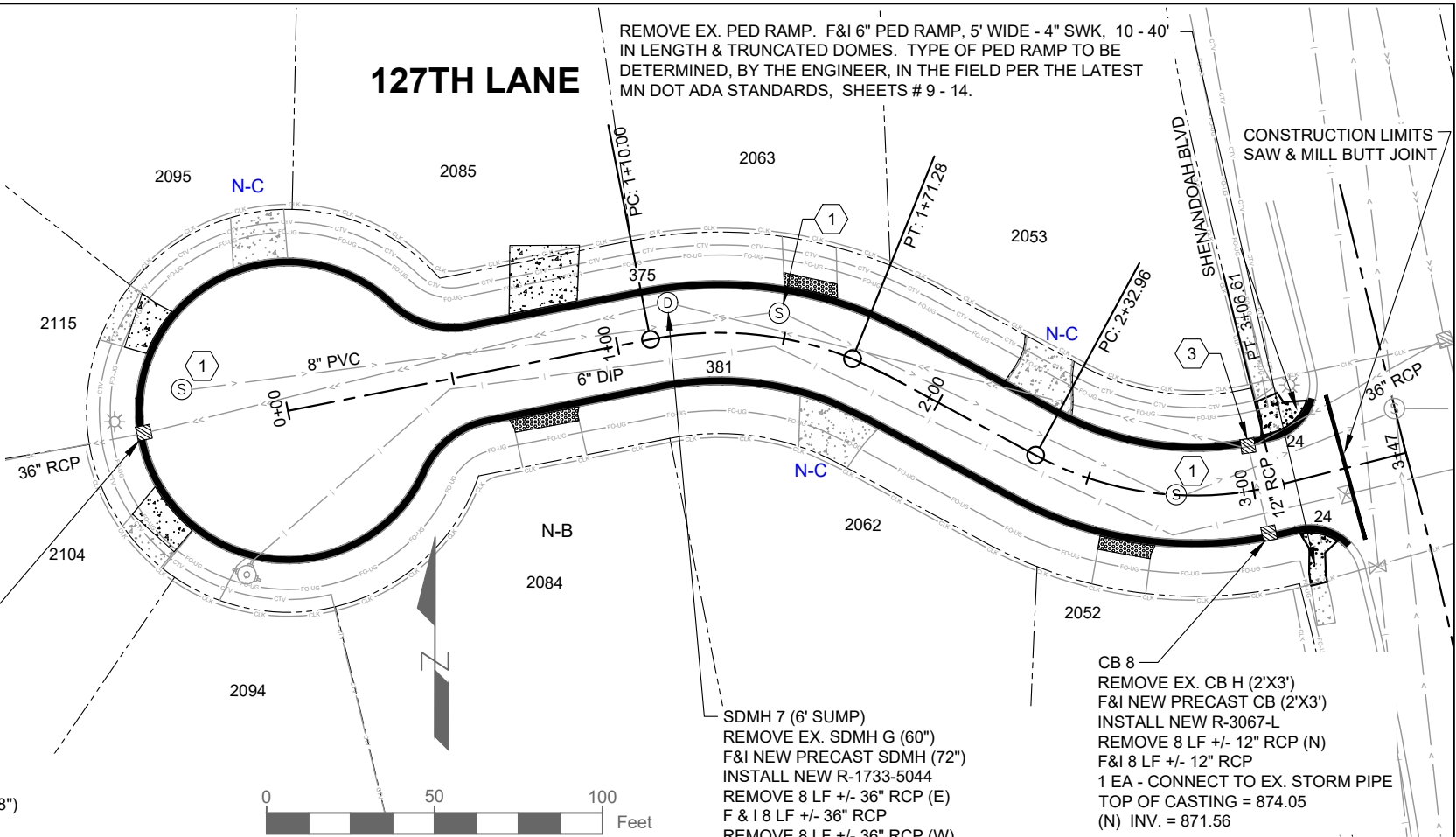
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MATCHLINE
SHEET # 50

CB 6
REMOVE EX. CB F (48")
F&I NEW PRECAST CB (48")
INSTALL NEW R-3067-L
REMOVE 8 LF +/- 36" RCP (E)
F&I 8 LF +/- 36" RCP
REMOVE 8 LF +/- 36" RCP (W)
F&I 8 LF +/- 36" RCP
2 EA - CONNECT TO EX. STORM PIPE
TOP OF CASTING = 869.26
(E) & (W) INV. = 864.11

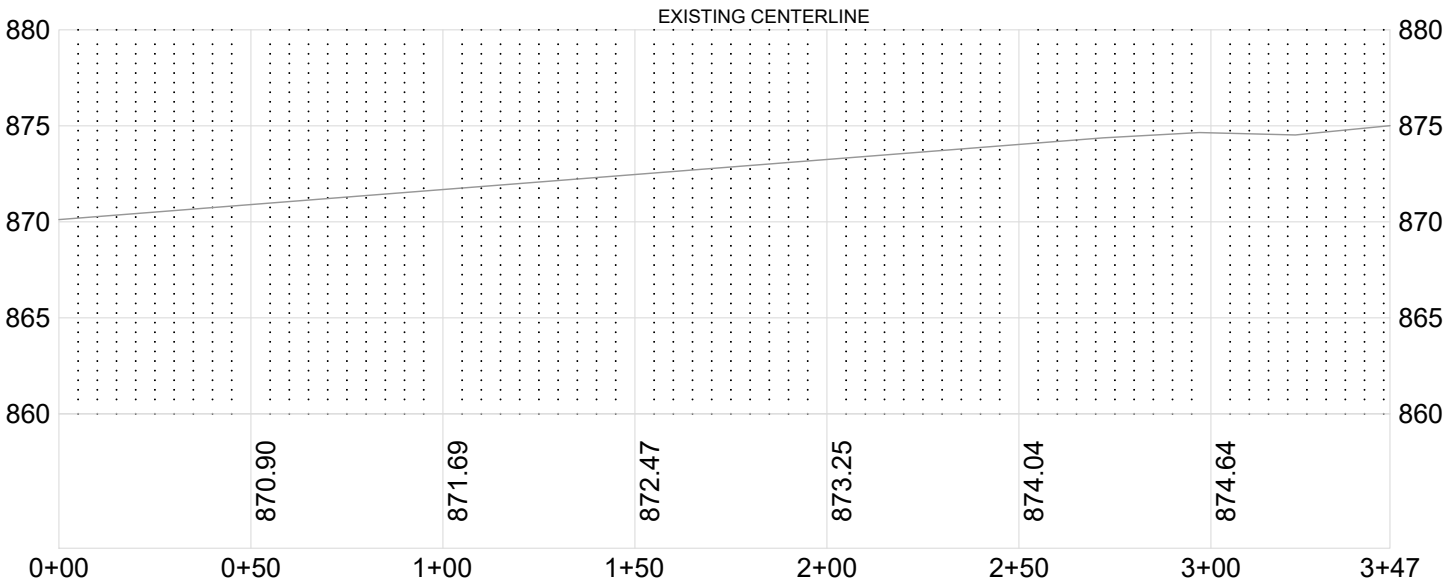
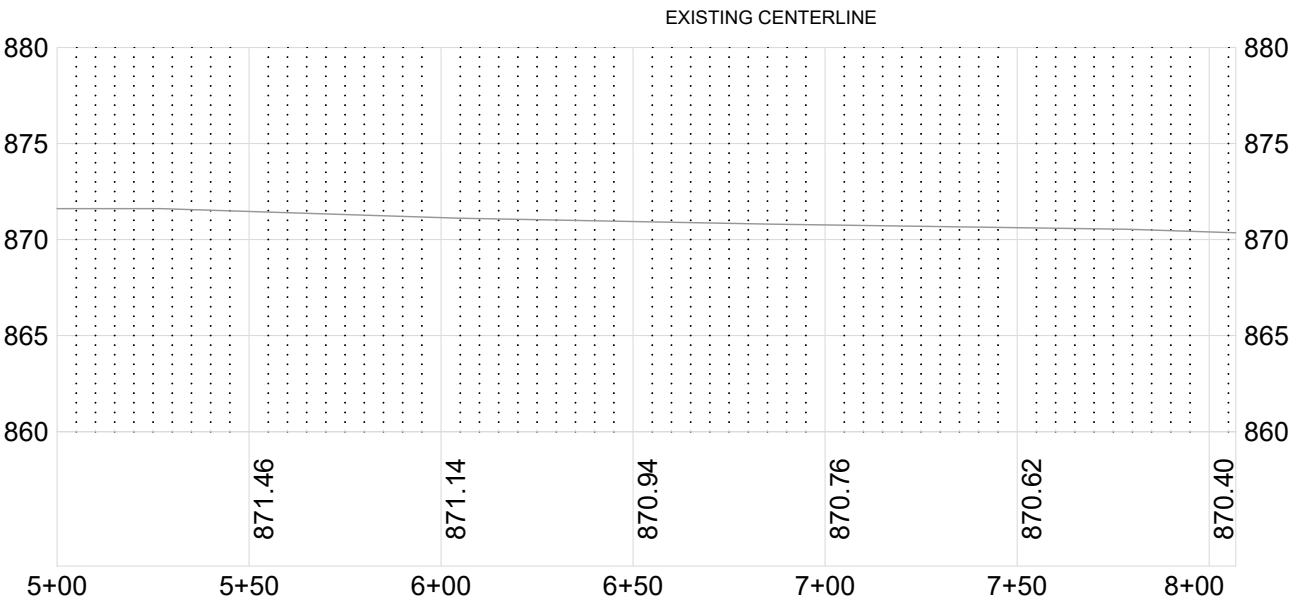




REMOVE EX. PED RAMP. F&I 6" PED RAMP, 5' WIDE - 4" SWK, 10 - 40' IN LENGTH & TRUNCATED DOMES. TYPE OF PED RAMP TO BE DETERMINED, BY THE ENGINEER, IN THE FIELD PER THE LATEST MN DOT ADA STANDARDS, SHEETS # 9 - 14.

CONSTRUCTION LIMITS
SAW & MILL BUTT JOINT

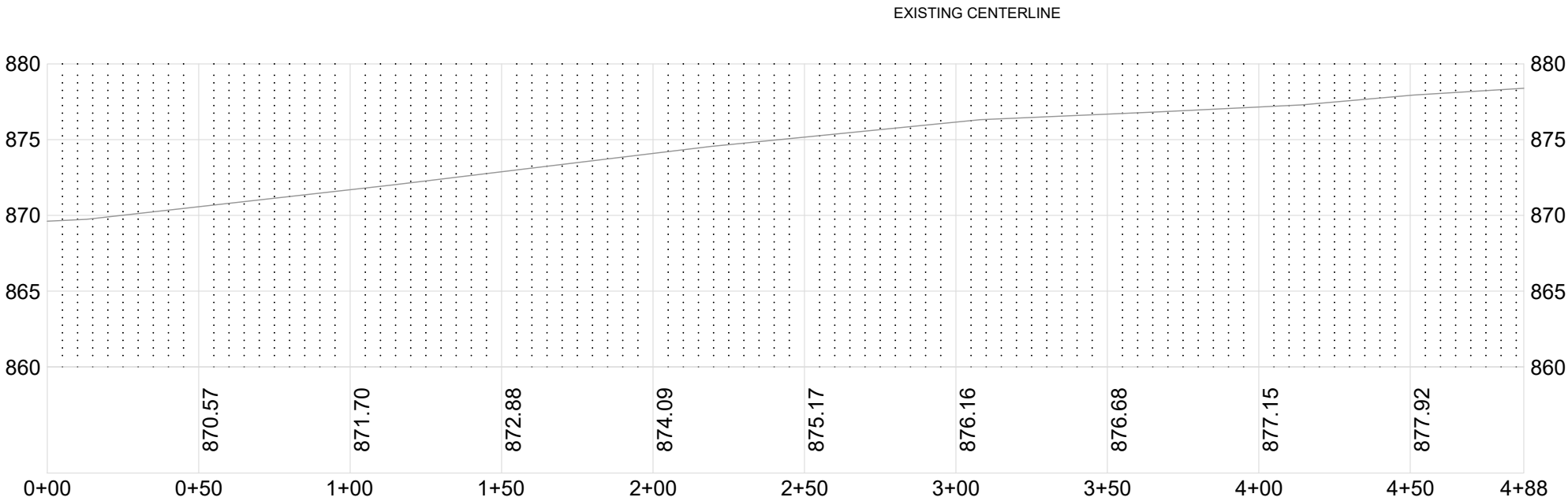
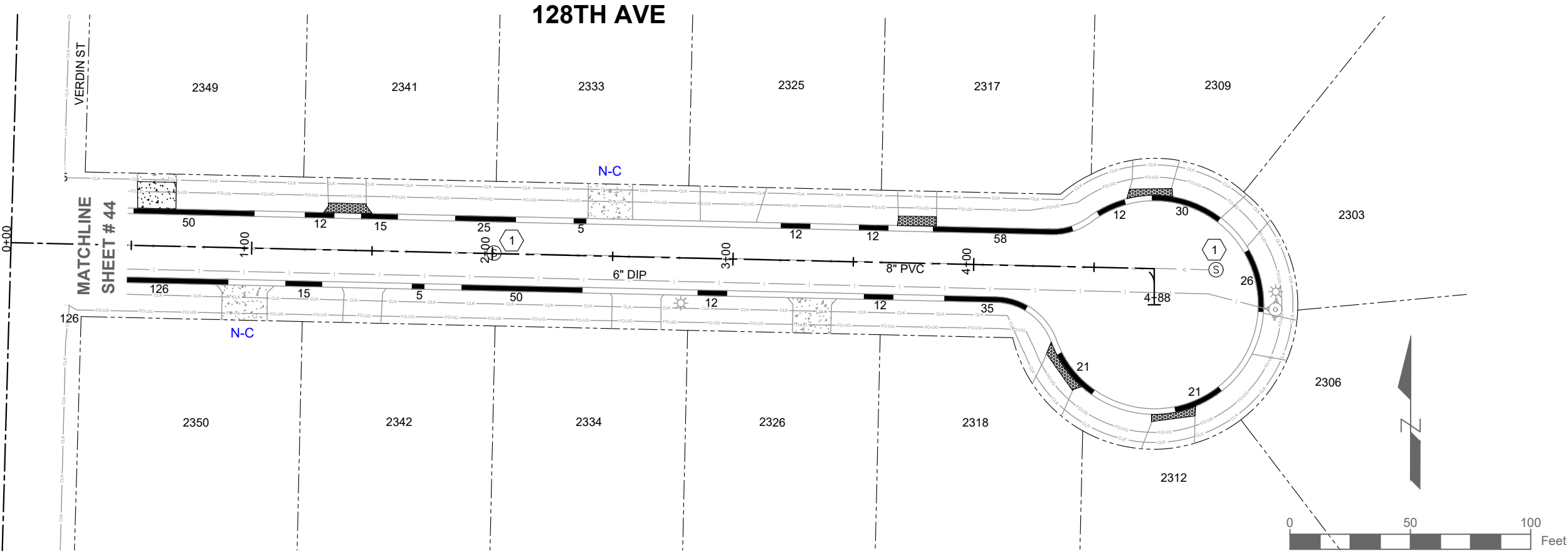
SDMH 7 (6' SUMP)
REMOVE EX. SDMH G (60")
F&I NEW PRECAST SDMH (72")
INSTALL NEW R-1733-5044
REMOVE 8 LF +/- 36" RCP (E)
F & I 8 LF +/- 36" RCP
REMOVE 8 LF +/- 36" RCP (W)
F&I 8 LF +/- 36" RCP W / (SAFL BAFFLE)
2 EA - CONNECT TO EX. STORM PIPE
TOP OF CASTING = 872.29
(E) INV. = 866.35
(W) INV. = 864.88
BOTTOM OF SUMP = 858.88

CB 8
REMOVE EX. CB H (2'X3')
F&I NEW PRECAST CB (2'X3')
INSTALL NEW R-3067-L
REMOVE 8 LF +/- 12" RCP (N)
F&I 8 LF +/- 12" RCP
1 EA - CONNECT TO EX. STORM PIPE
TOP OF CASTING = 874.05
(N) INV. = 871.56



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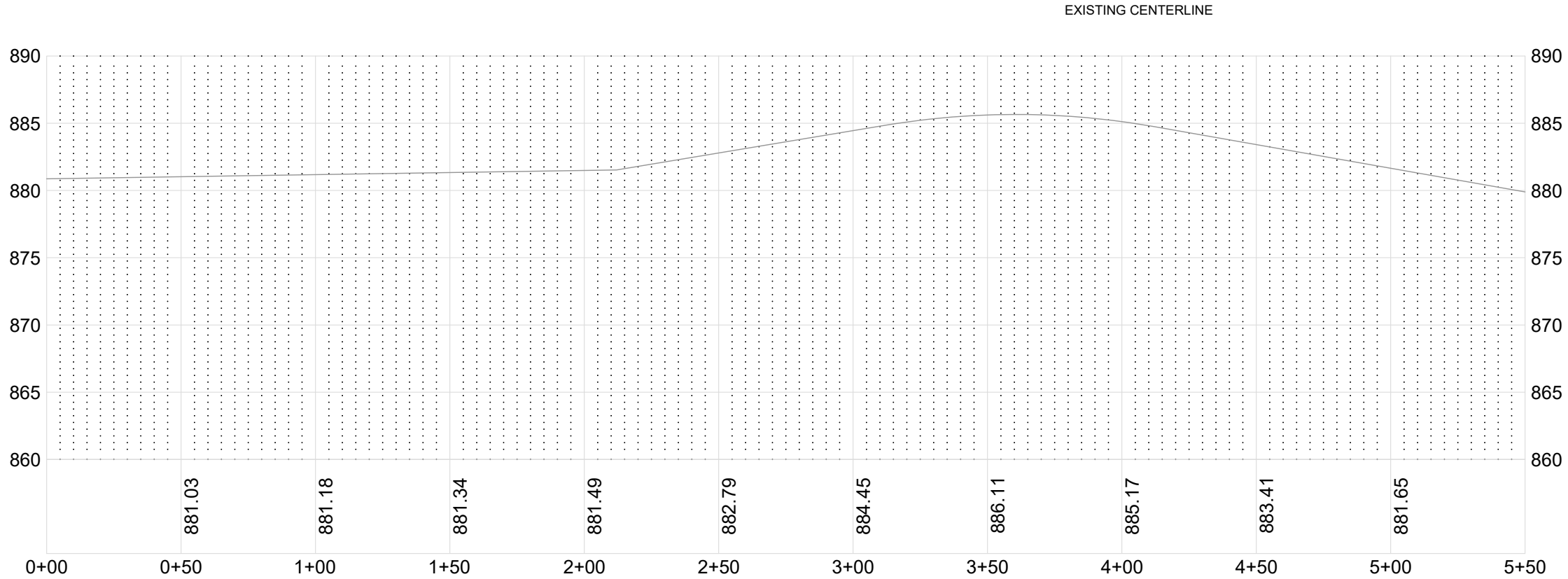
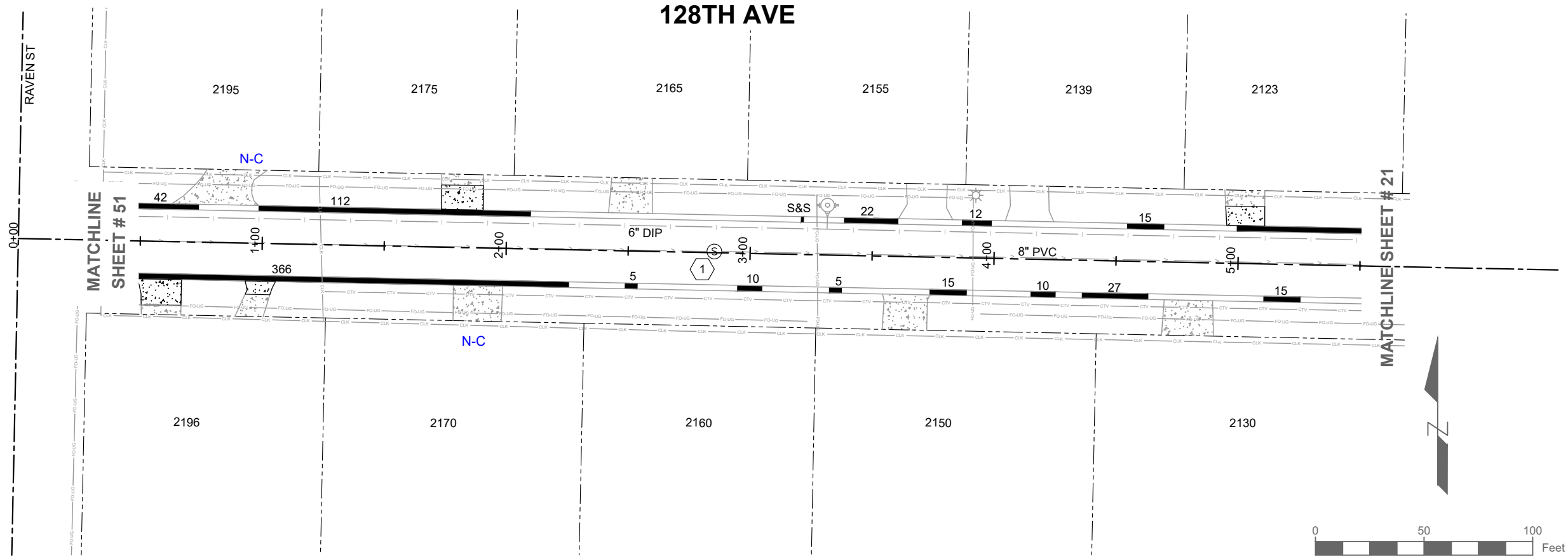
23-1 STREET RECONSTRUCTION



CITY OF COON RAPIDS, MINNESOTA

PLAN & PROFILE

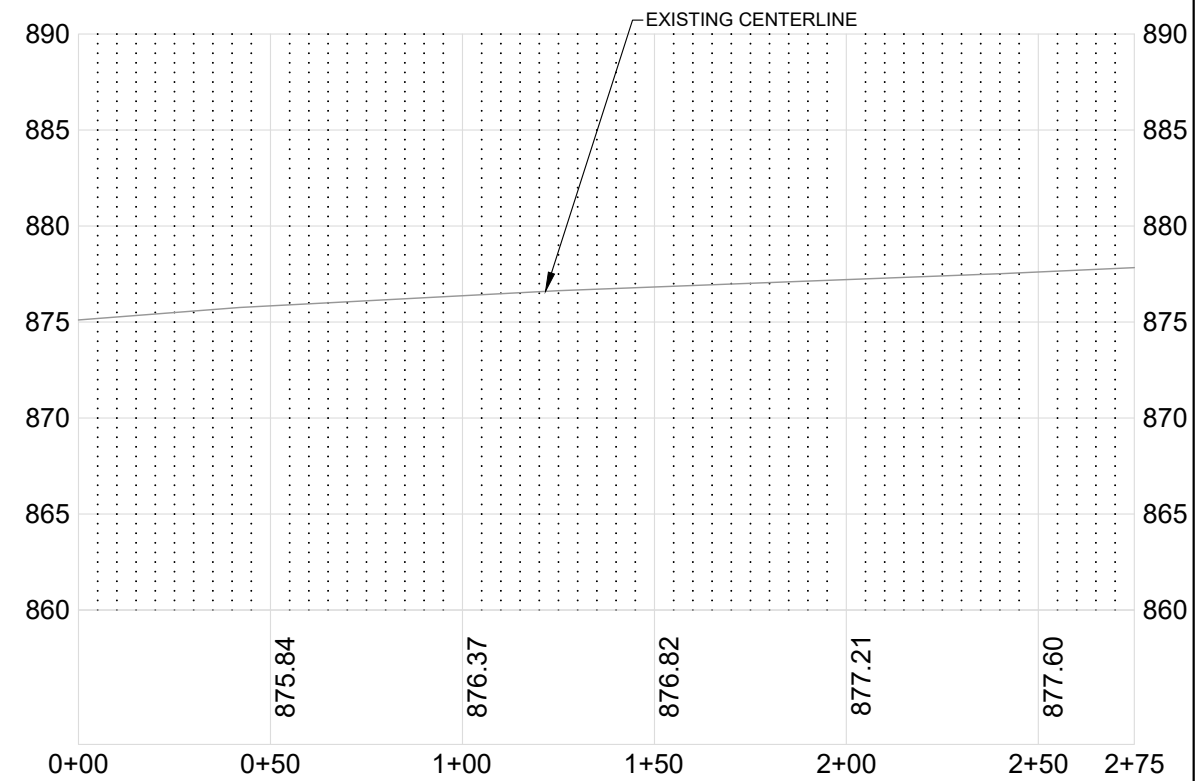
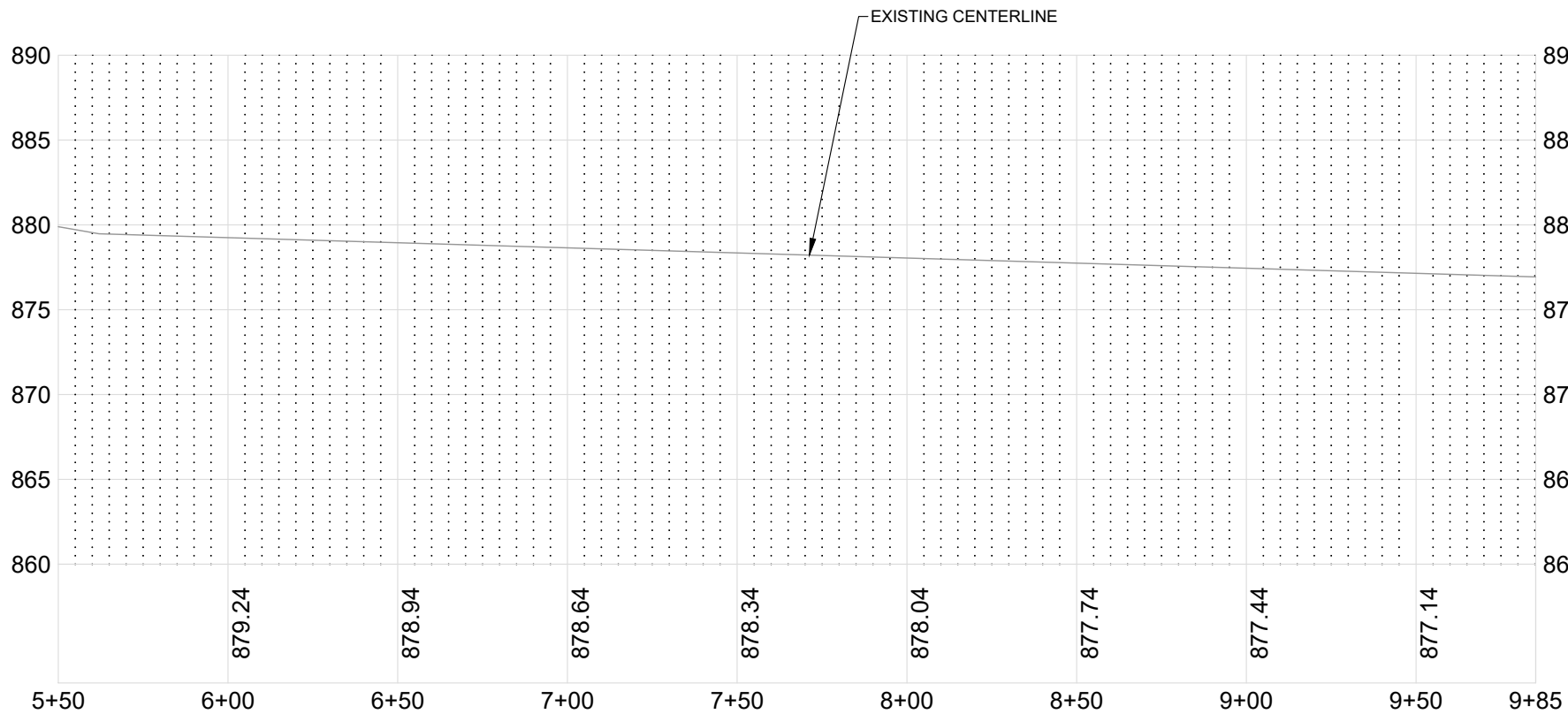
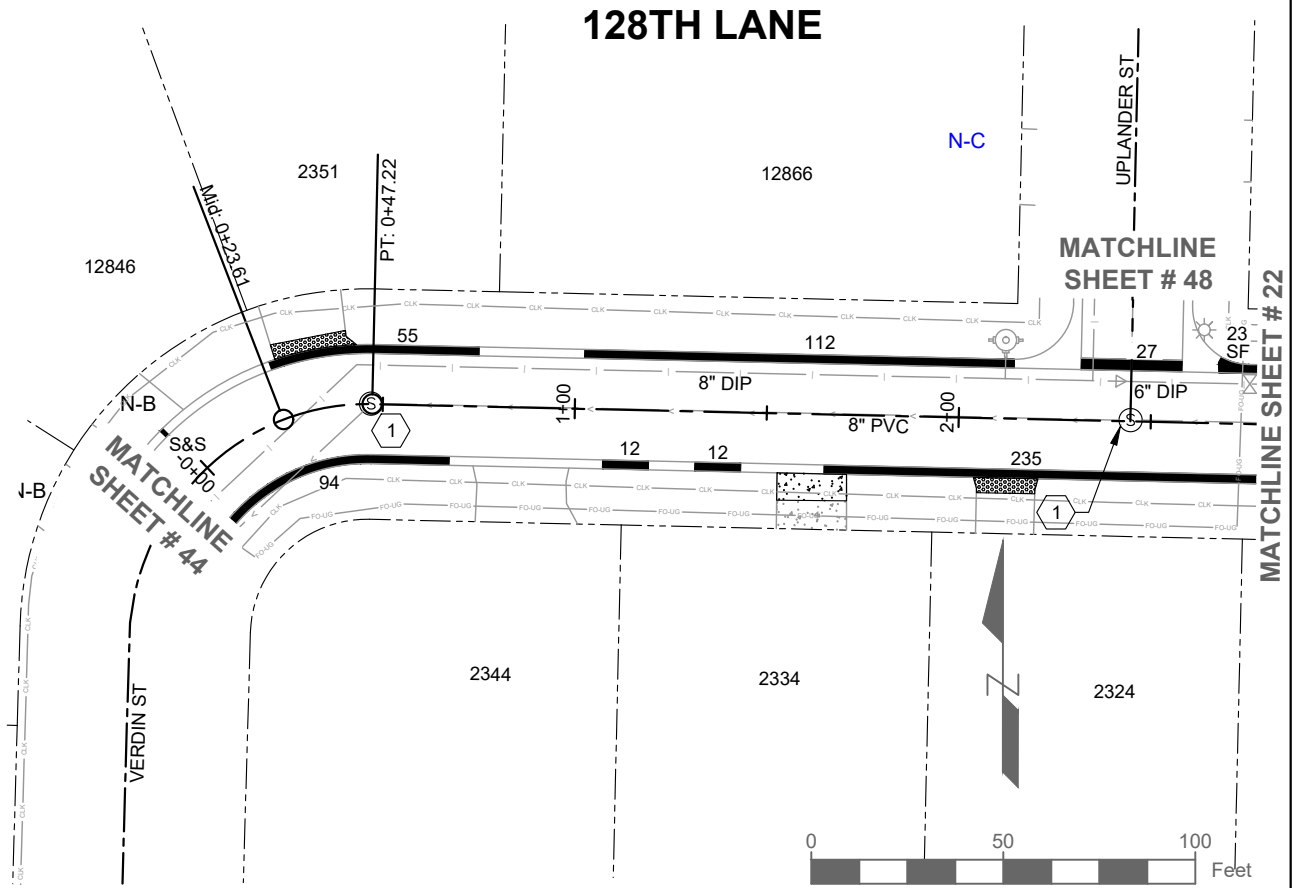
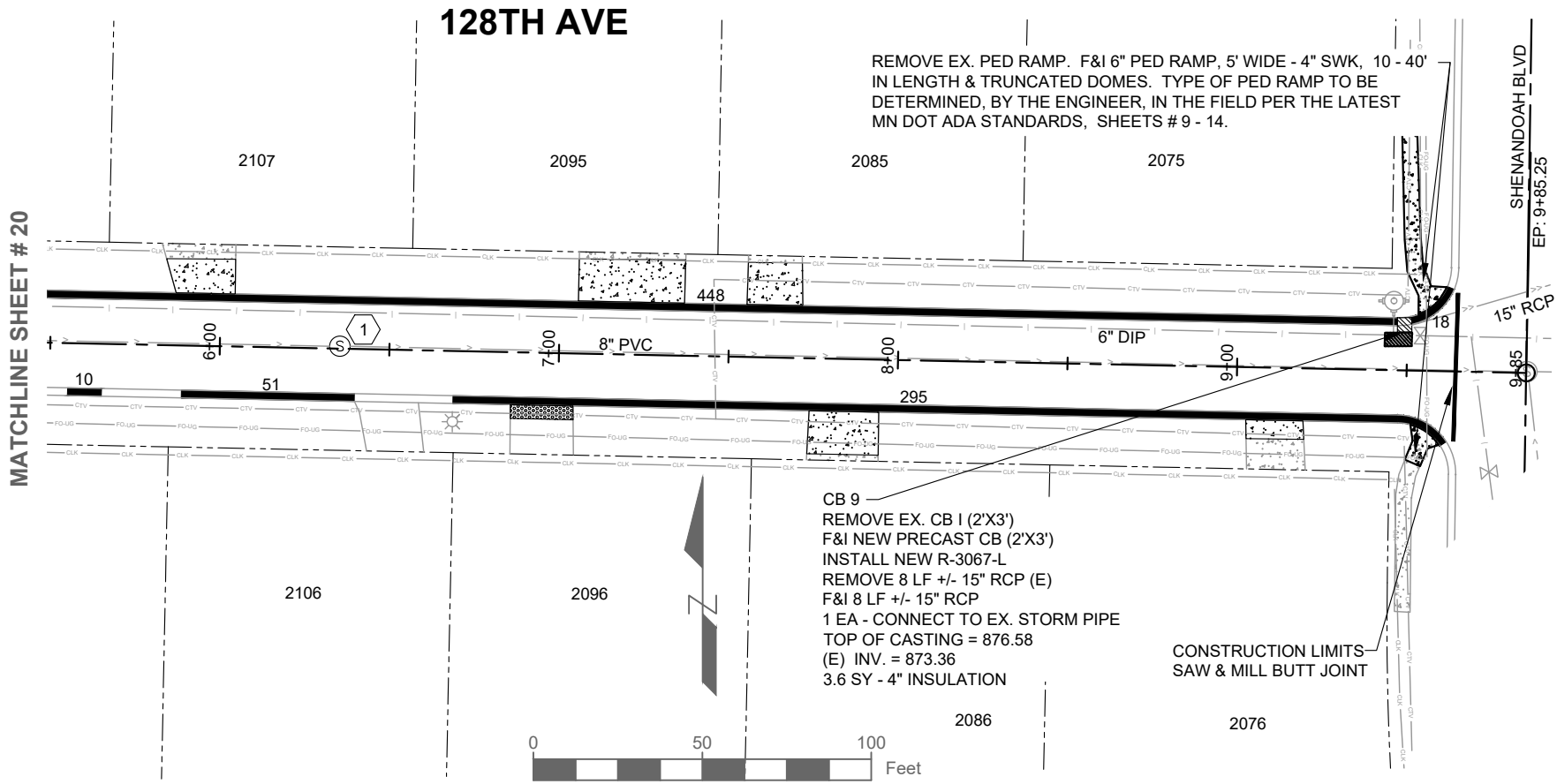
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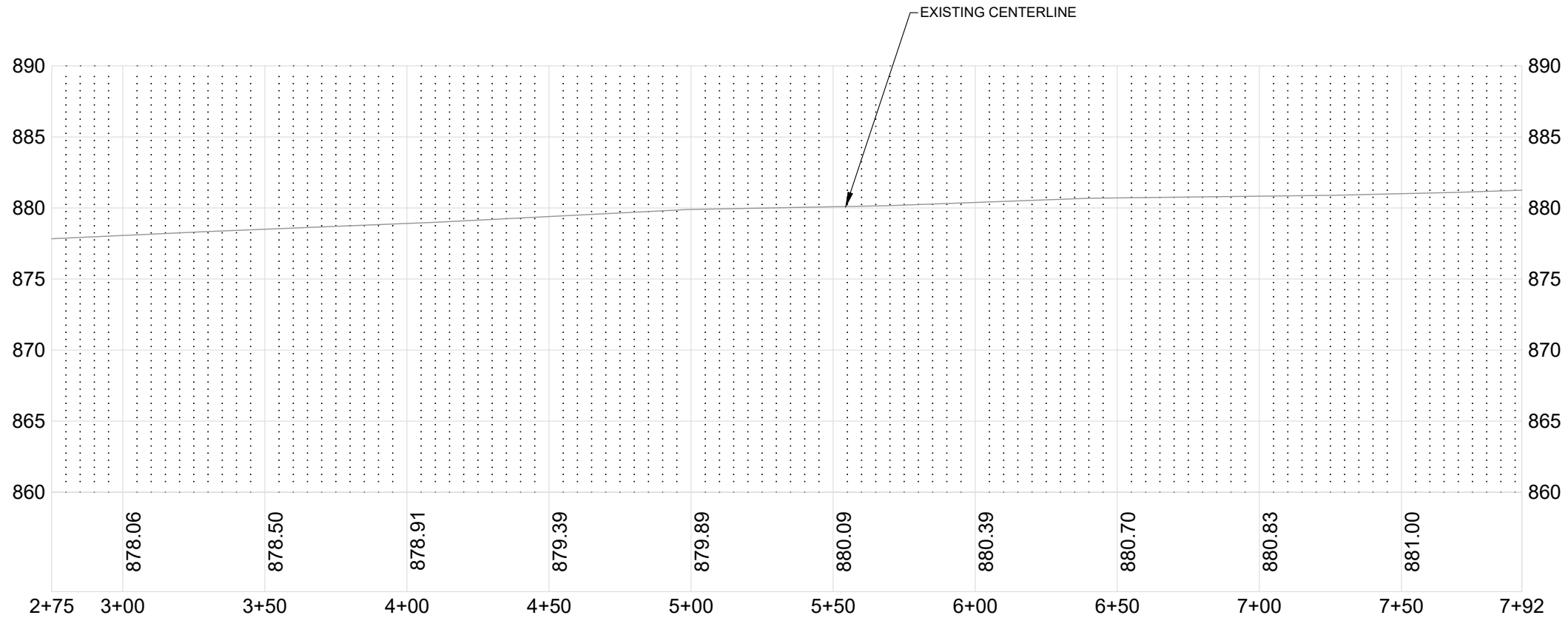




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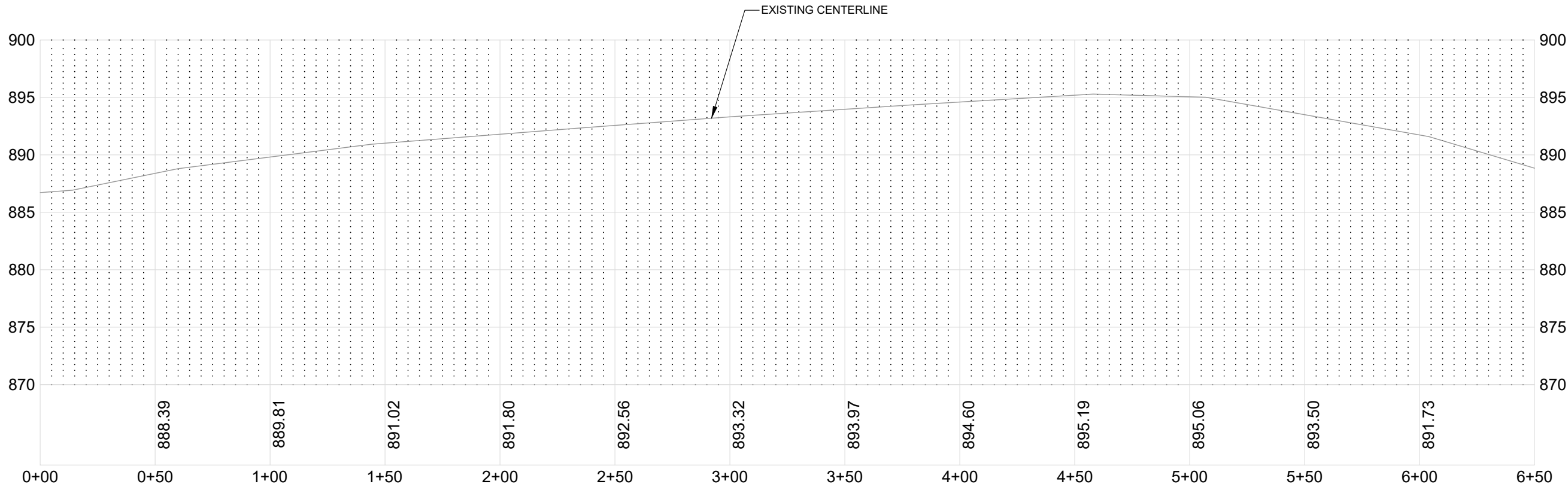
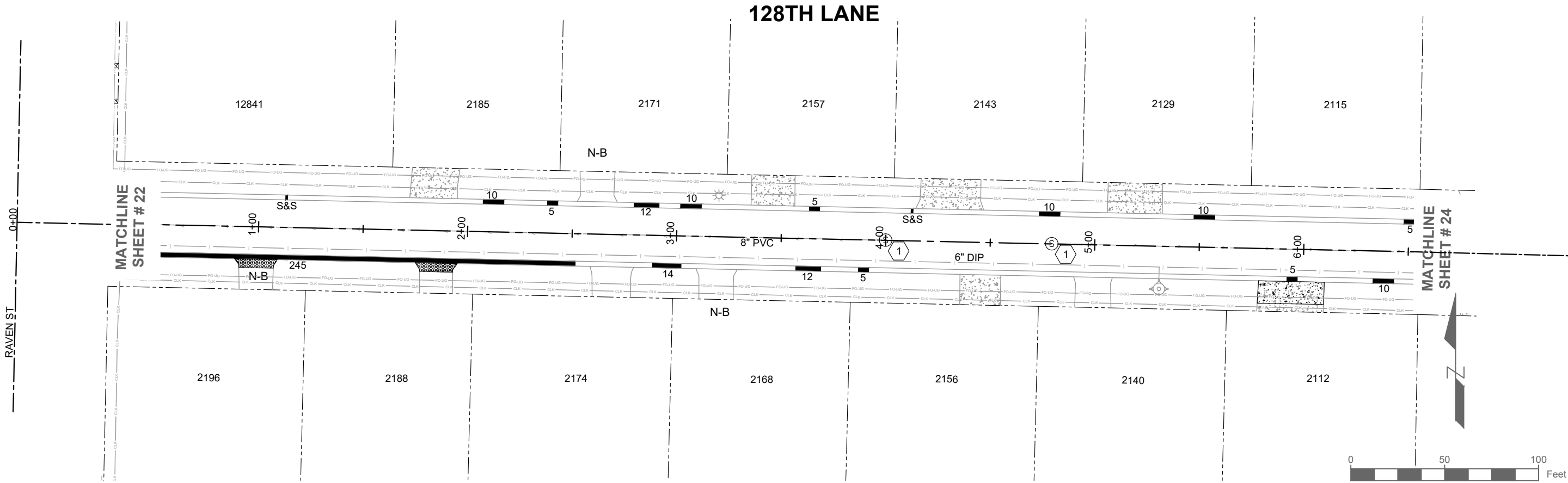


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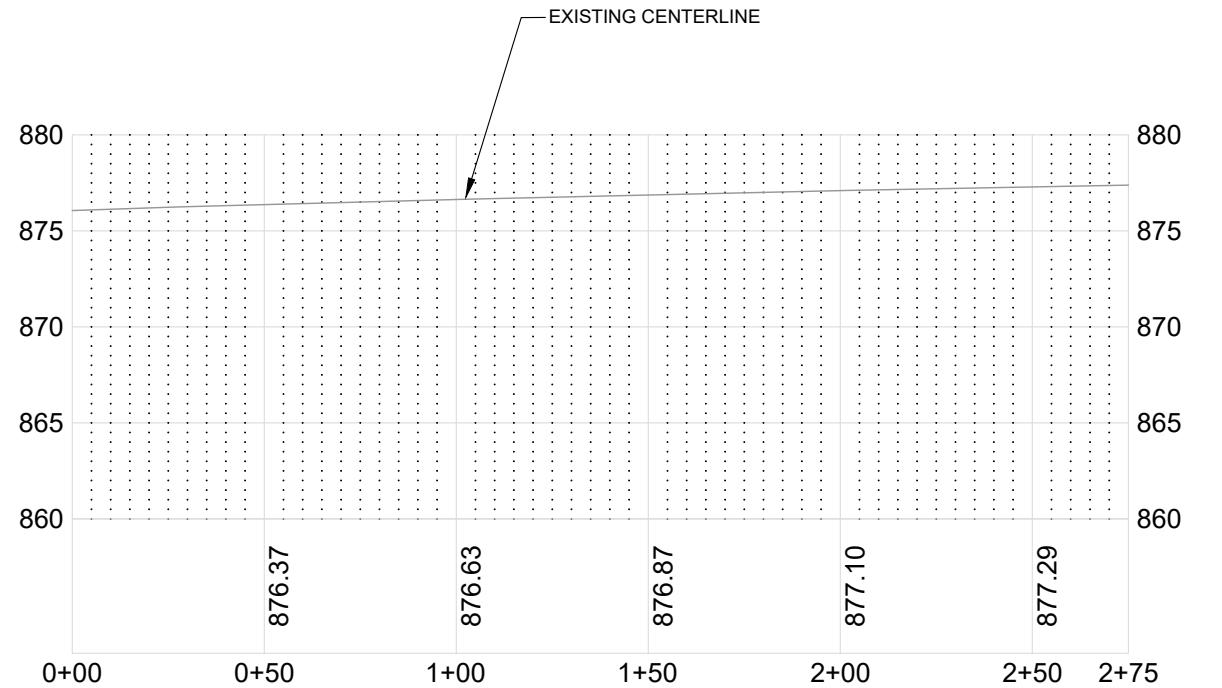
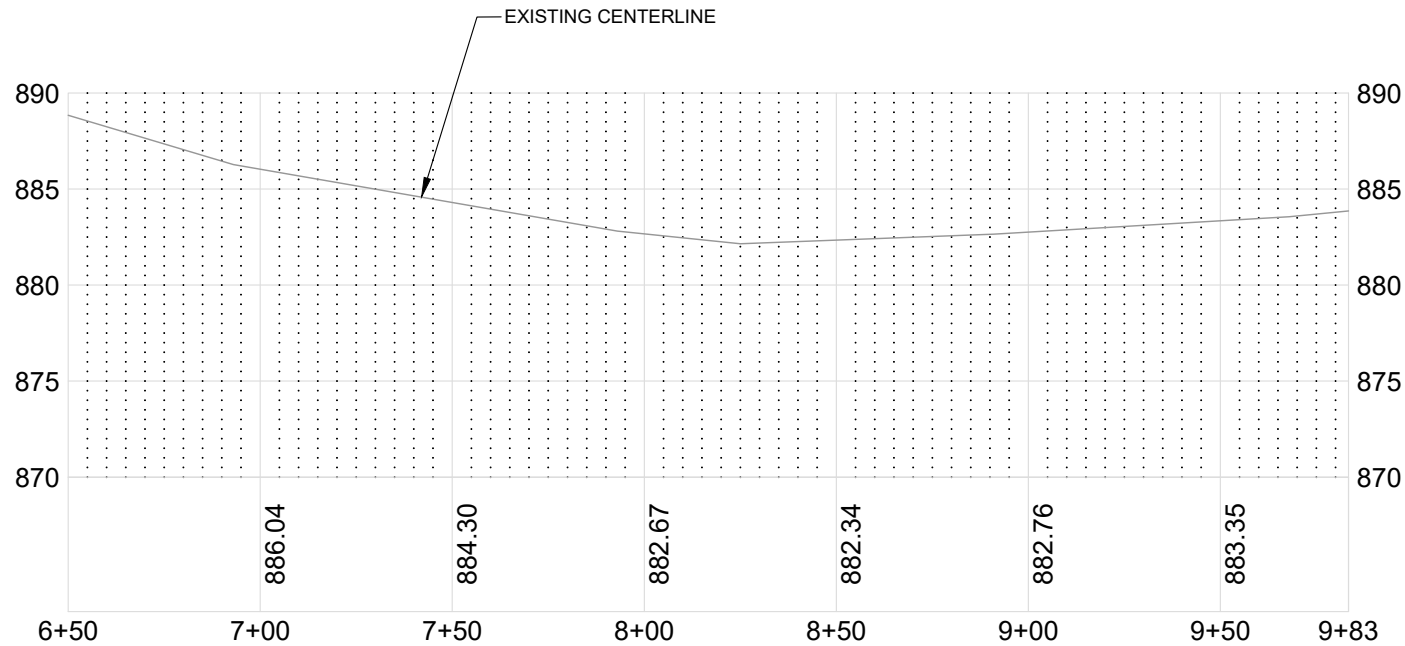
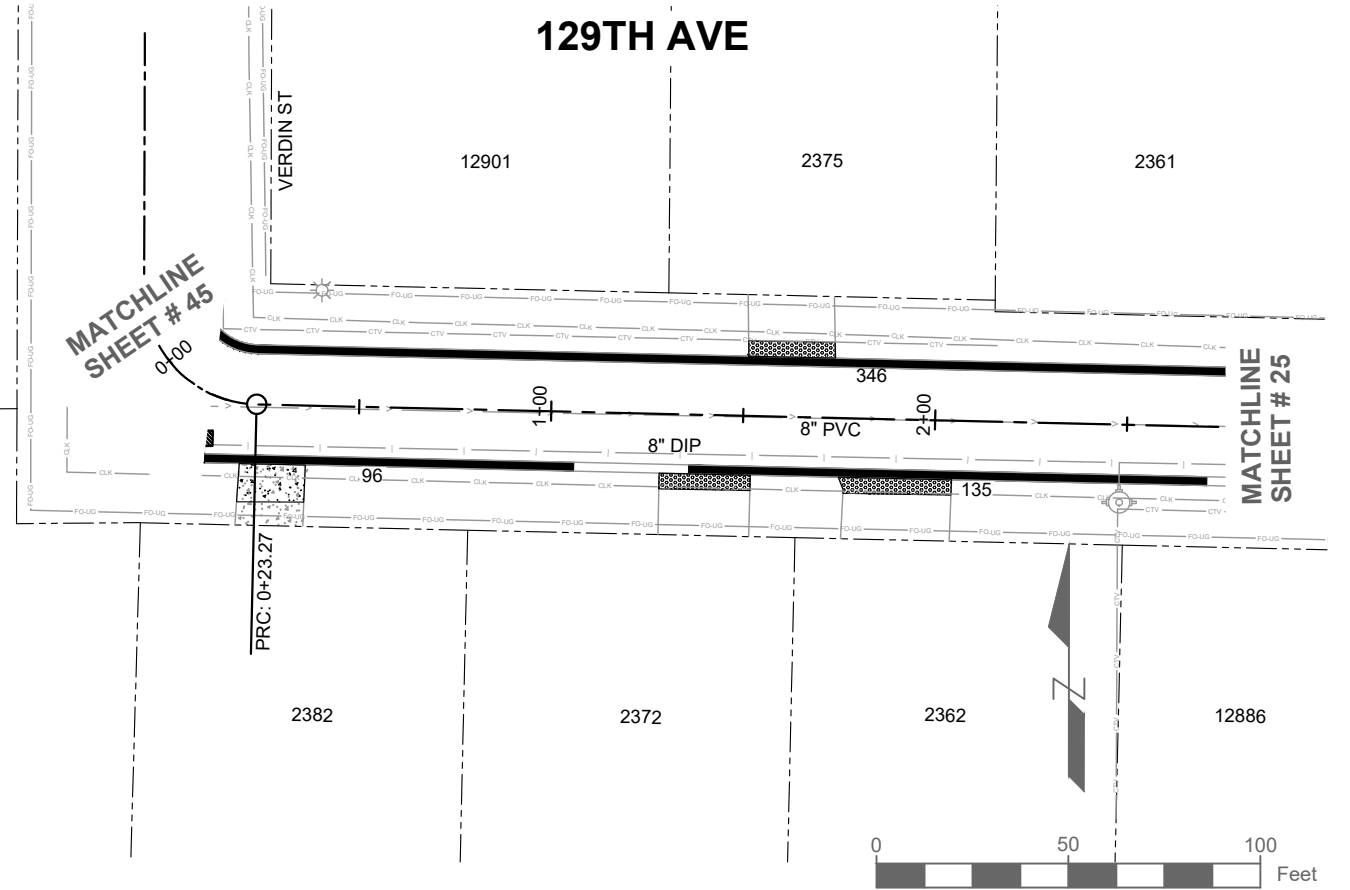
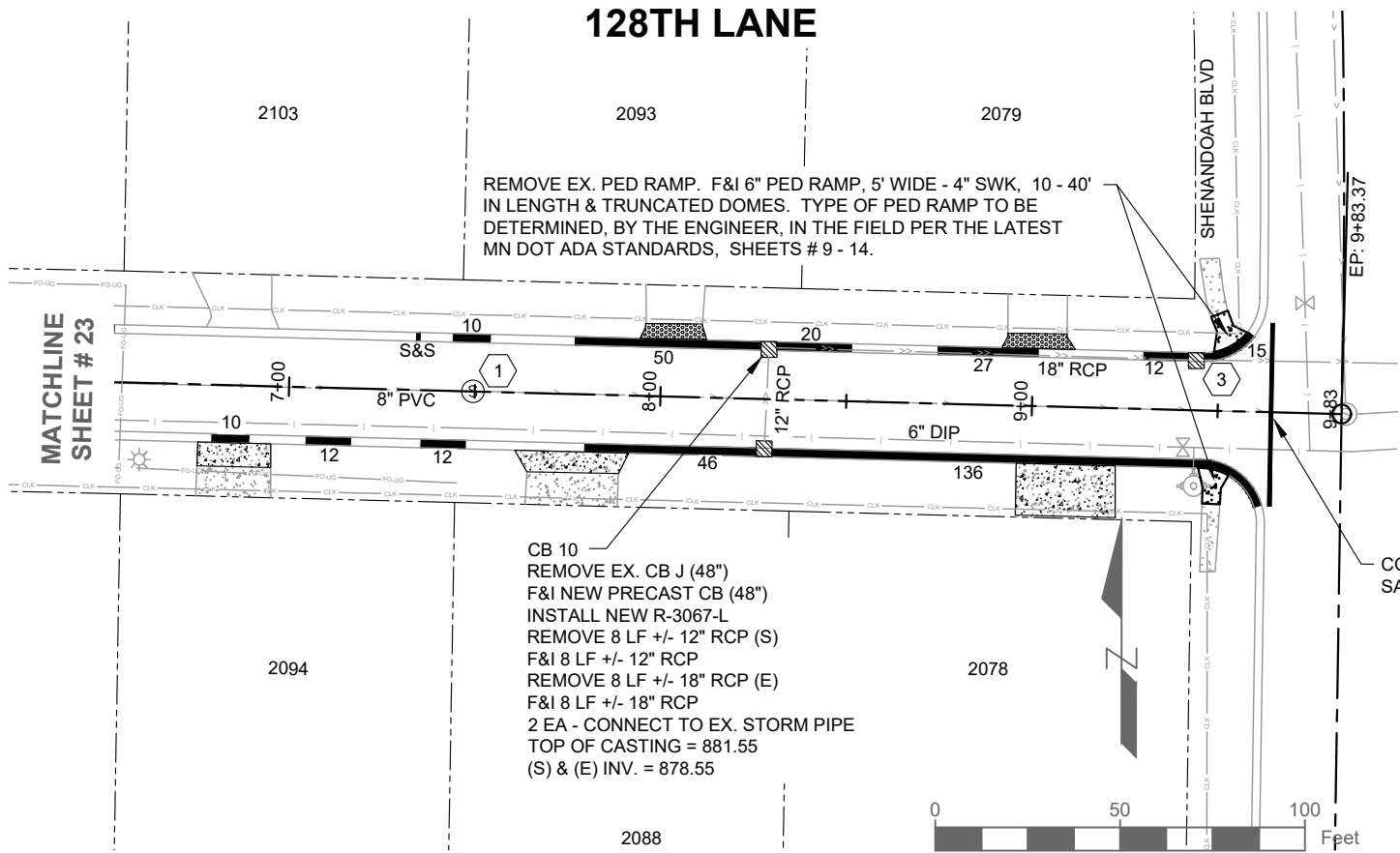
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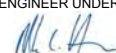
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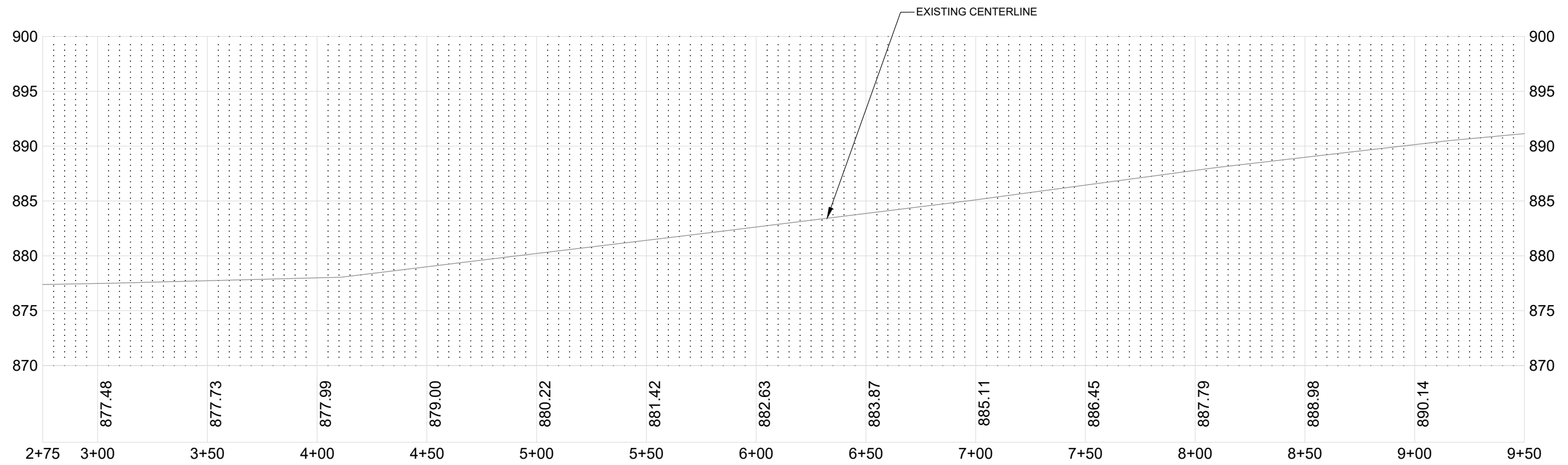
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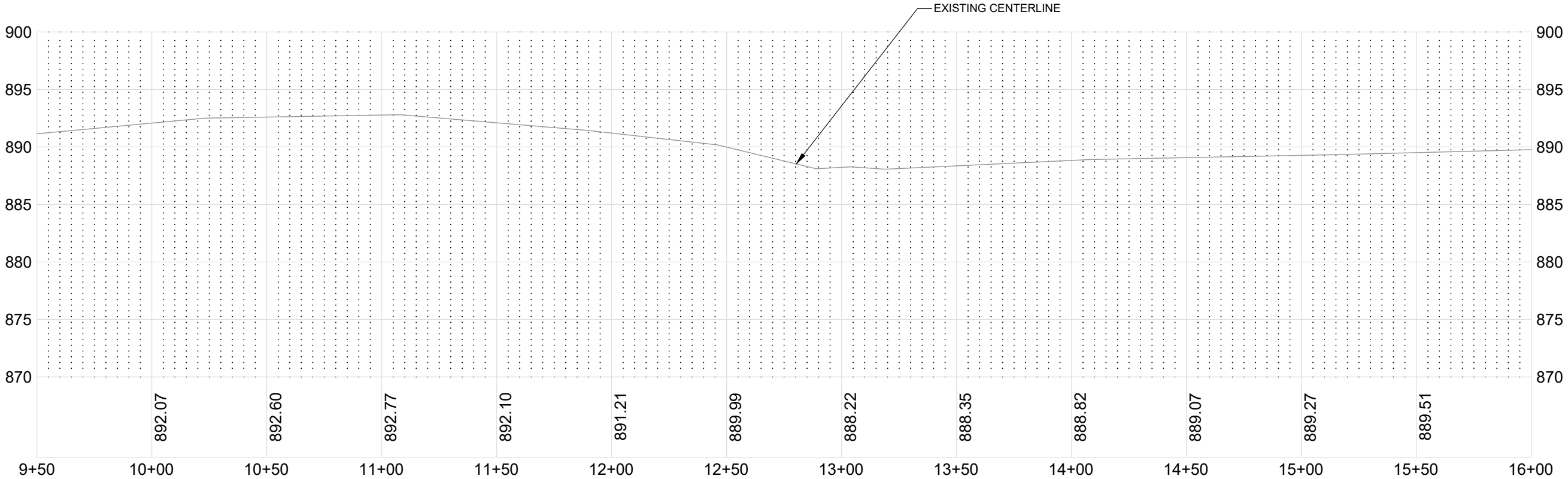
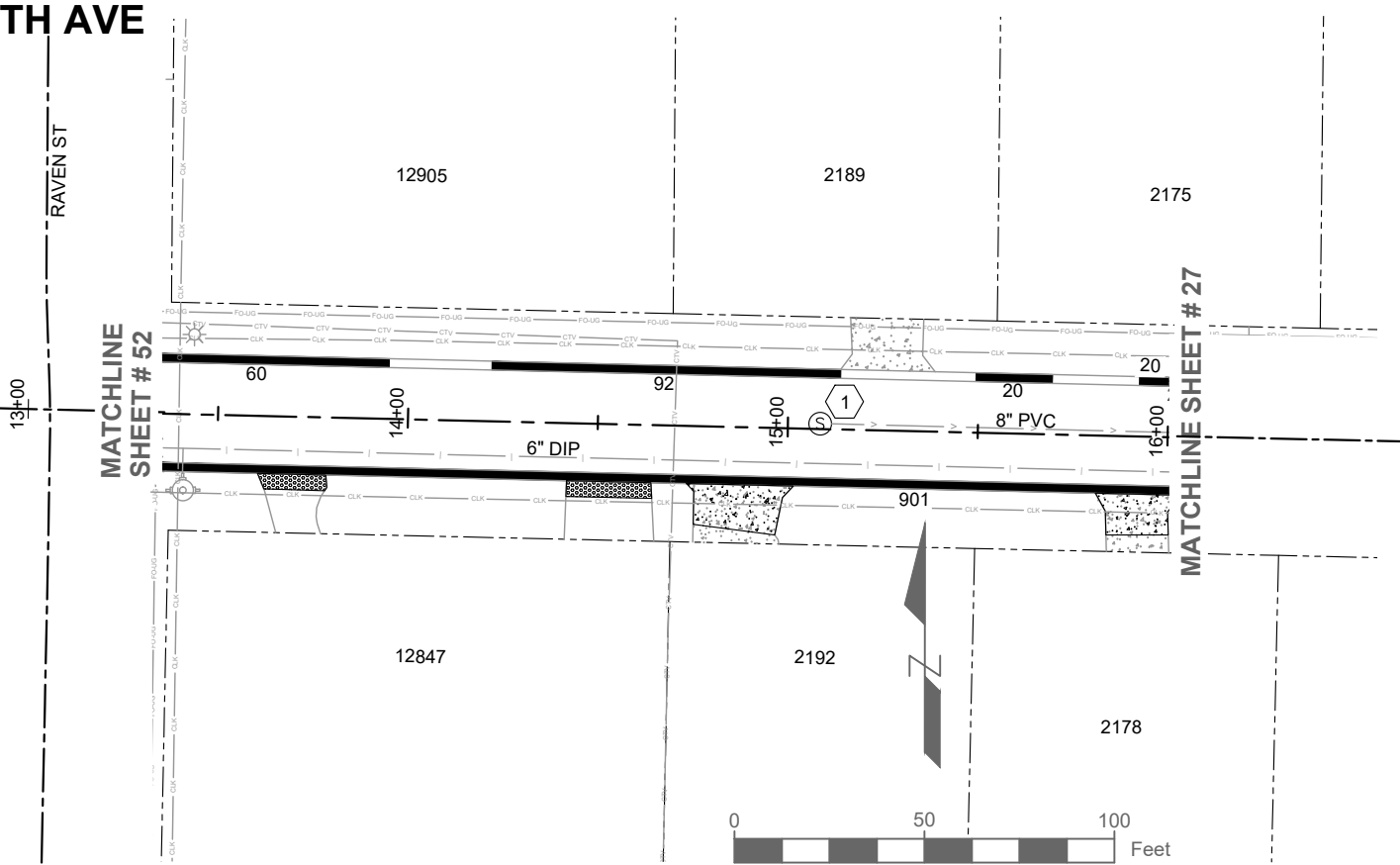
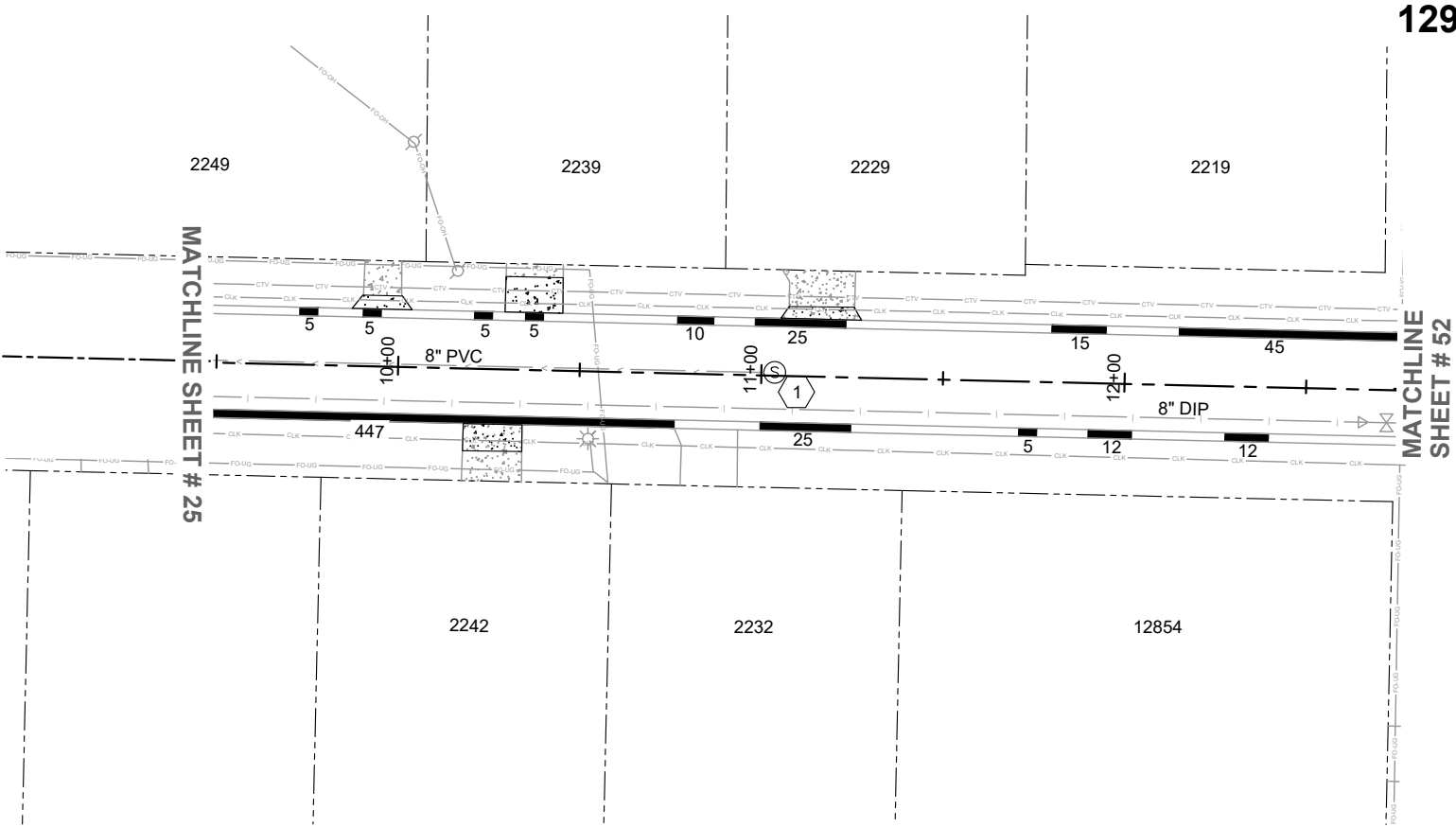
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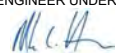
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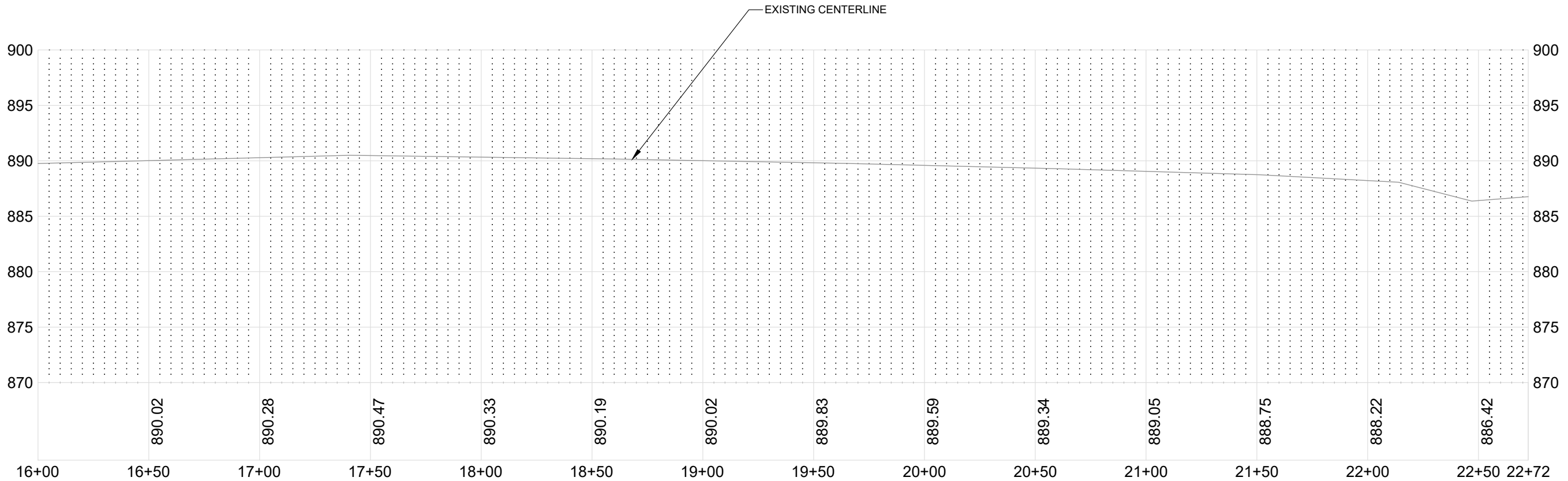
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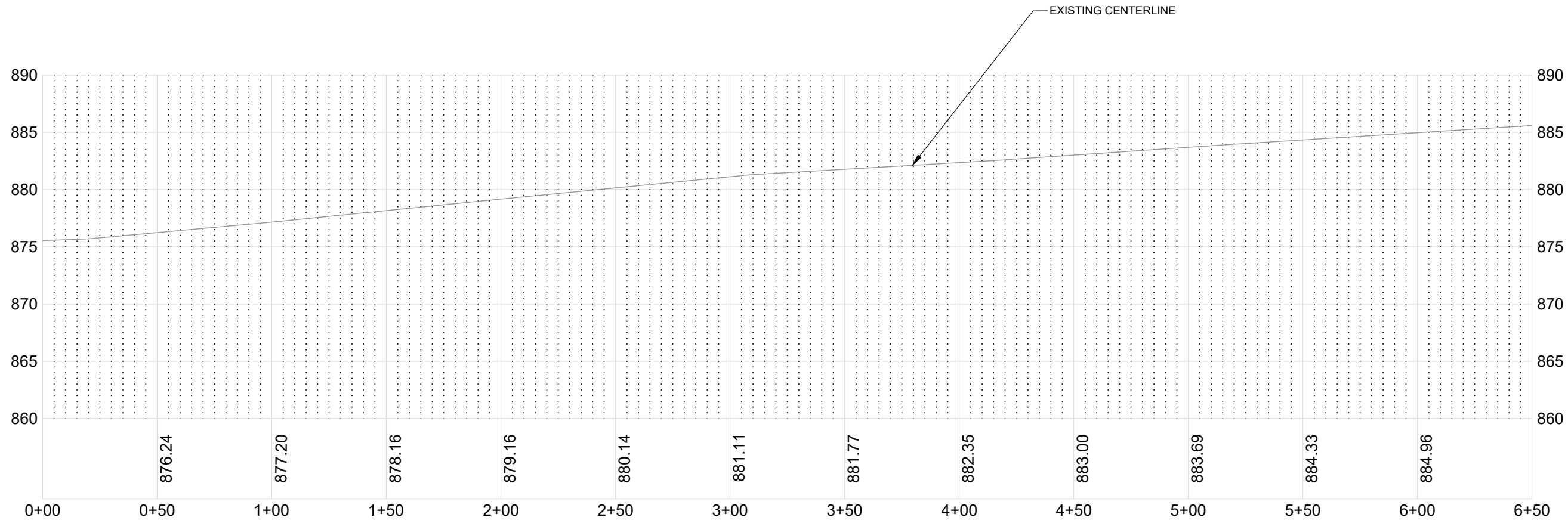
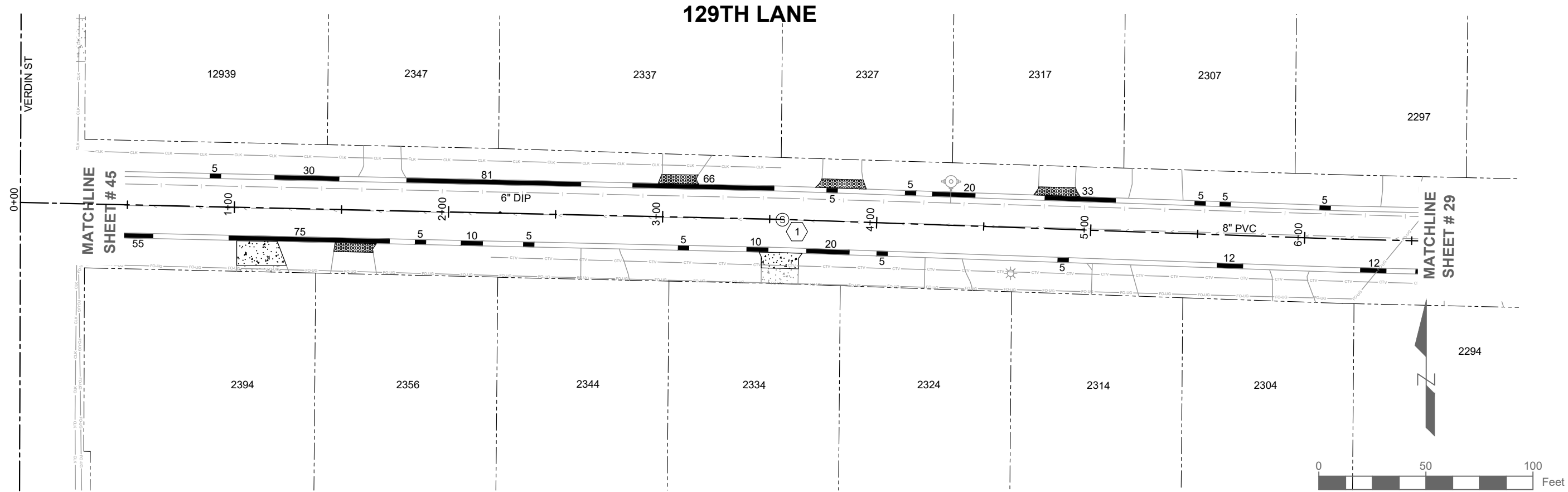
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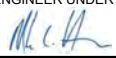
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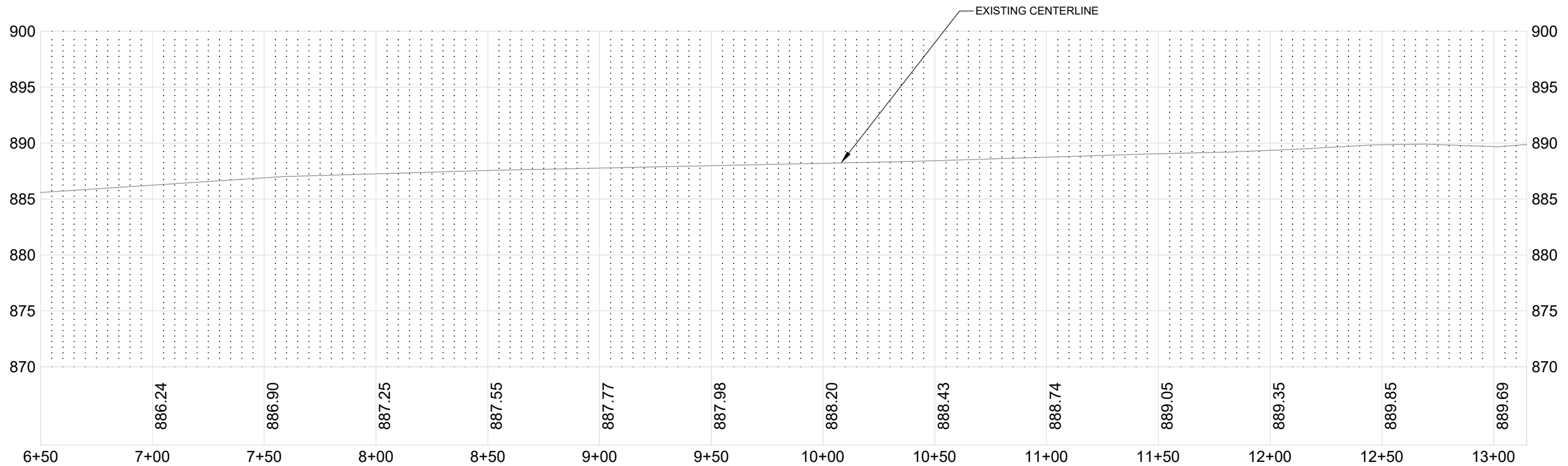
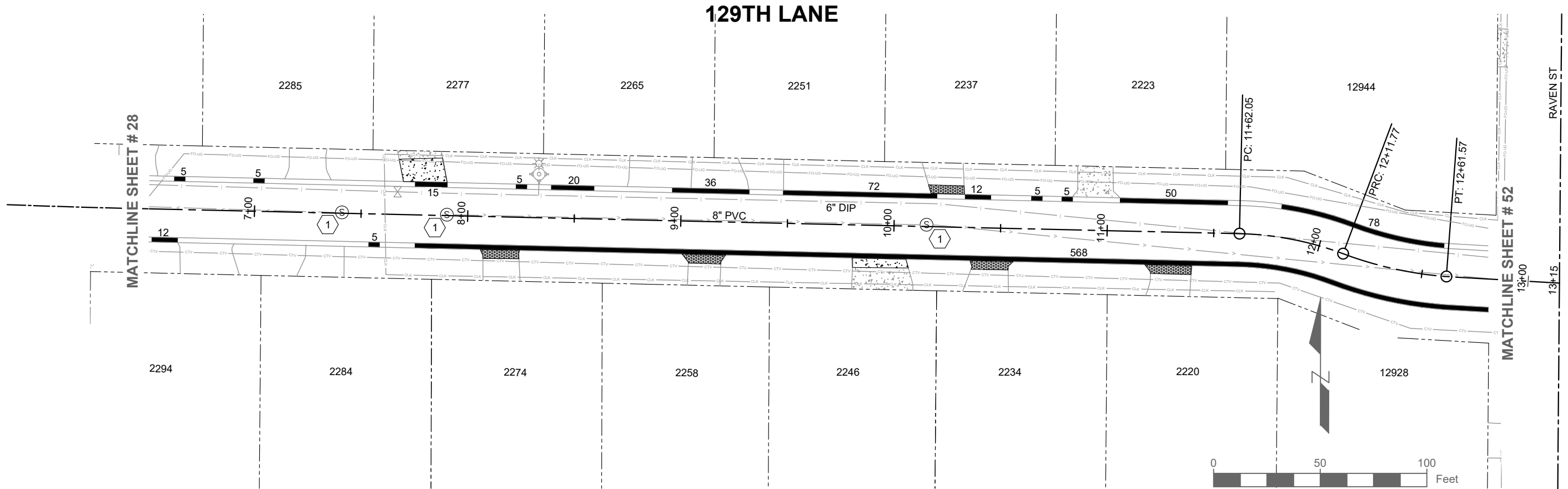
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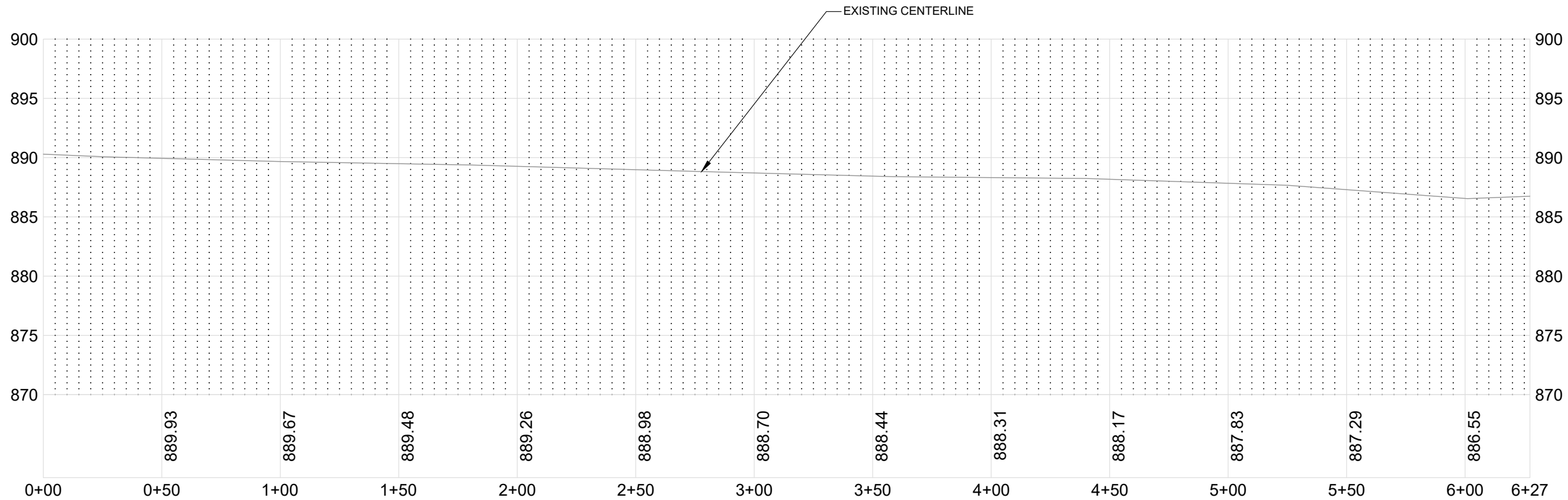
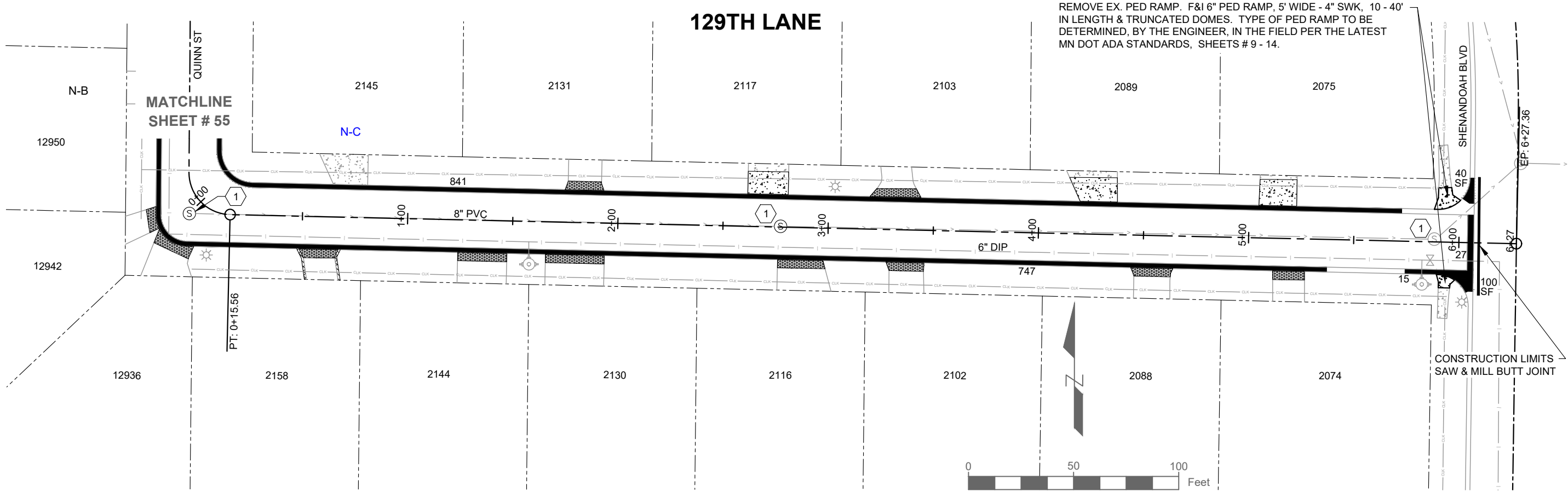
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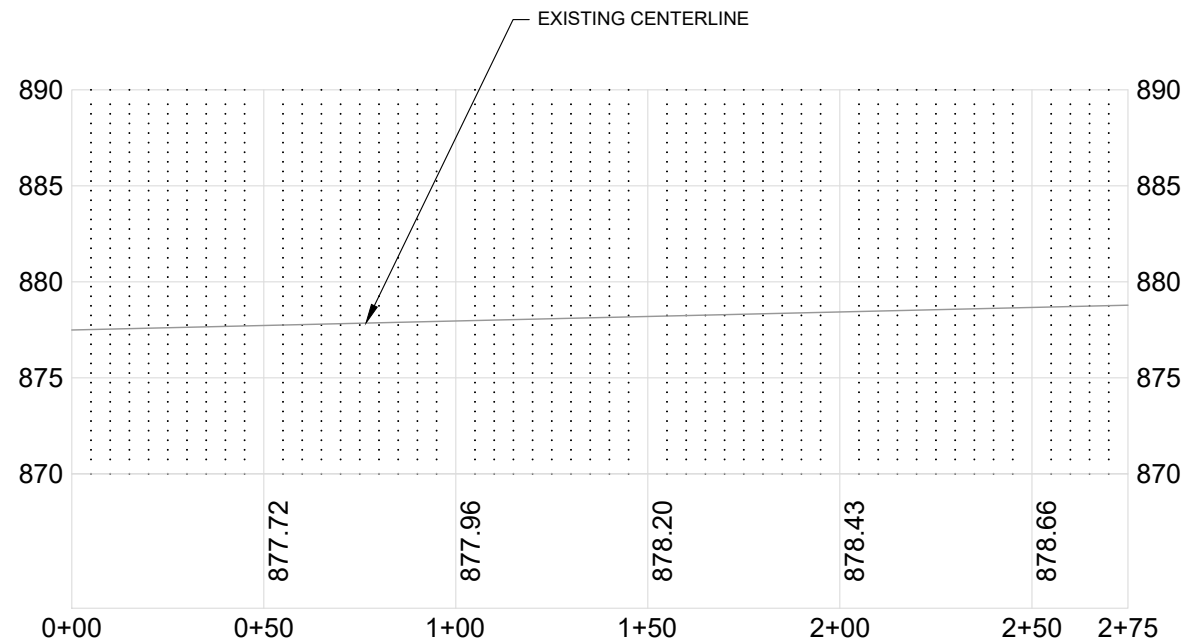
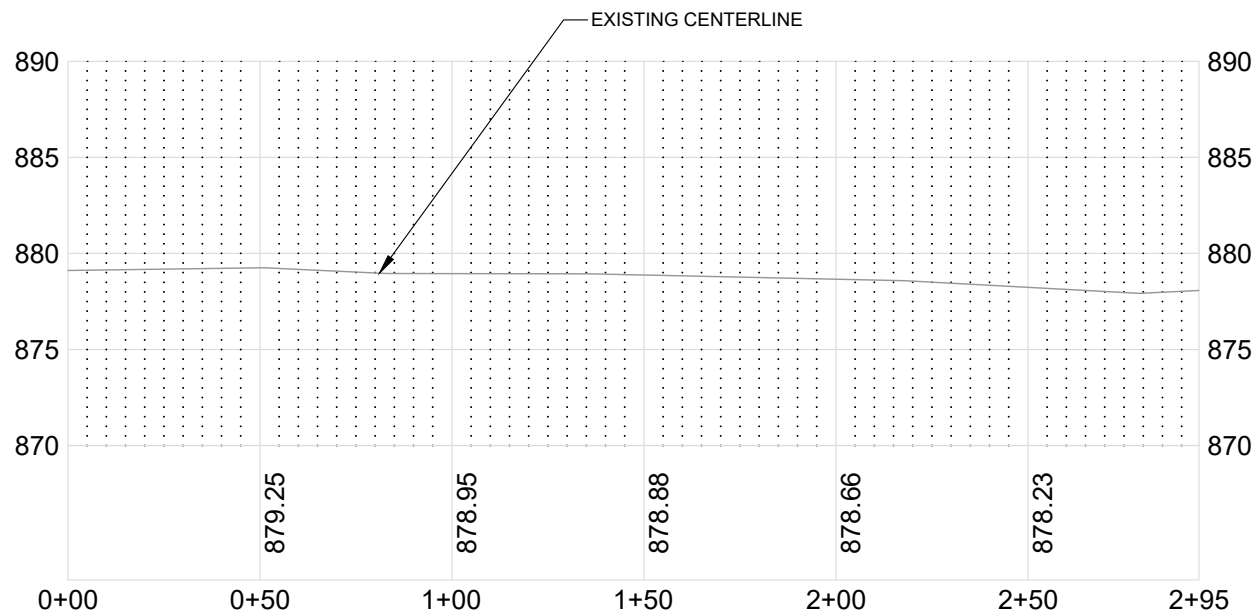
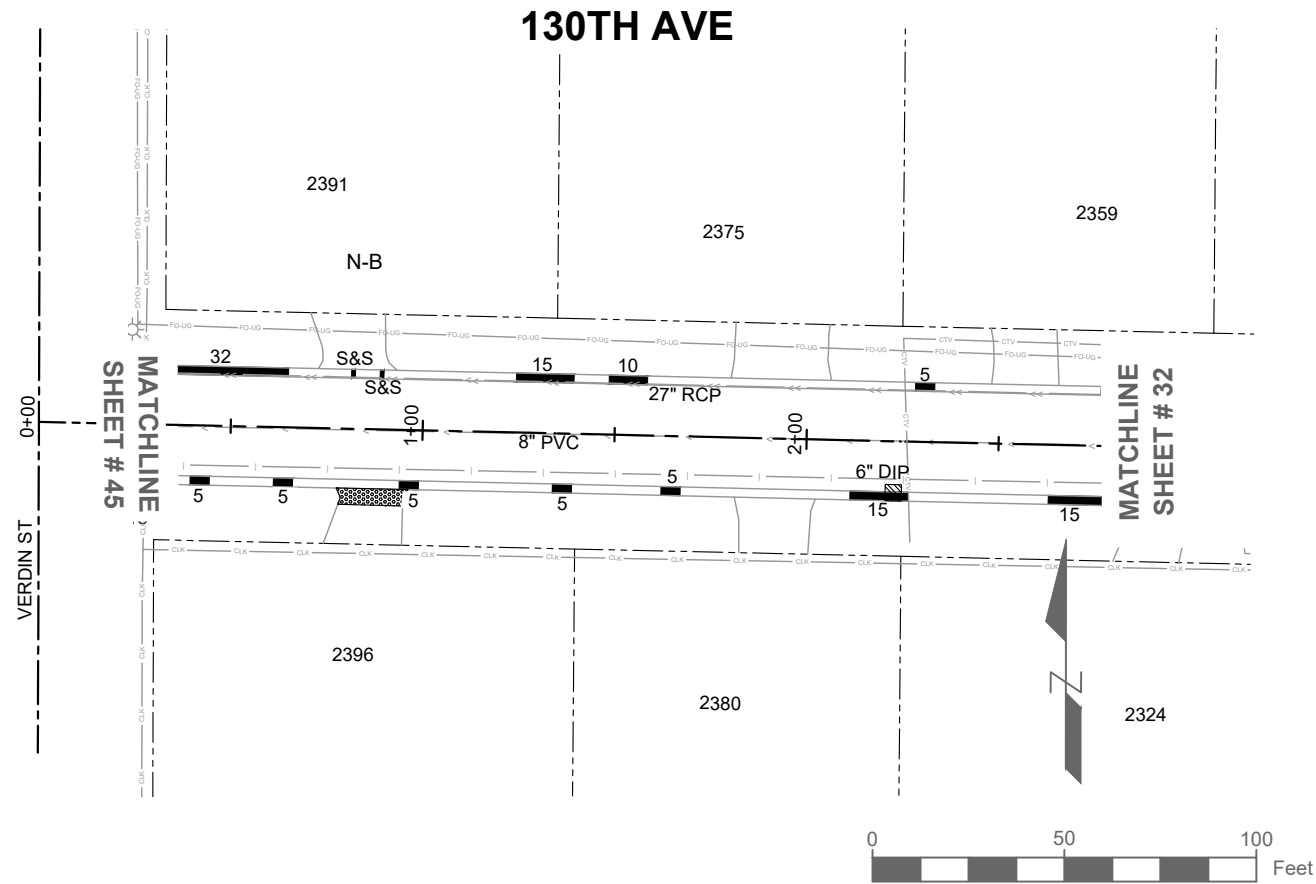
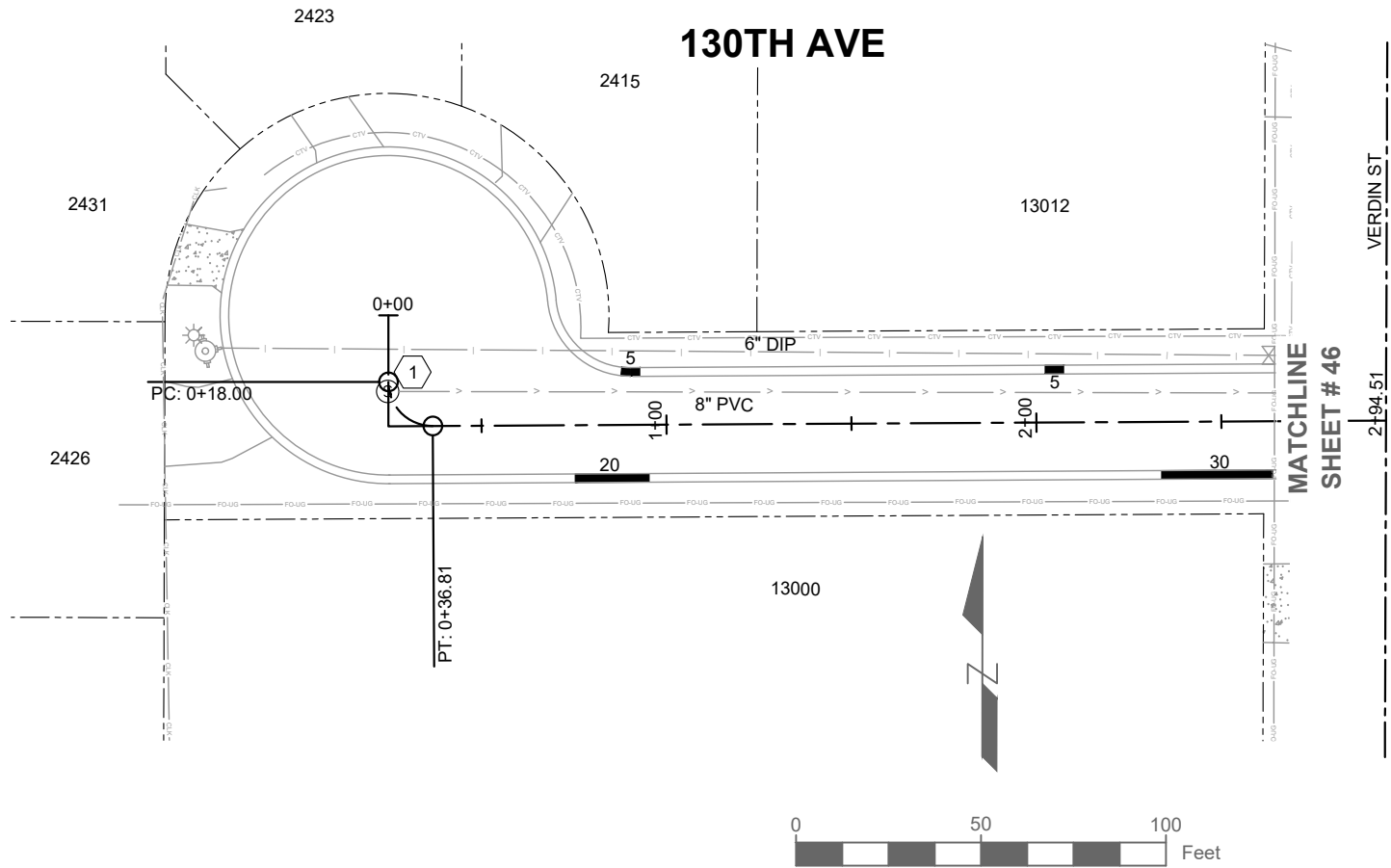
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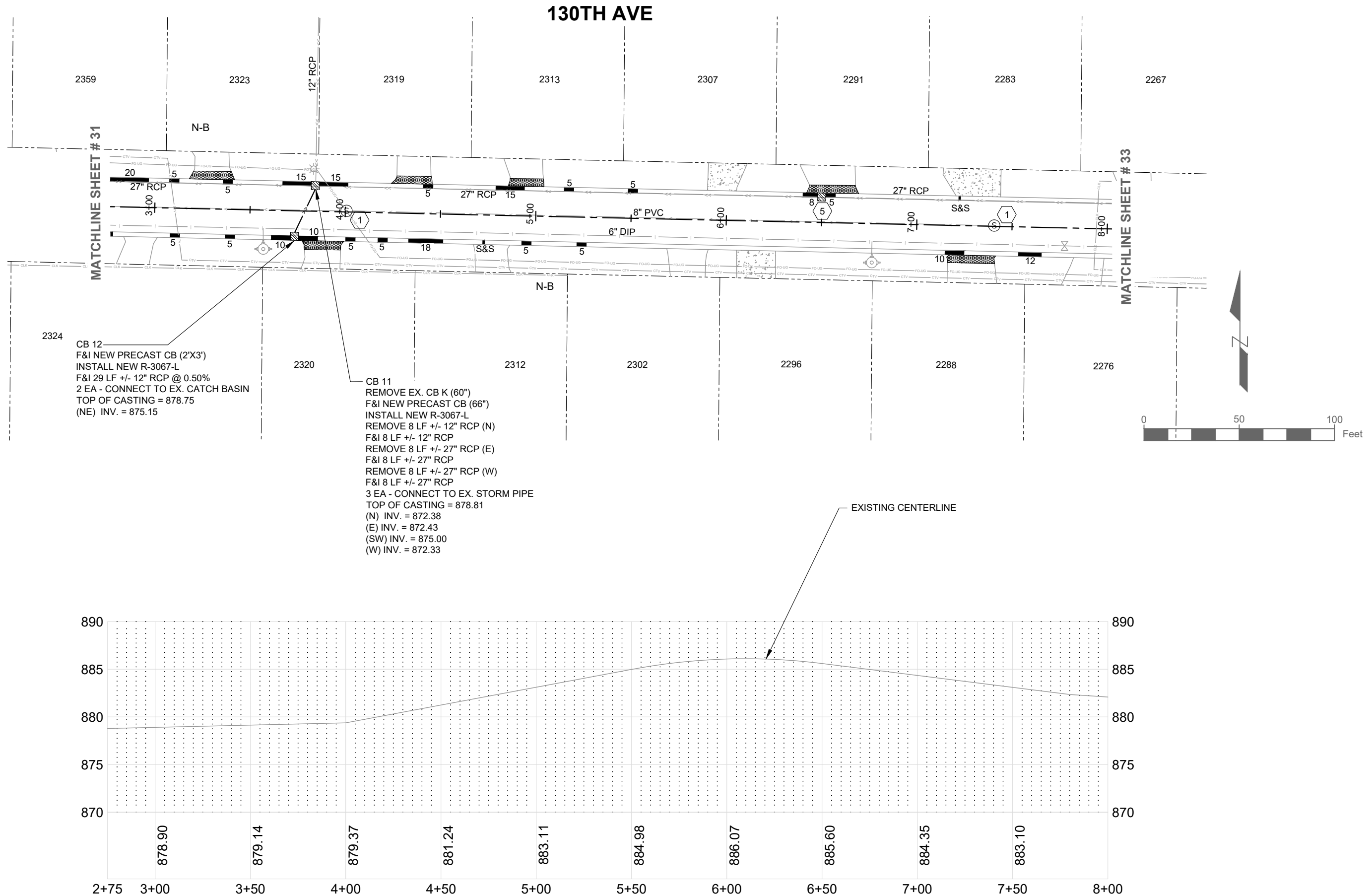
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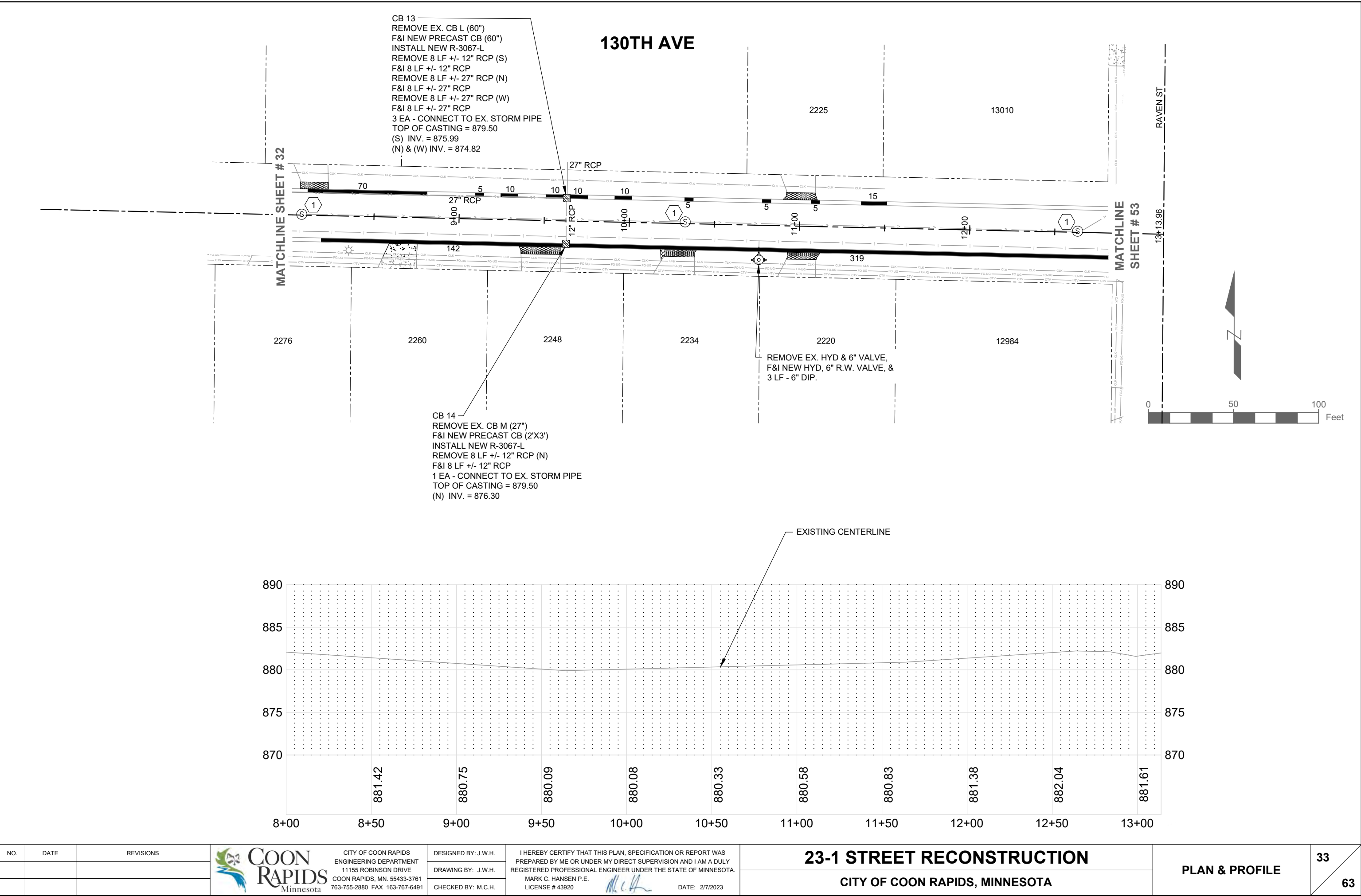
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23-1 STREET RECONSTRUCTION		PLAN & PROFILE	31 63
CITY OF COON RAPIDS, MINNESOTA			

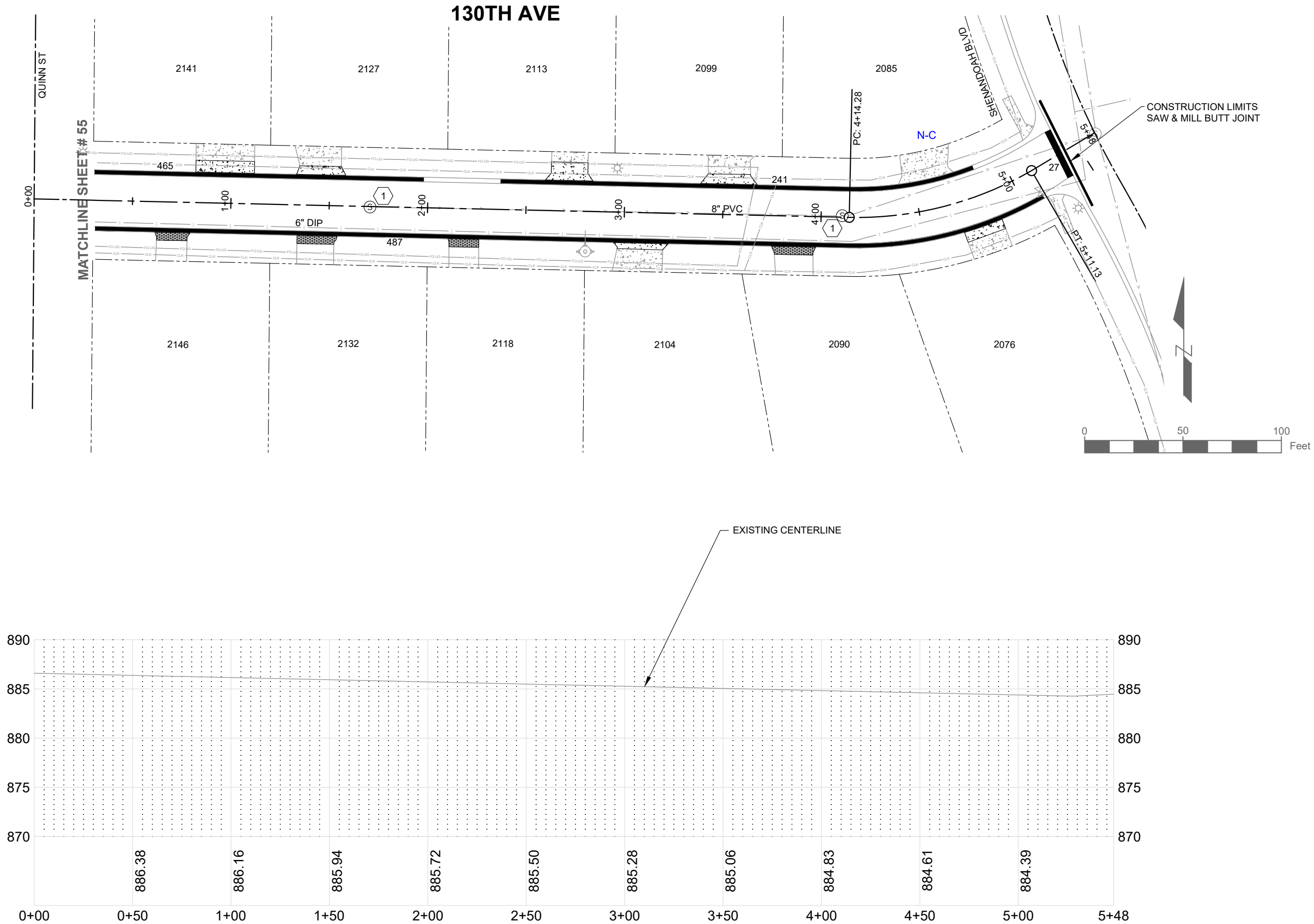
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NO.	DATE	REVISIONS	 <div>CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491</div>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E. LICENSE # 43920  DATE: 2/7/2023	23-1 STREET RECONSTRUCTION	PLAN & PROFILE	32
				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.		CITY OF COON RAPIDS, MINNESOTA		63



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NO.	DATE	REVISIONS

 **COON RAPIDS**
MINNESOTA

CITY OF COON RAPIDS
ENGINEERING DEPARTMENT
11155 ROBINSON DRIVE
COON RAPIDS, MN. 55433-3761
763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.
DRAWING BY: J.W.H.
CHECKED BY: M.C.H.

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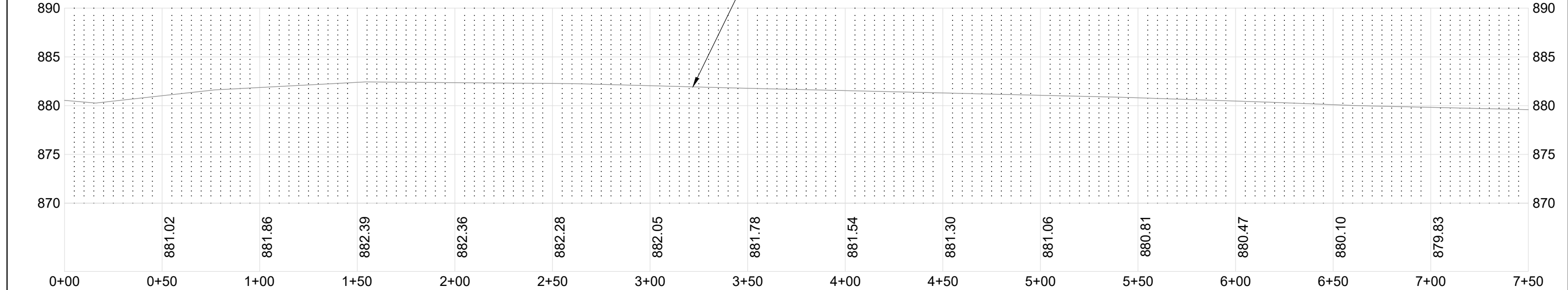
MARK C. HANSEN P.E.
LICENSE # 43920



DATE: 2/7/2023

23-1 STREET RECONSTRUCTION

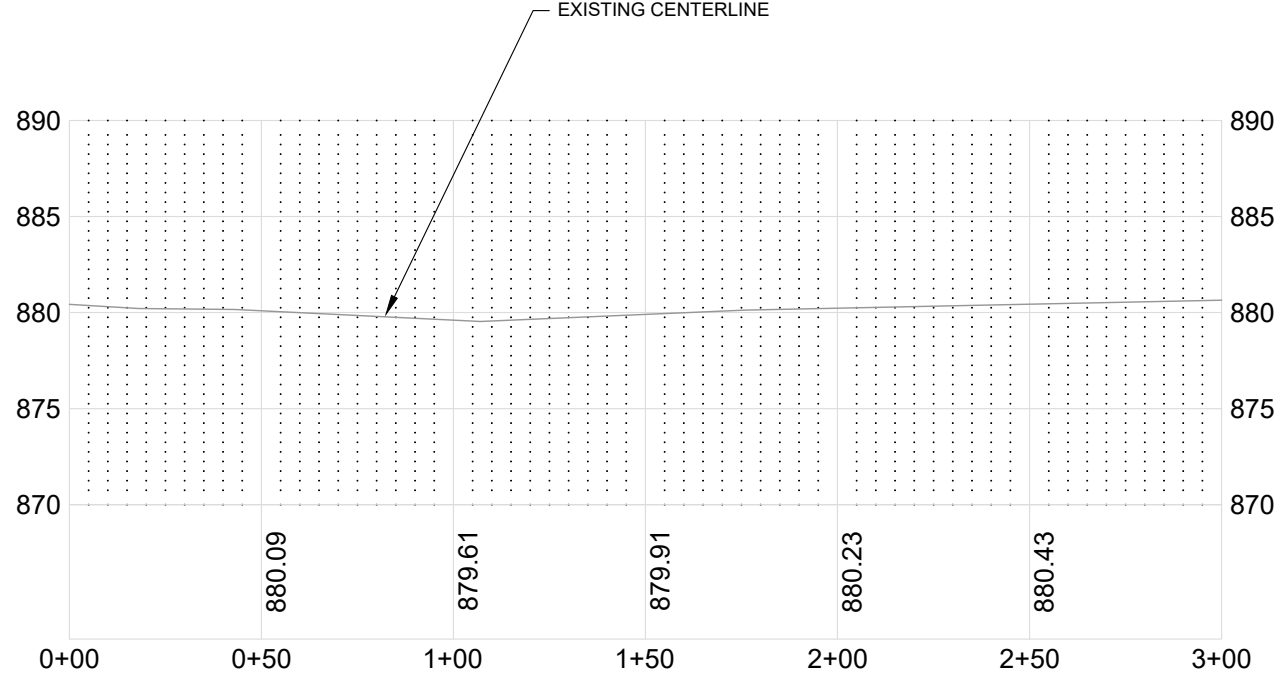
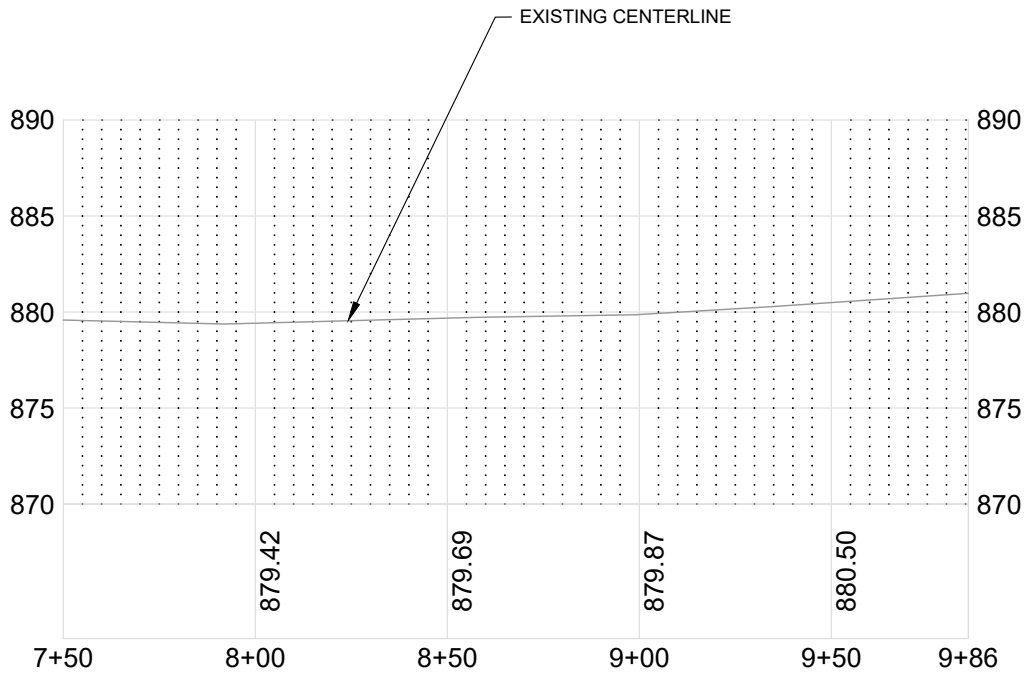
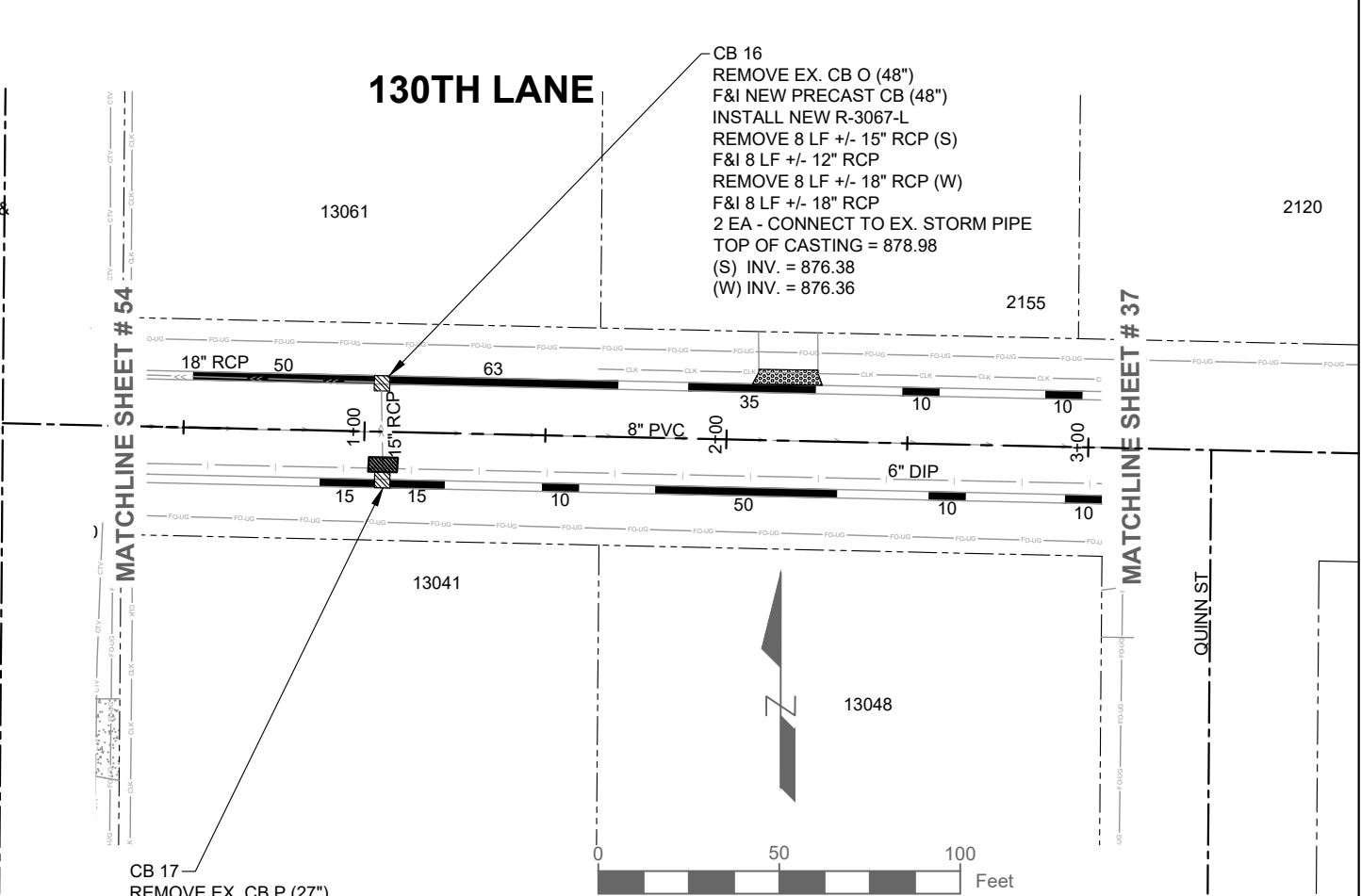
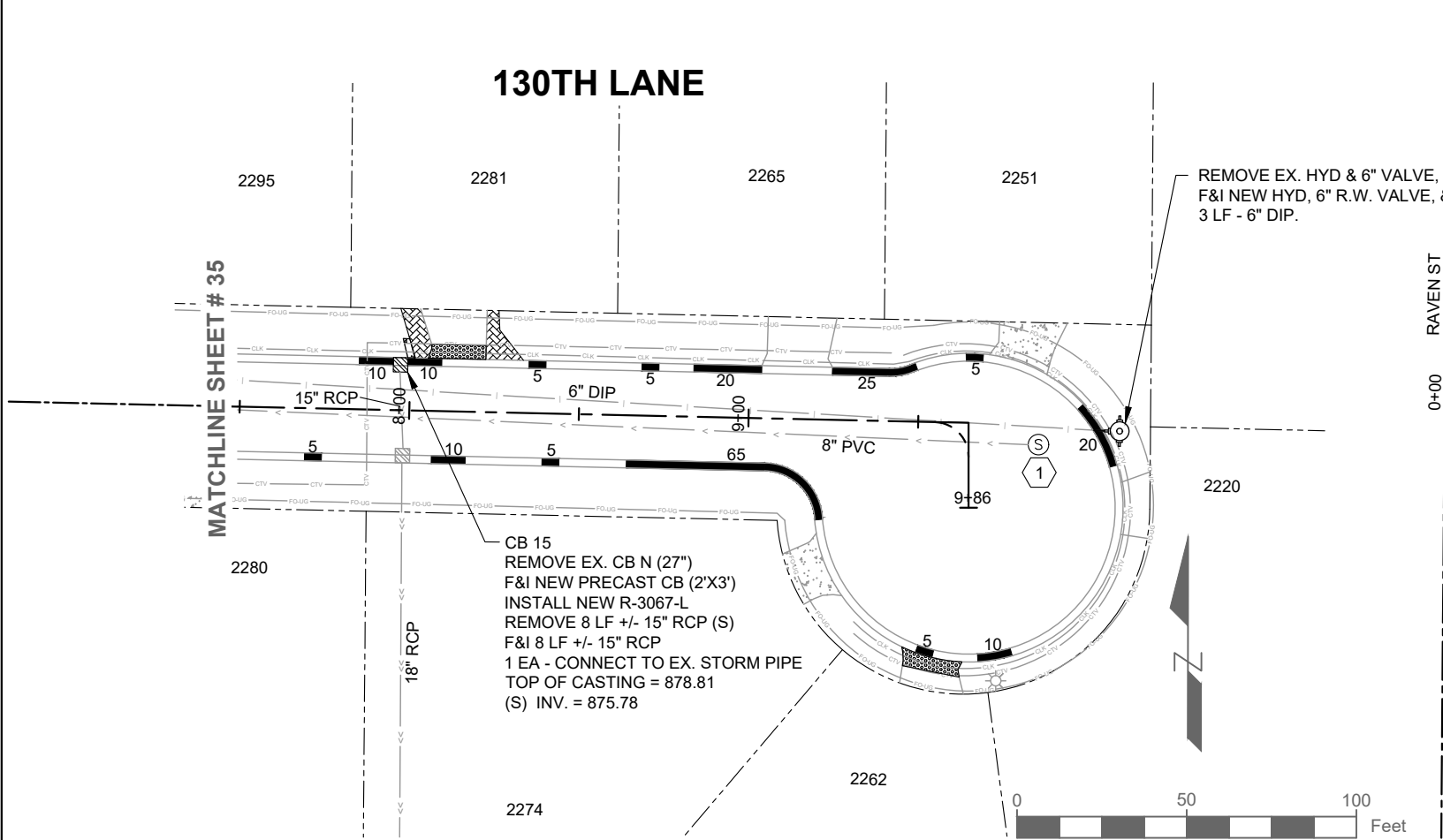
CITY OF COON RAPIDS, MINNESOTA



PLAN & PROFILE



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				DRAWING BY: J.W.H.					
				CHECKED BY: M.C.H.					

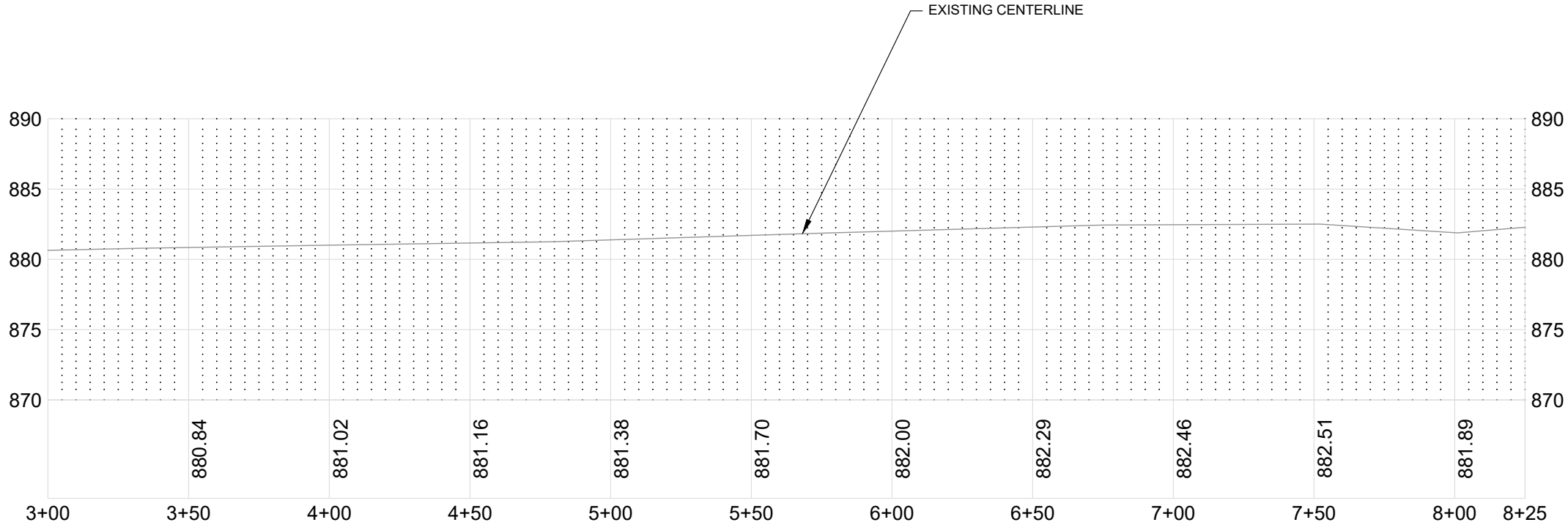
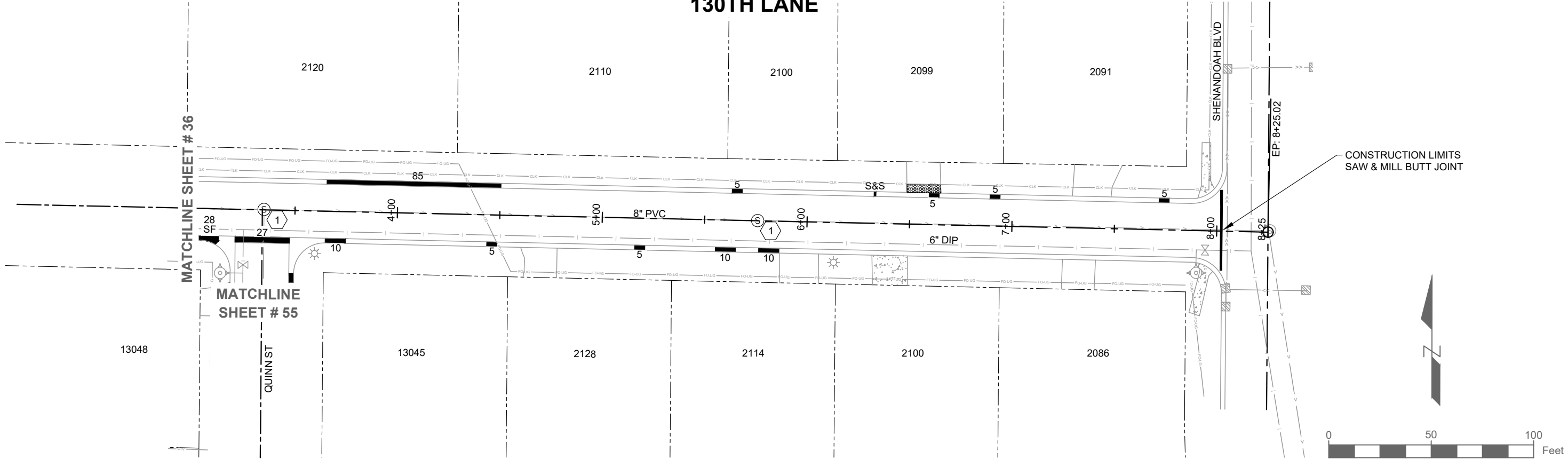
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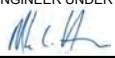


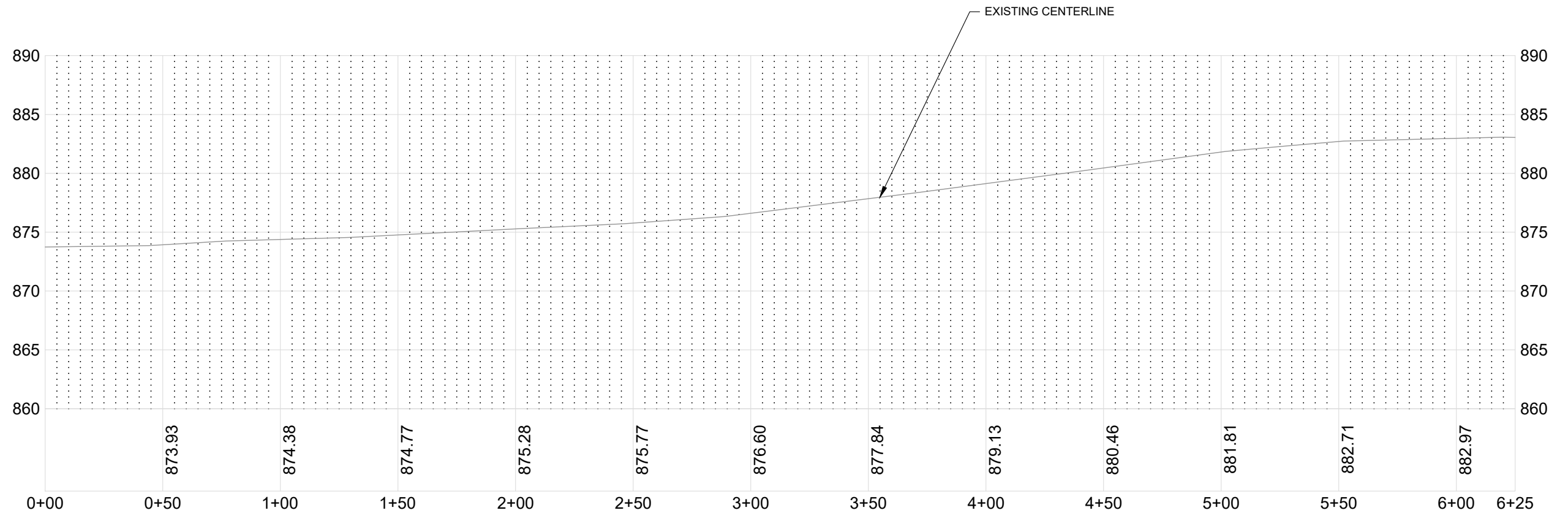
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				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.				



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				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.				

CB 19
REMOVE EX. CB R (48")
F&I NEW PRECAST CB (48")
INSTALL NEW R-3067-L
REMOVE 8 LF +/- 15" RCP (S)
F&I 8 LF +/- 15" RCP
REMOVE 8 LF +/- 15" RCP (W)
F&I 8 LF +/- 15" RCP
2 EA - CONNECT TO EX. STORM PIPE
TOP OF CASTING = 879.62
(S) & (W) INV. = 875.36
2323

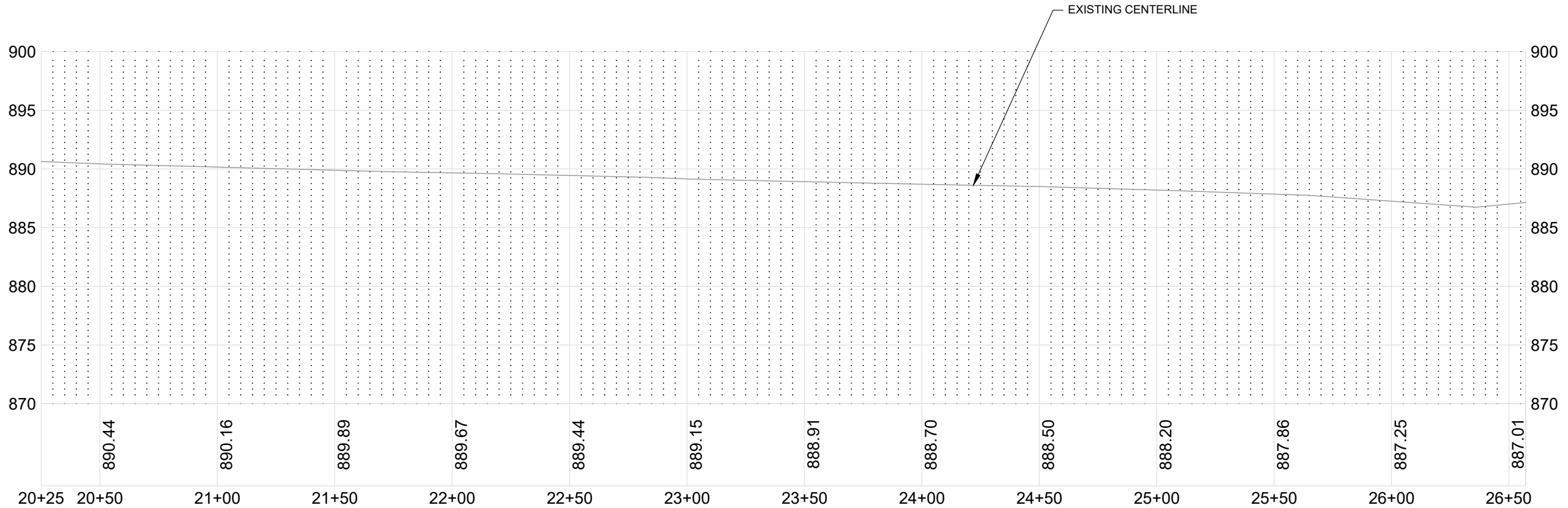
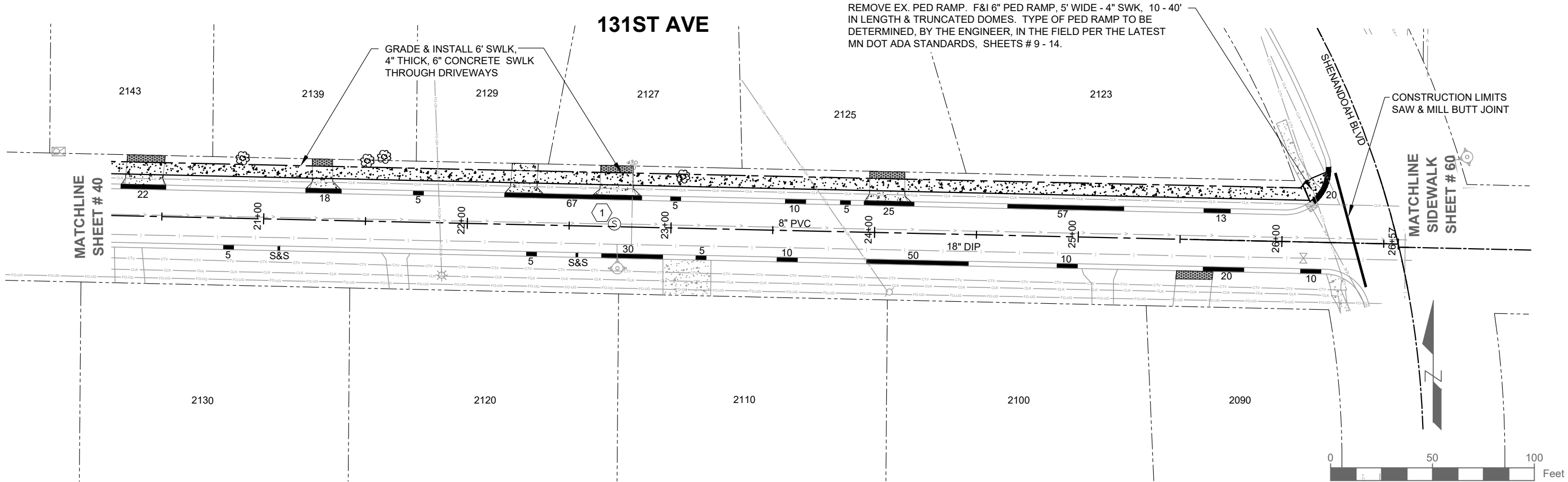


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				CHECKED BY: M.C.H.				



NO.	DATE	REVISIONS	 <div> CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491 </div>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E.  DATE: 2/7/2023 LICENSE # 43920	<div>23-1 STREET RECONSTRUCTION</div> <div>CITY OF COON RAPIDS, MINNESOTA</div>	<div>PLAN & PROFILE</div>	<div>40</div> <div>63</div>
				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.				

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COON RAPIDS

Minnesota

CITY OF COON RAPIDS

ENGINEERING DEPARTMENT

11155 ROBINSON DRIVE

COON RAPIDS, MN. 55433-3761

763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.

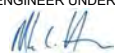
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LICENSE # 43920



DATE: 2/7/2023

23-1 STREET RECONSTRUCTION

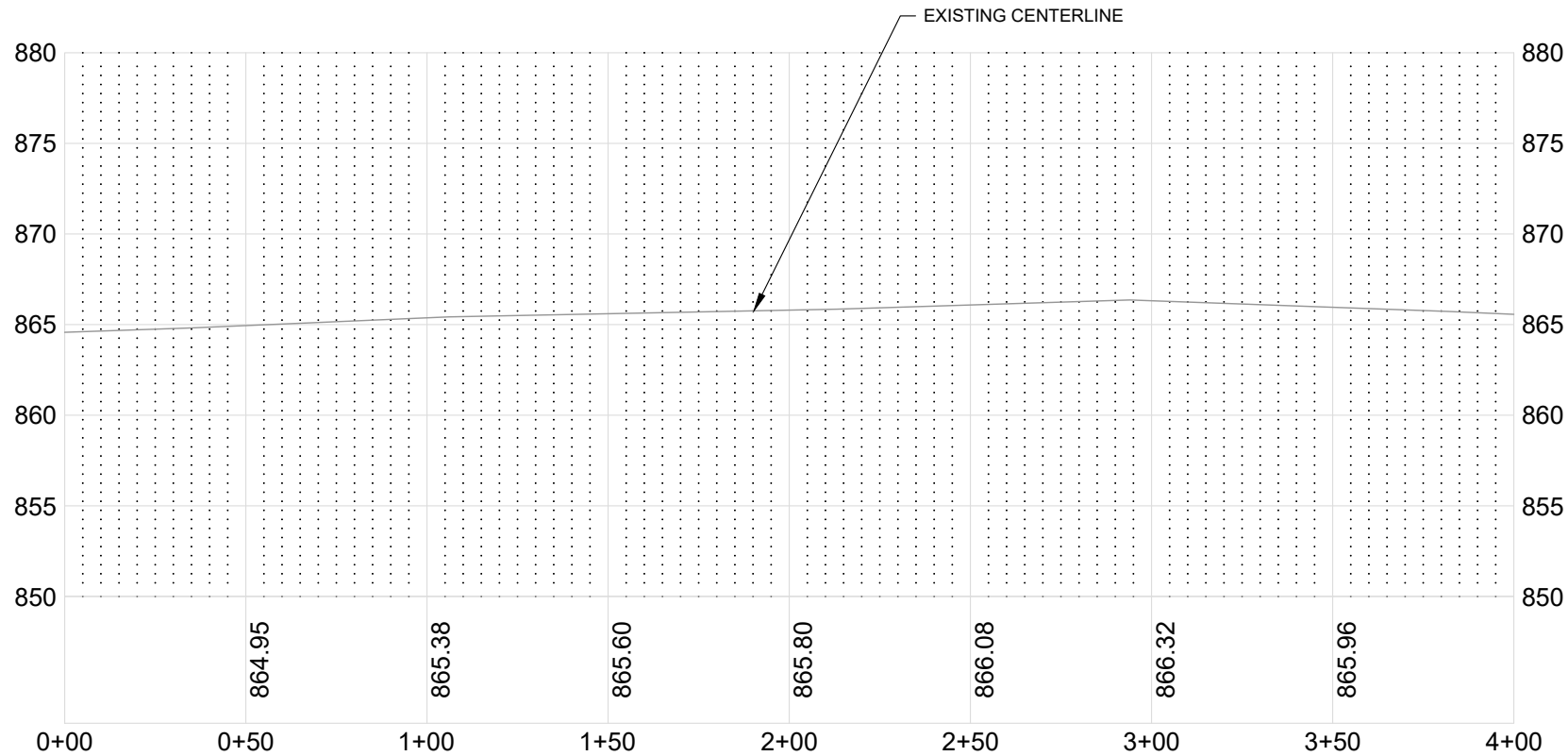
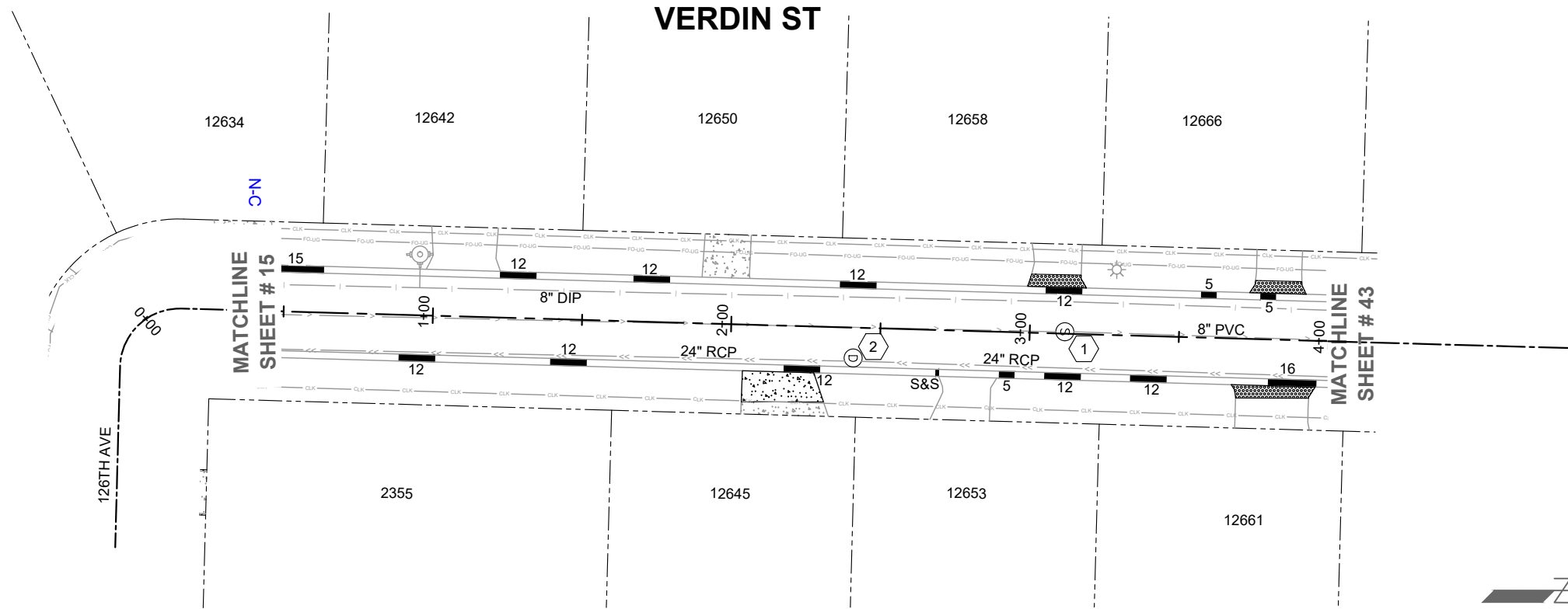
CITY OF COON RAPIDS, MINNESOTA



PLAN & PROFILE

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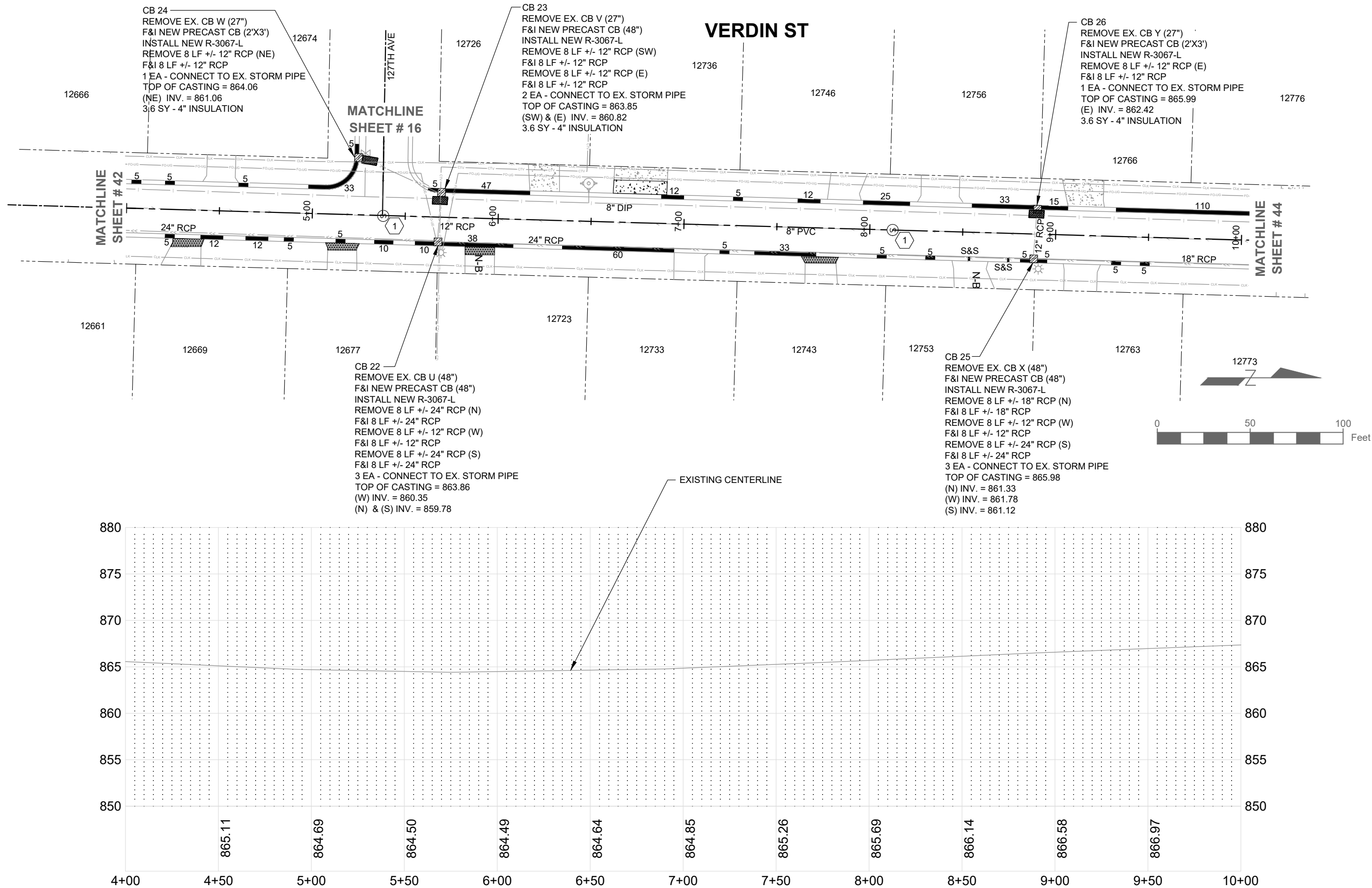
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				DRAWING BY: J.W.H.		CITY OF COON RAPIDS, MINNESOTA			
				CHECKED BY: M.C.H.					

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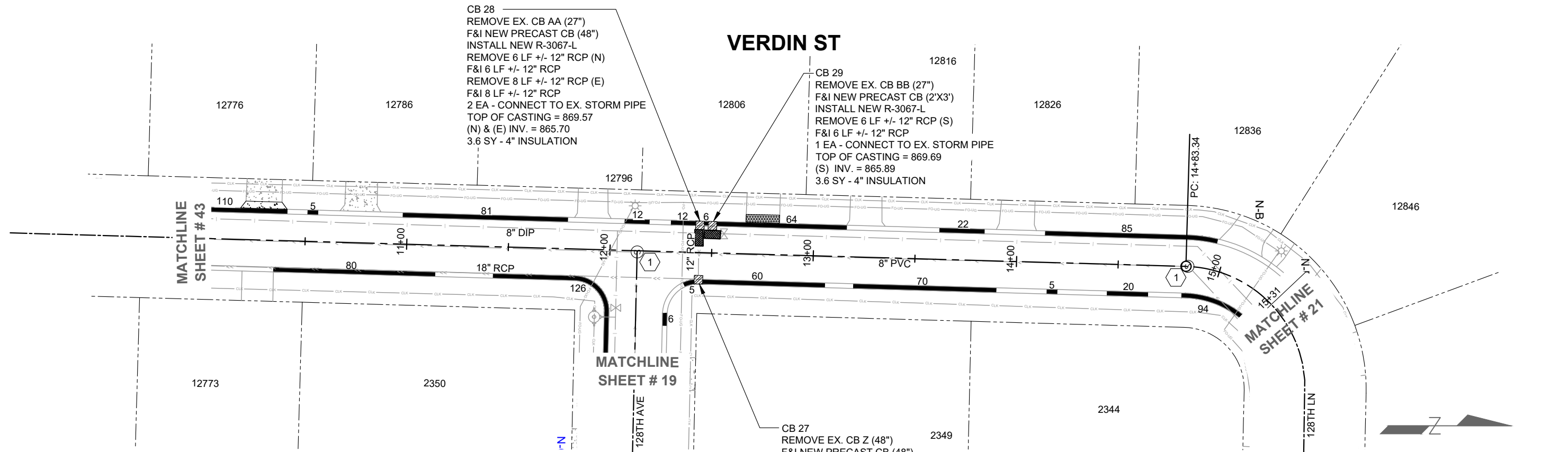
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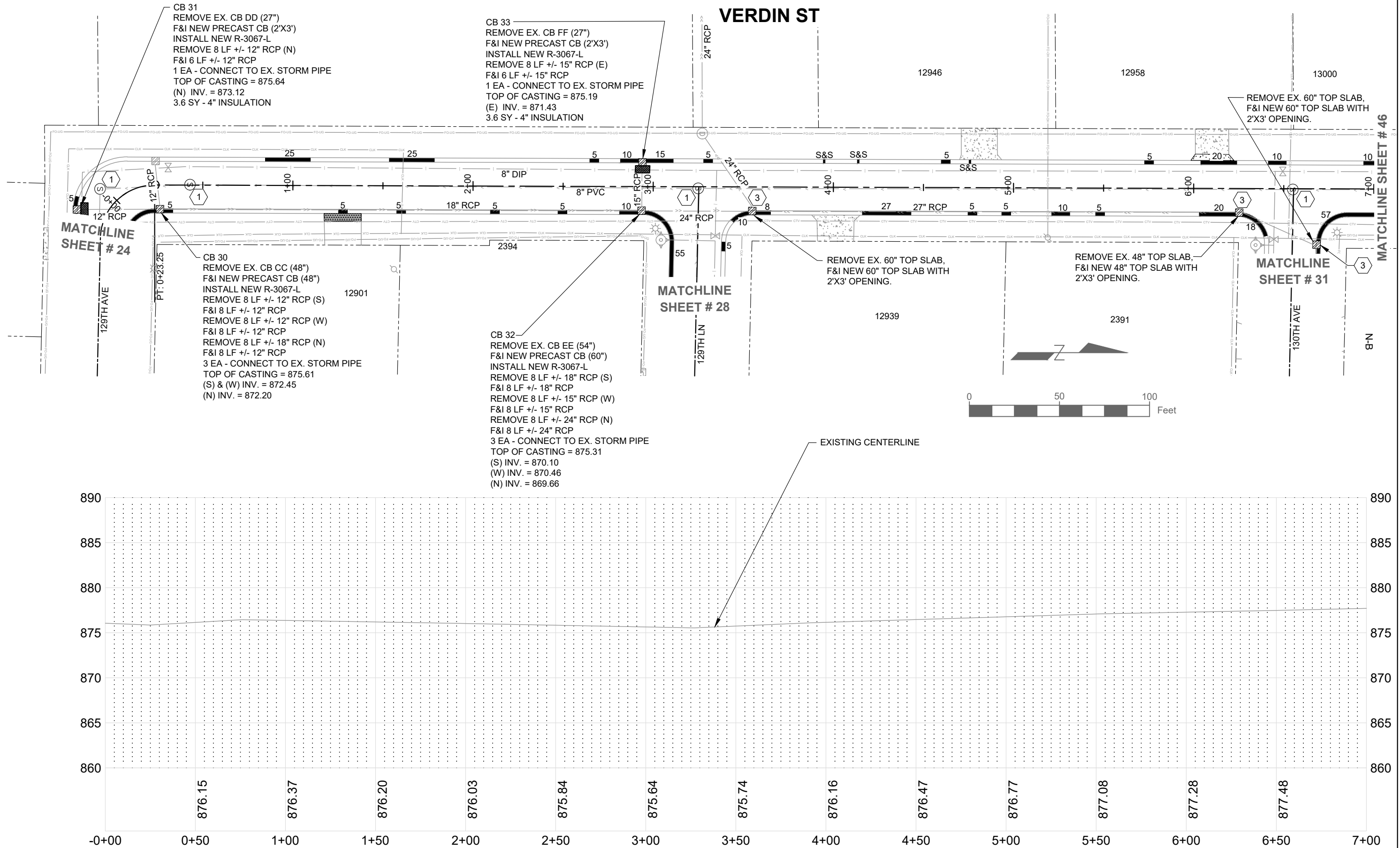
CITY OF COON RAPIDS, MINNESOTA



PLAN & PROFILE

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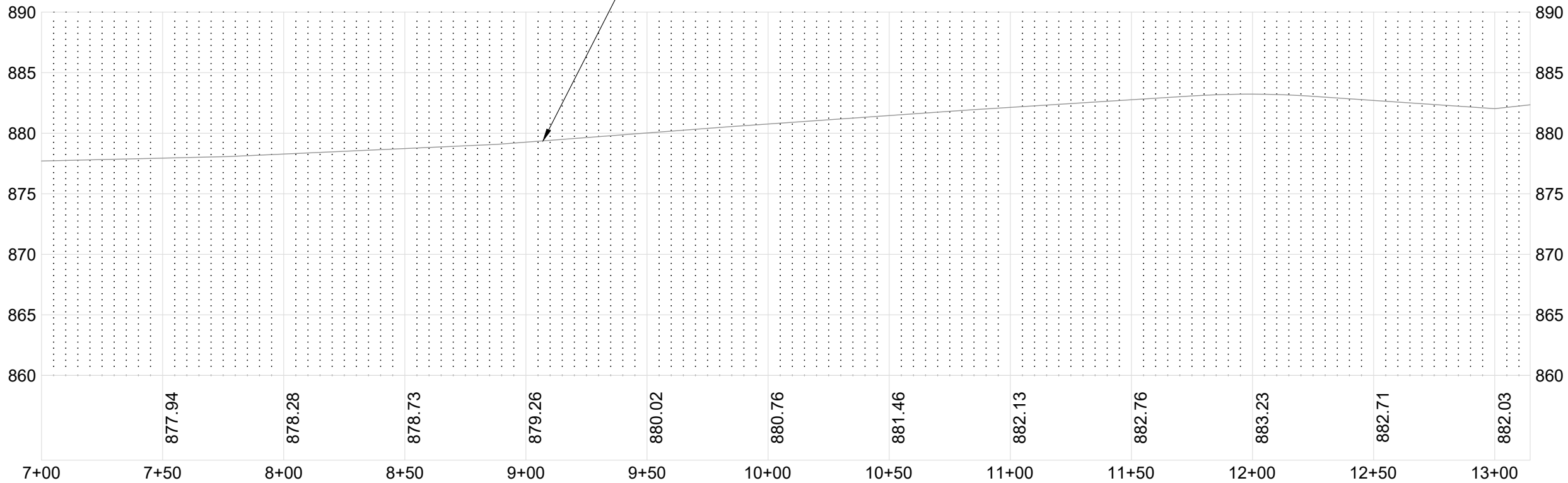
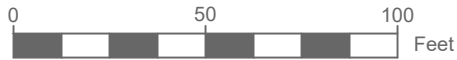
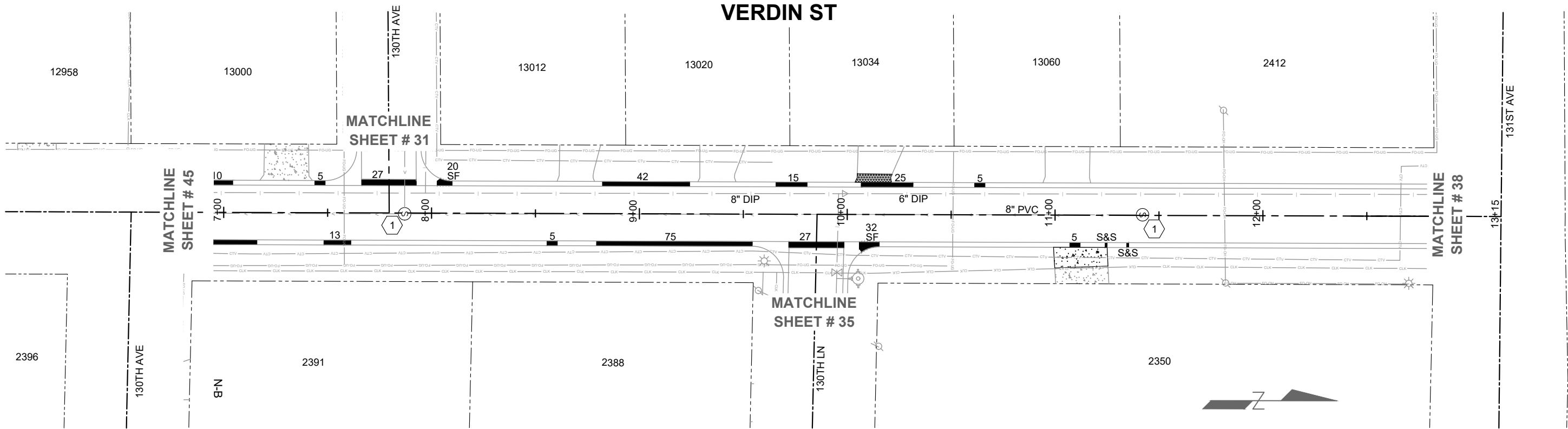
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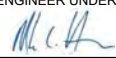




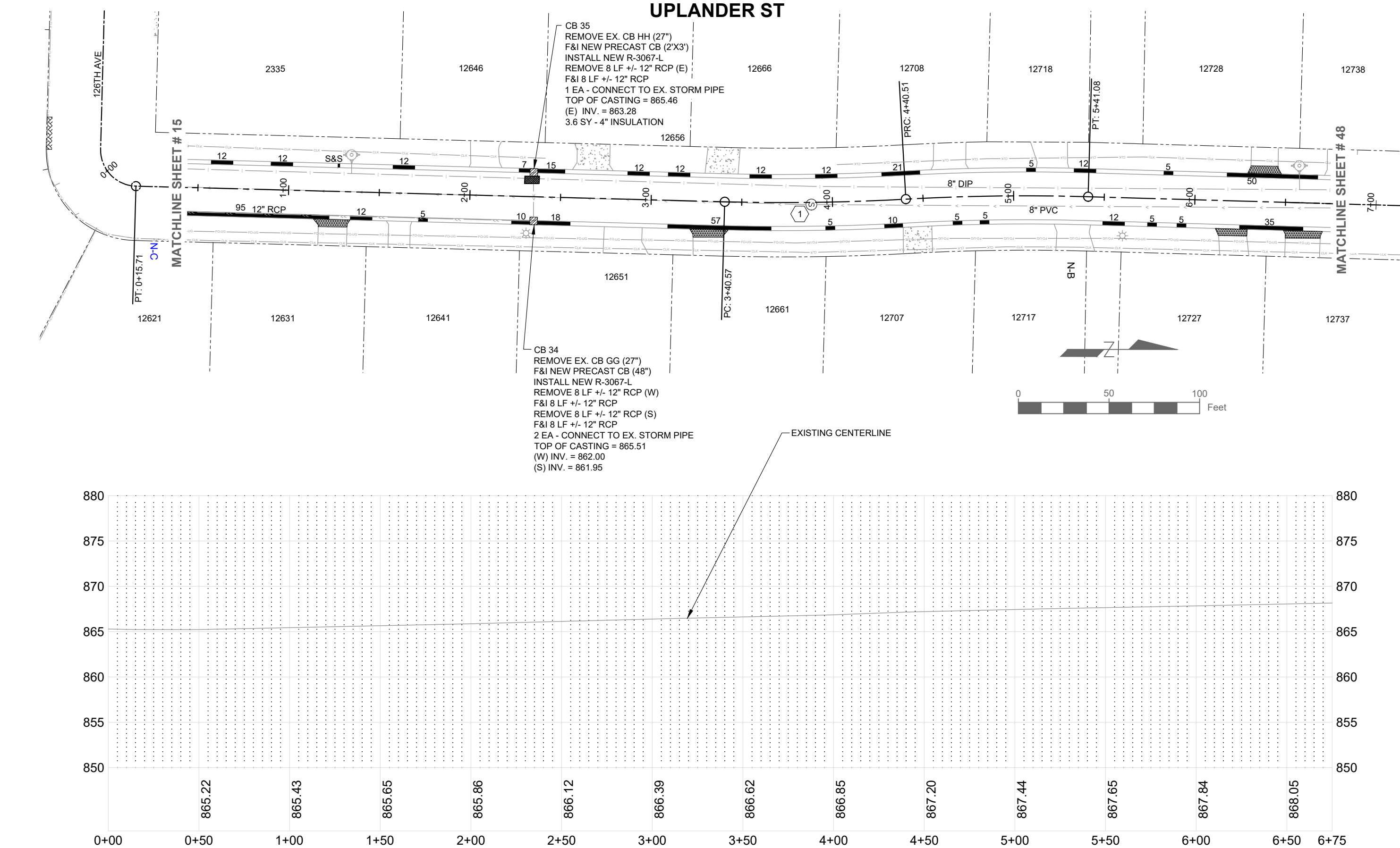
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				ENGINEERING DEPARTMENT	DRAWING BY: J.W.H.				
				11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491	CHECKED BY: M.C.H.				


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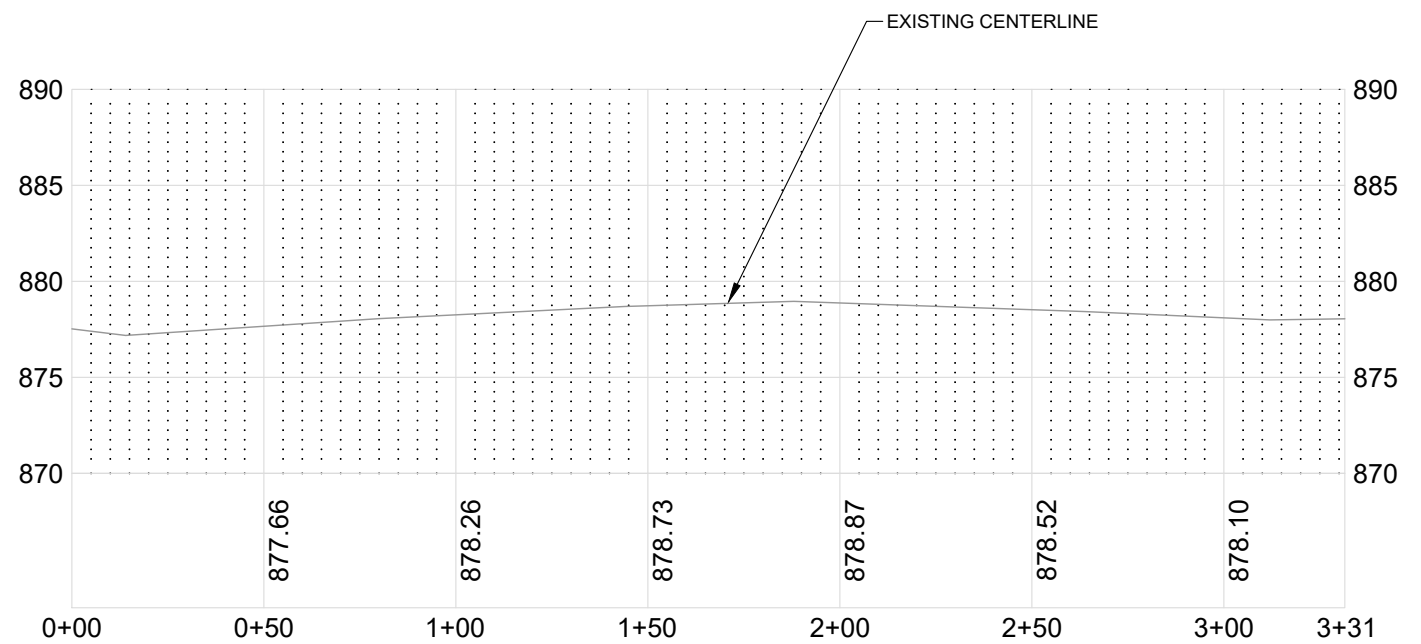
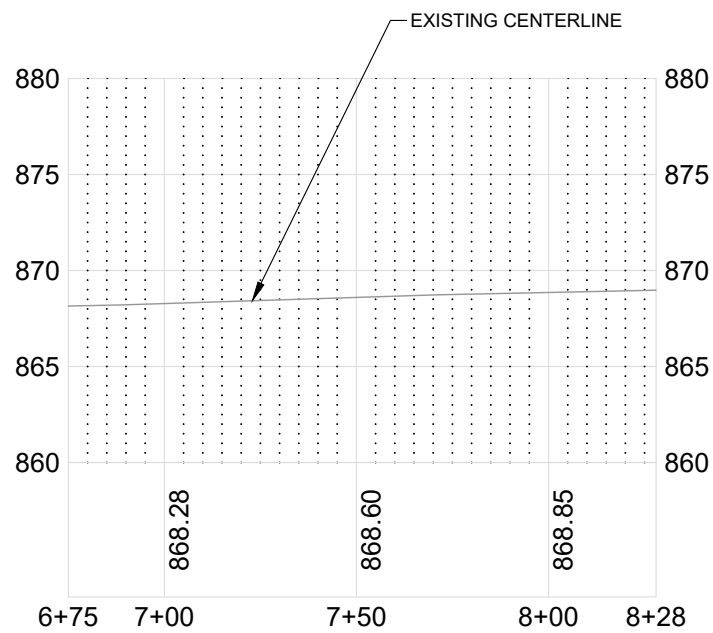


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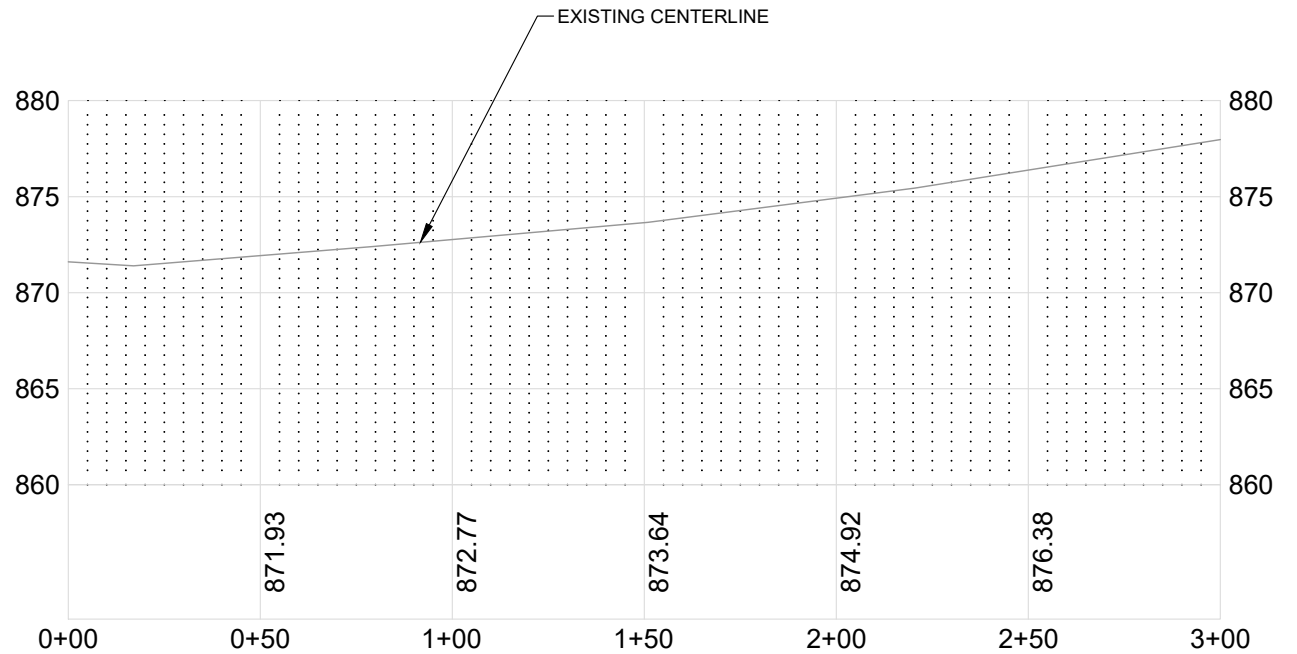
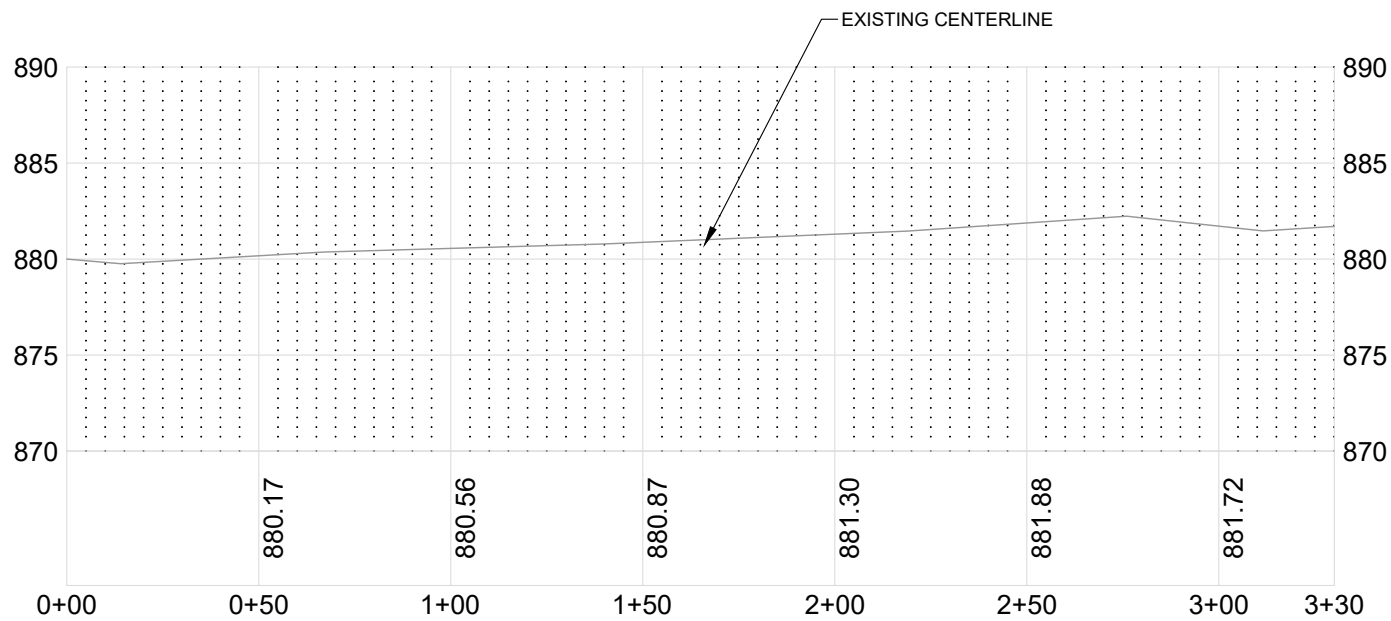
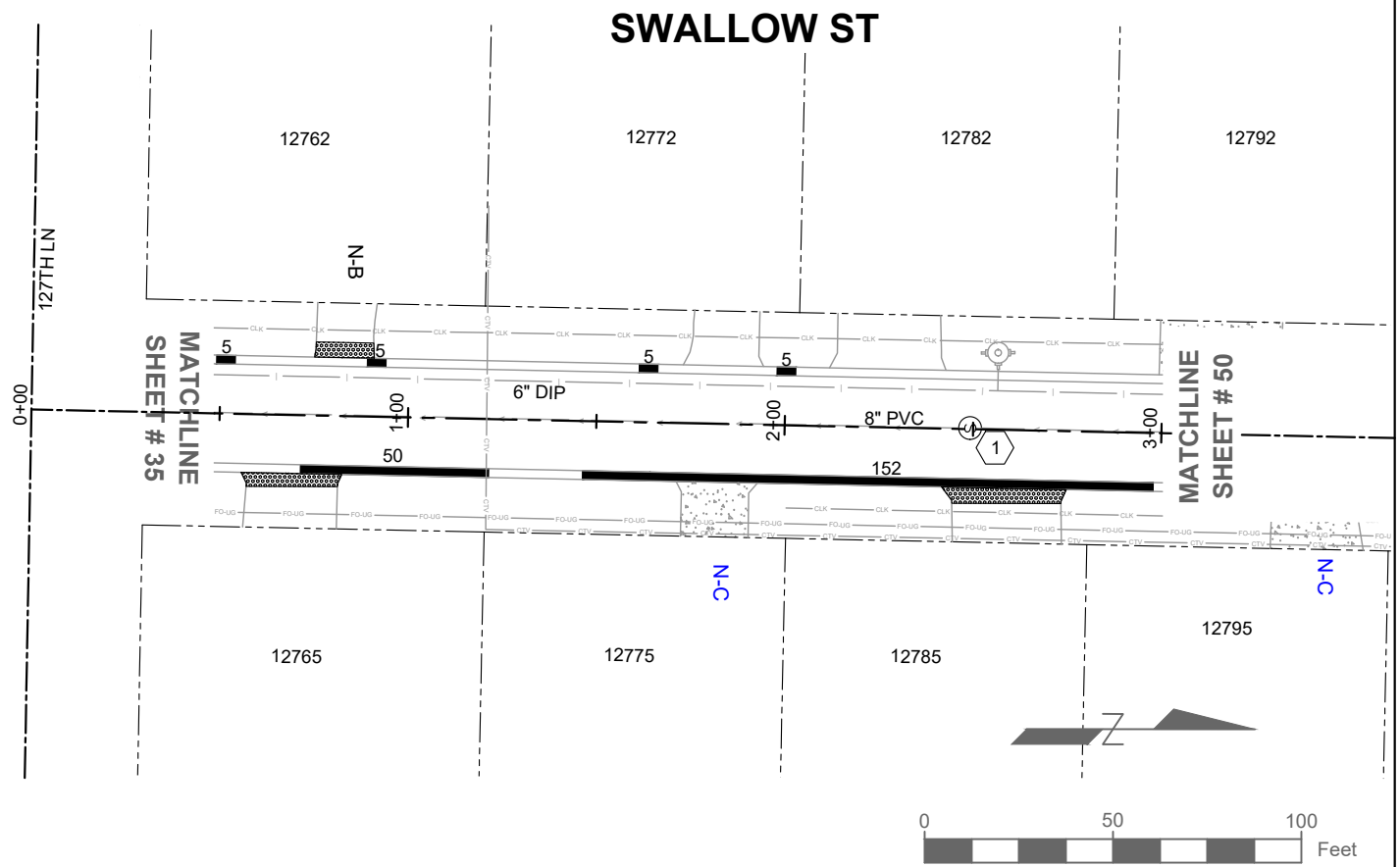
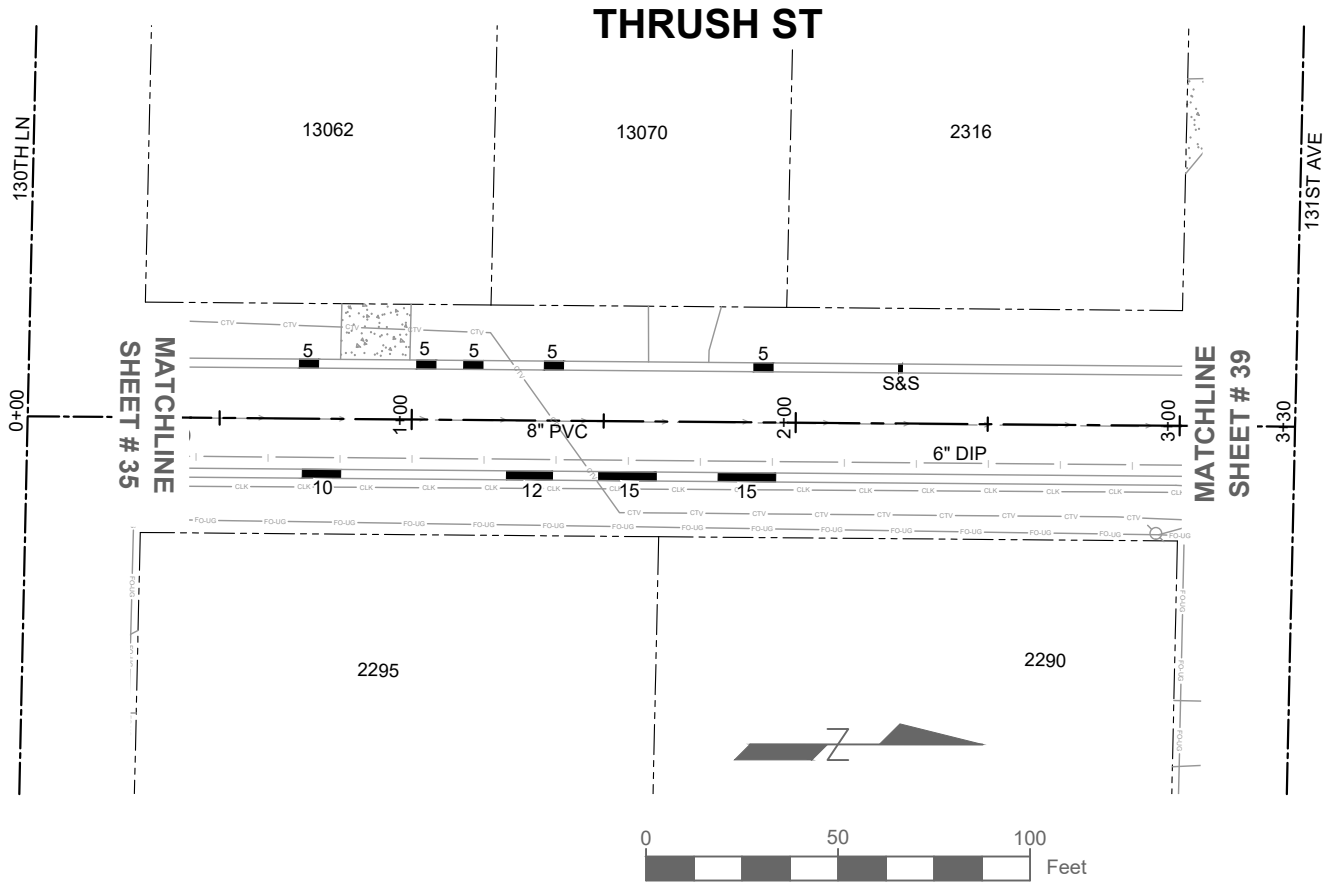
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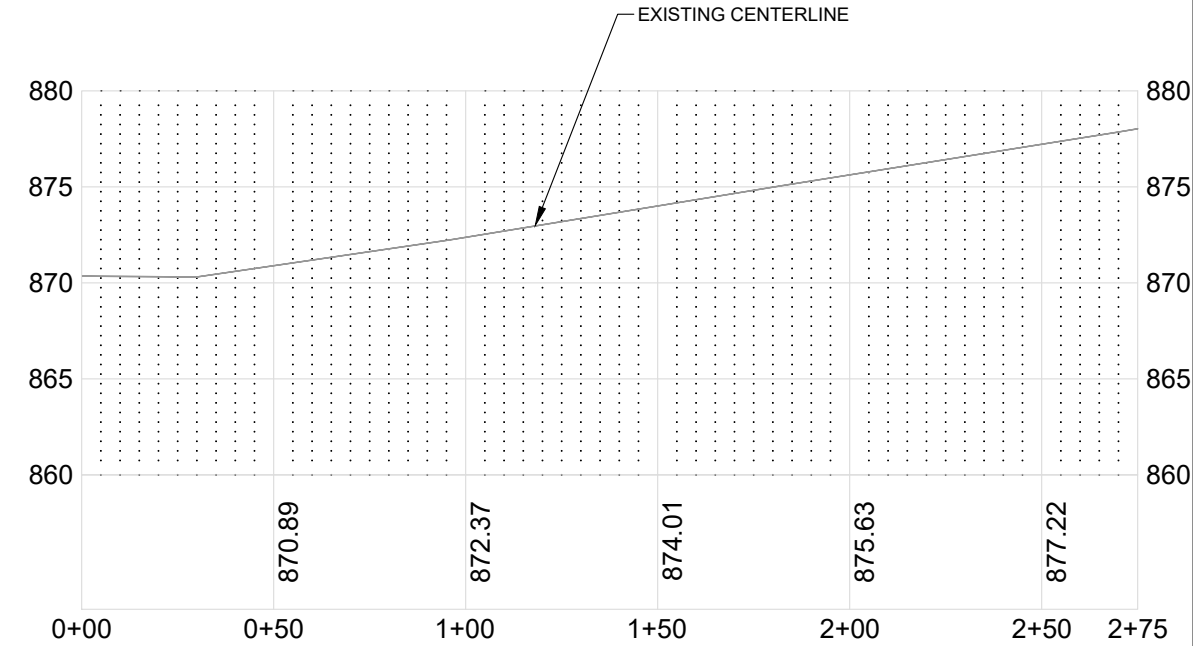
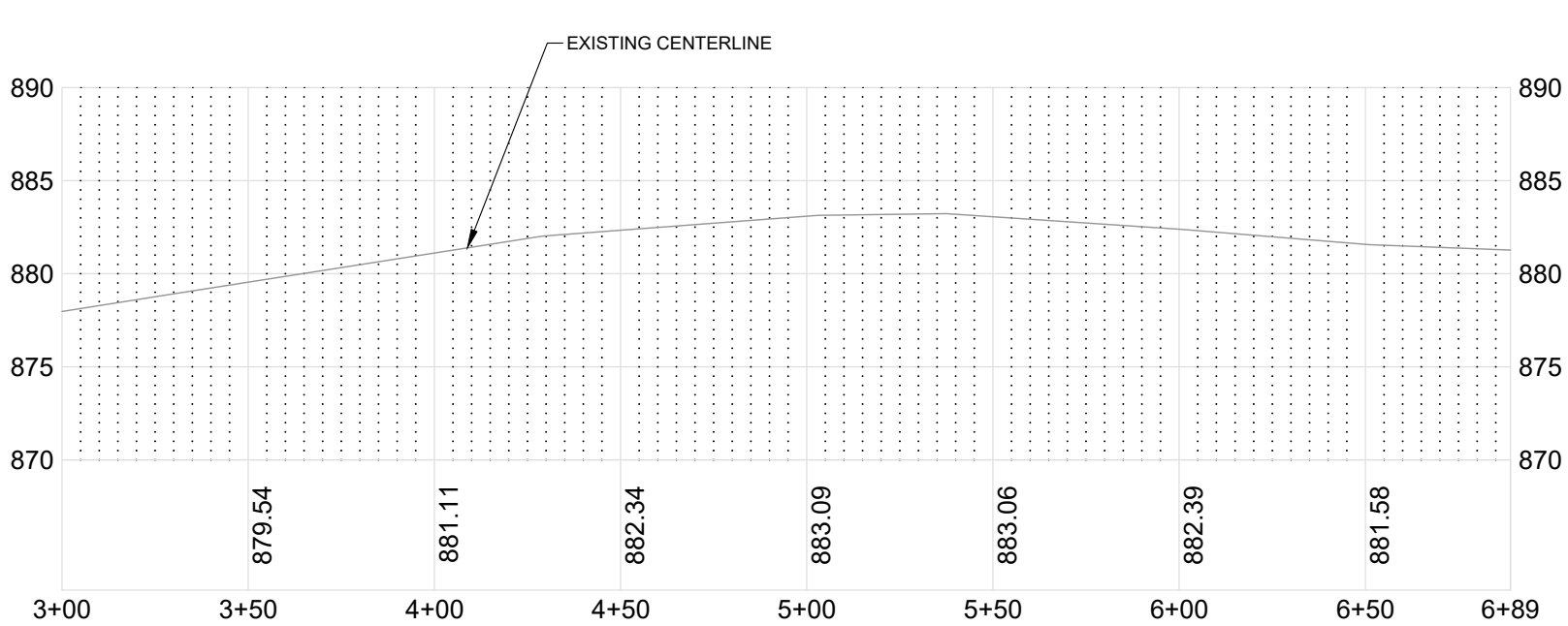
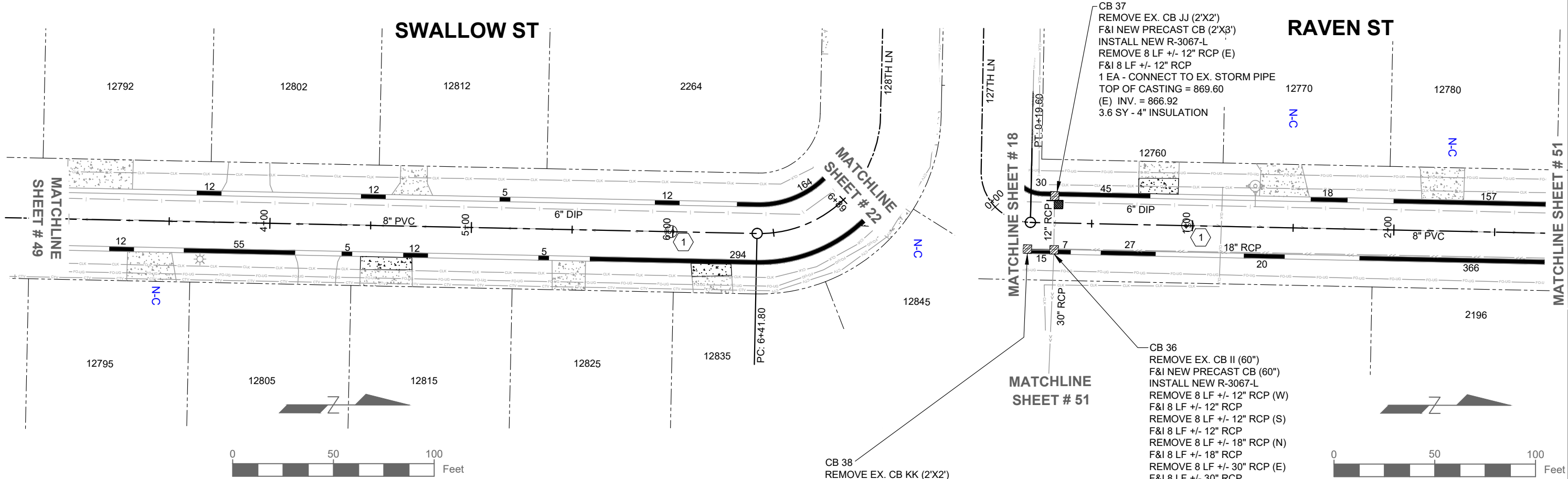


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				DRAWING BY: J.W.H.		CITY OF COON RAPIDS, MINNESOTA			
				CHECKED BY: M.C.H.					

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CITY OF COON RAPIDS

ENGINEERING DEPARTMENT

11155 ROBINSON DRIVE

COON RAPIDS, MN. 55433-3761

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LICENSE # 43920
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23-1 STREET RECONSTRUCTION
CITY OF COON RAPIDS, MINNESOTA

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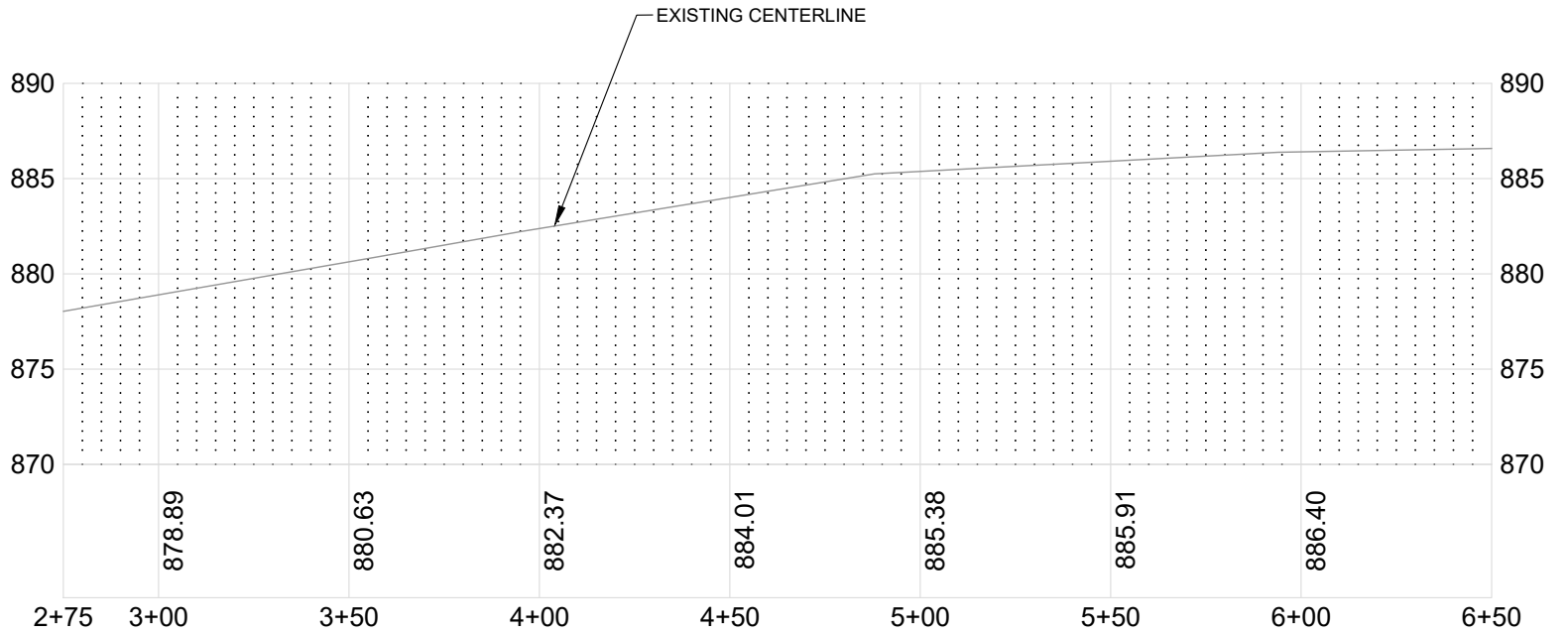
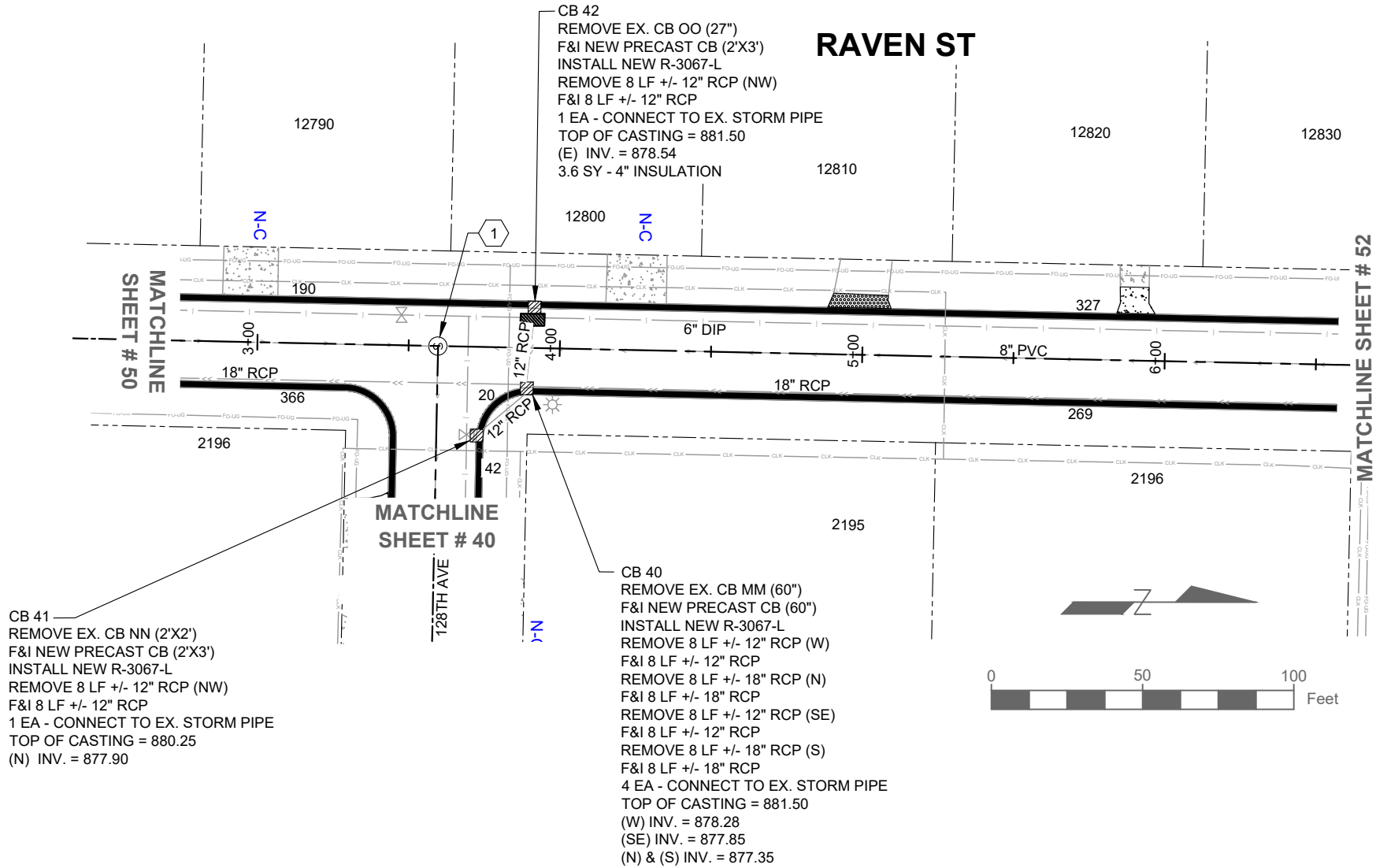
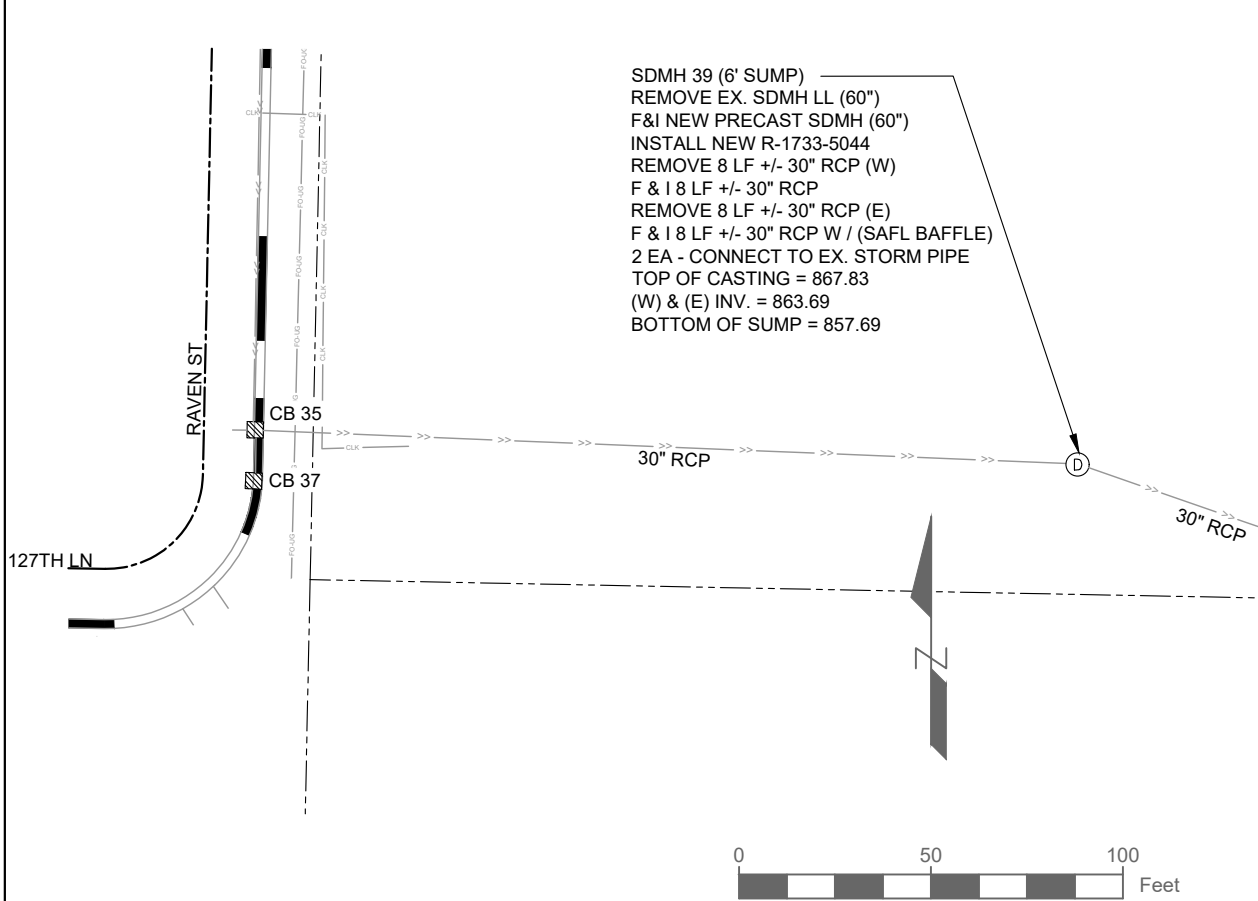
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23-1 STREET RECONSTRUCTION

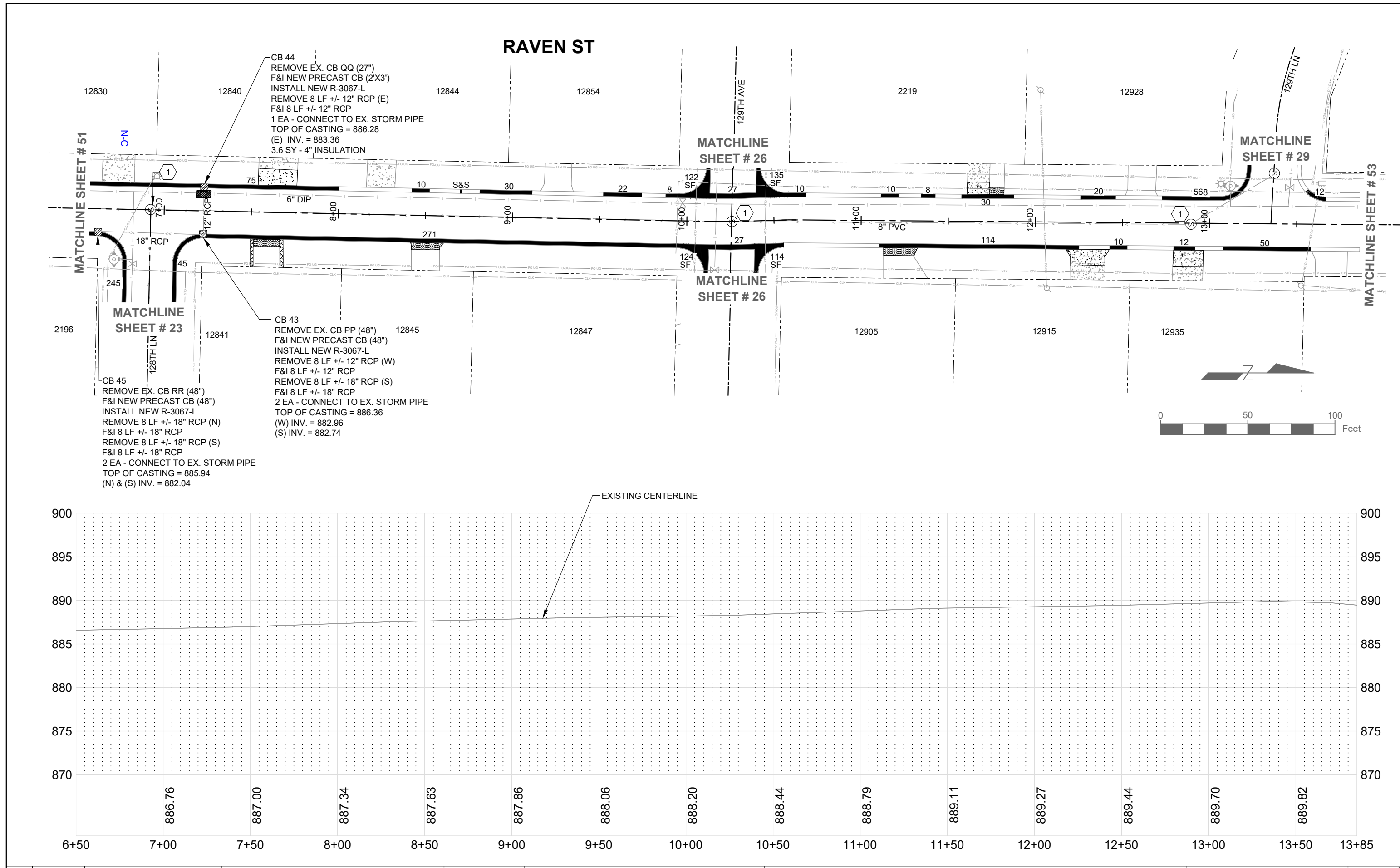
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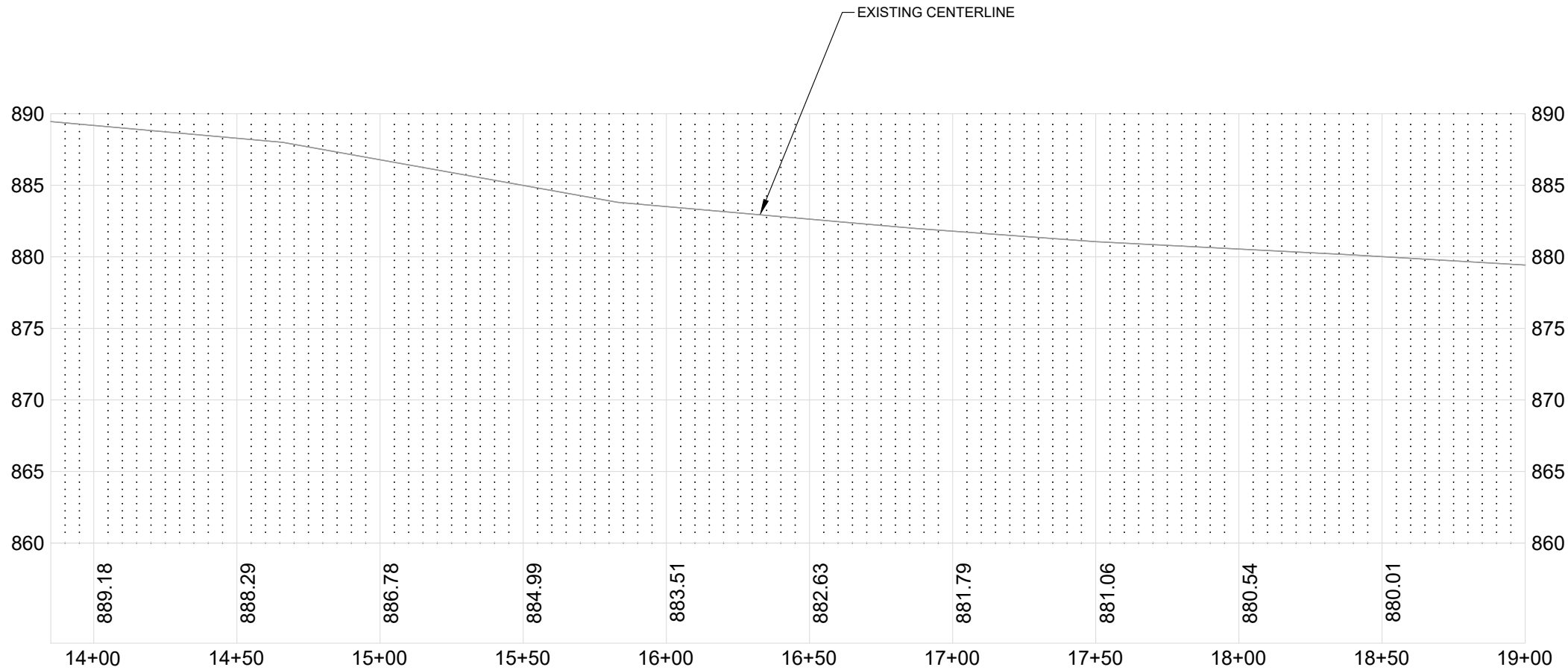
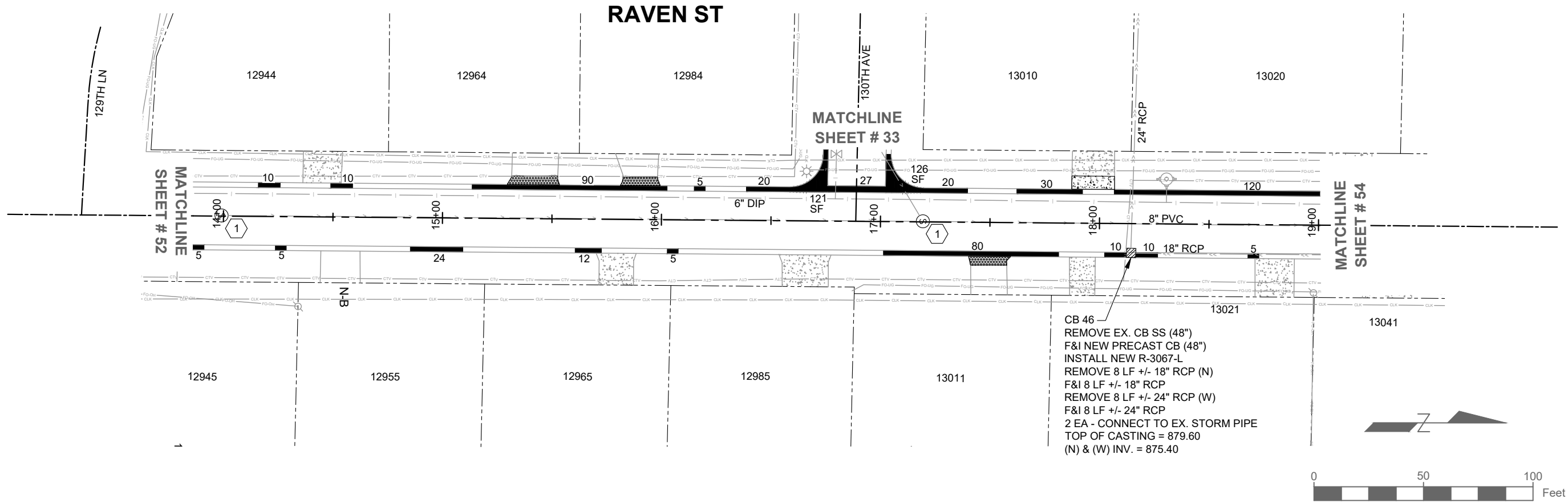


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<table><tr><th>NO.</th><th>DATE</th><th>REVISIONS</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			NO.	DATE	REVISIONS							 <div>CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491</div>		<table><tr><td>DESIGNED BY: J.W.H.</td><td rowspan="6">I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E. LICENSE # 43920 </td><td rowspan="3">DATE: 2/7/2023</td></tr><tr><td>DRAWING BY: J.W.H.</td></tr><tr><td>CHECKED BY: M.C.H.</td></tr></table>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E. LICENSE # 43920 	DATE: 2/7/2023	DRAWING BY: J.W.H.	CHECKED BY: M.C.H.	<table><tr><td colspan="2">23-1 STREET RECONSTRUCTION</td></tr><tr><td colspan="2">CITY OF COON RAPIDS, MINNESOTA</td></tr></table>		23-1 STREET RECONSTRUCTION		CITY OF COON RAPIDS, MINNESOTA		PLAN & PROFILE	52
NO.	DATE	REVISIONS																									
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CITY OF COON RAPIDS, MINNESOTA																											
							63																				

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NO.	DATE	REVISIONS

 **COON RAPIDS**
MINNESOTA

CITY OF COON RAPIDS
ENGINEERING DEPARTMENT
11155 ROBINSON DRIVE
COON RAPIDS, MN. 55433-3761
763-755-2880 FAX 163-767-6491

DESIGNED BY: J.W.H.
DRAWING BY: J.W.H.
CHECKED BY: M.C.H.

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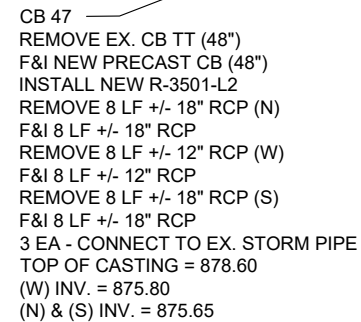
MARK C. HANSEN P.E.
LICENSE # 43920



DATE: 2/7/2023

23-1 STREET RECONSTRUCTION

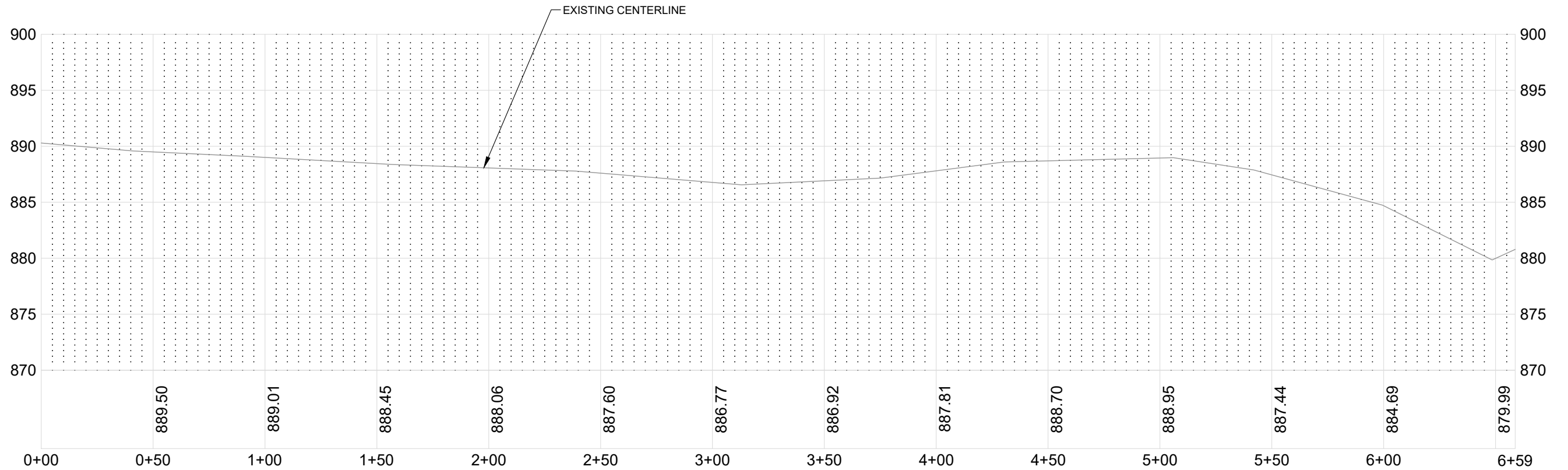
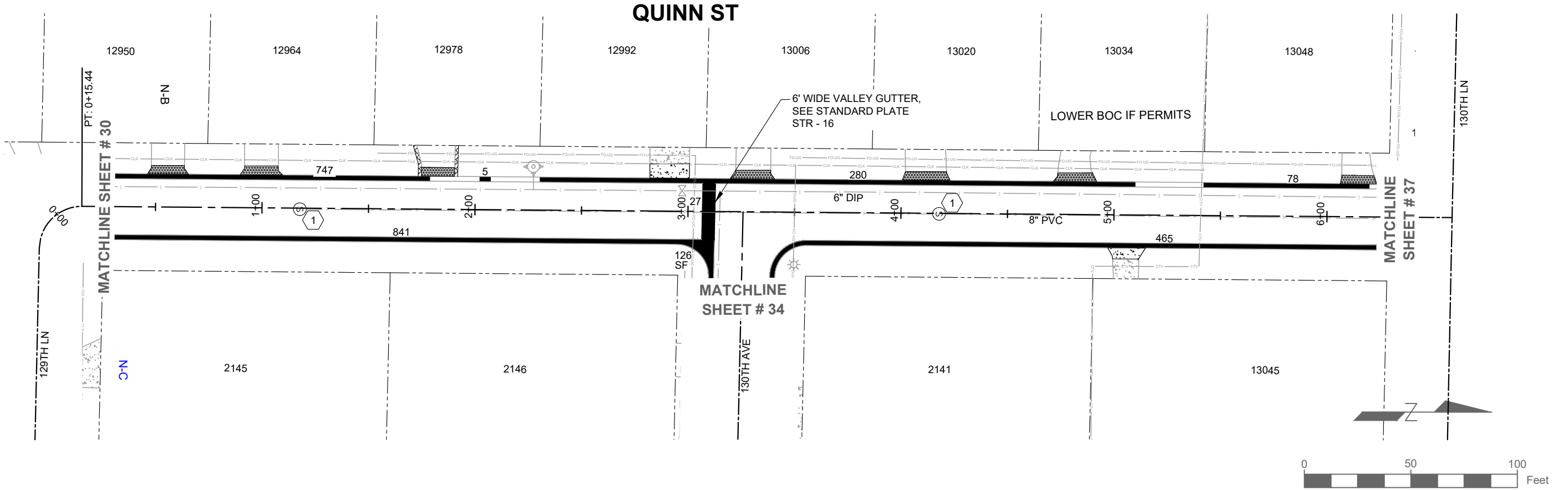
CITY OF COON RAPIDS, MINNESOTA

PLAN & PROFILE



NO.	DATE	REVISIONS	 <div>CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491</div>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E.  LICENSE # 43920 DATE: 2/7/2023	23-1 STREET RECONSTRUCTION CITY OF COON RAPIDS, MINNESOTA	PLAN & PROFILE	<div>54</div> <div>63</div>
				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.				

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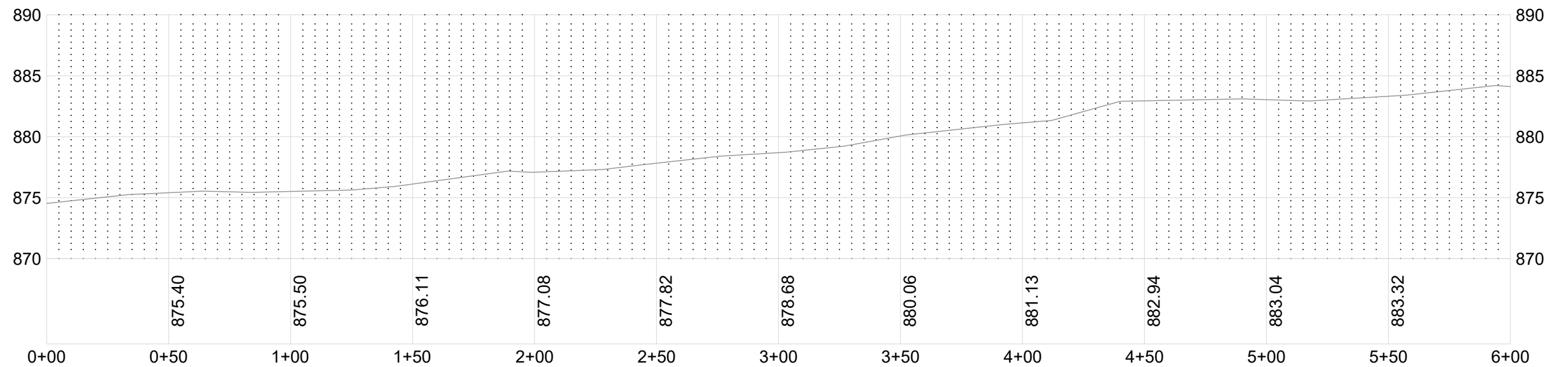
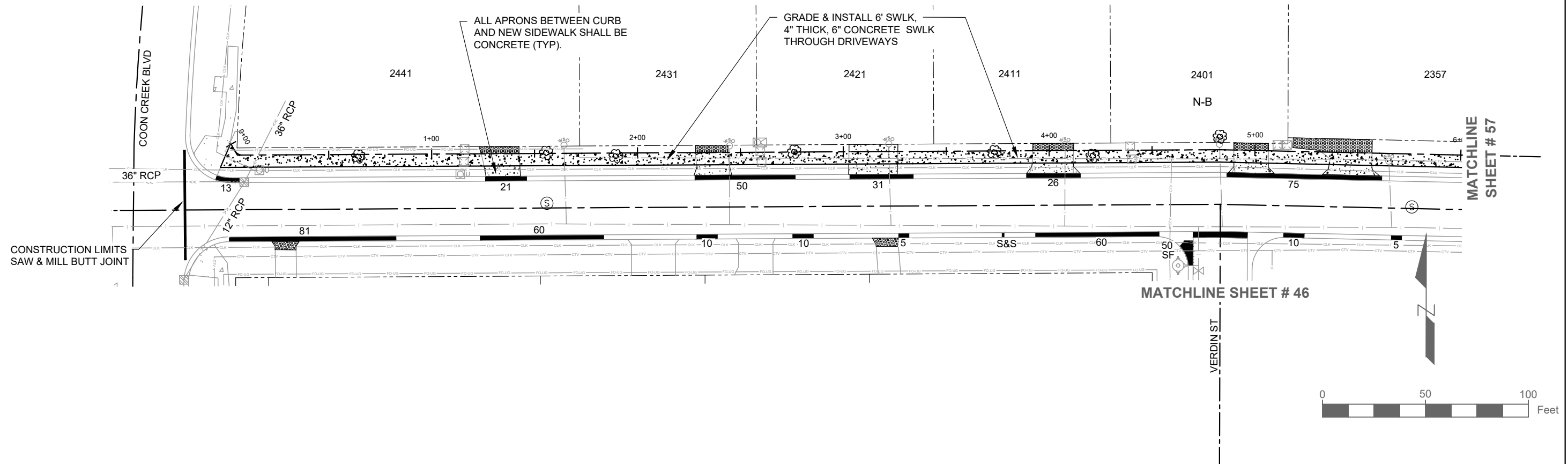
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CITY OF COON RAPIDS, MINNESOTA

PLAN & PROFILE

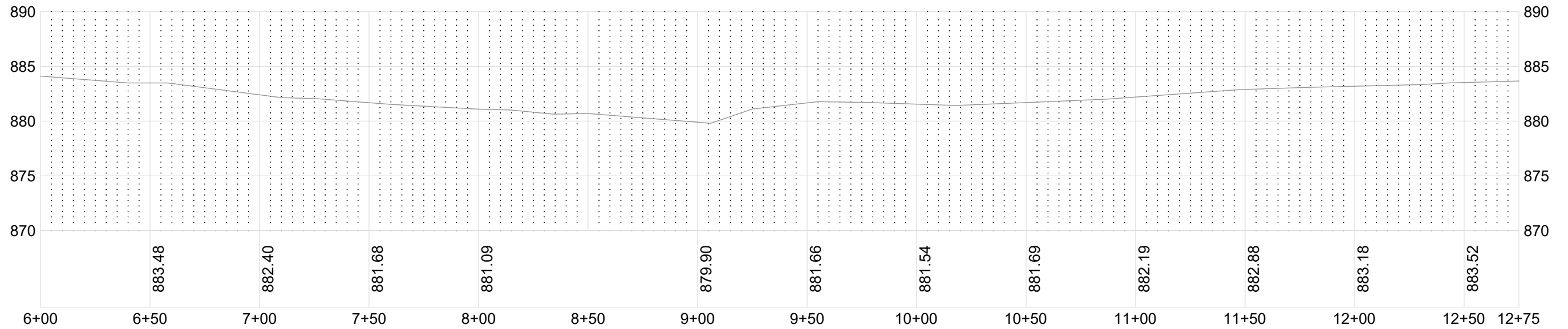
131ST AVE PROPOSED SIDEWALK





NO.	DATE	REVISIONS	 <div> CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491 </div>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E.  DATE: 2/7/2023 LICENSE # 43920	<div> 23-1 STREET RECONSTRUCTION CITY OF COON RAPIDS, MINNESOTA </div>	PROPOSED SIDEWALK	<div> 56 63 </div>
				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.				

ALL APRONS BETWEEN CURB
AND NEW SIDEWALK SHALL BE
CONCRETE (TYP).

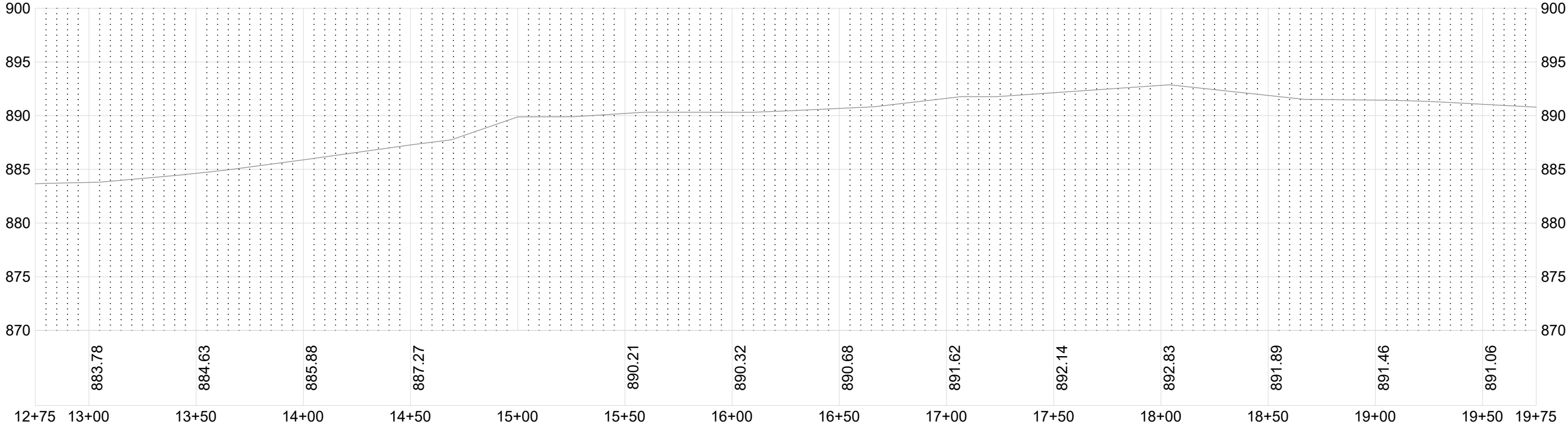
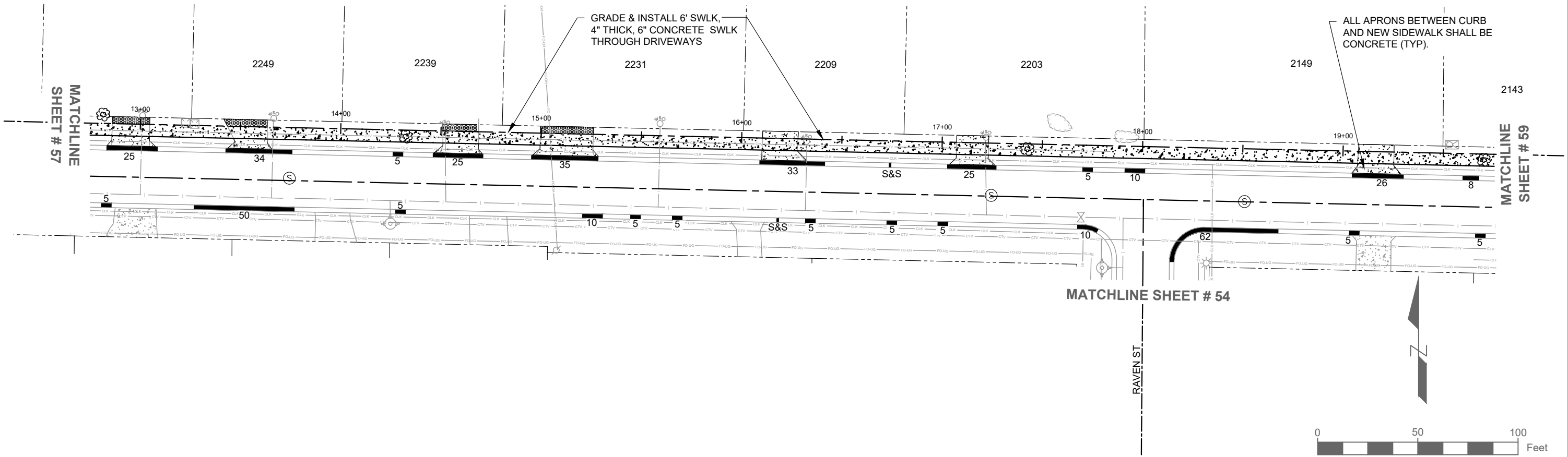
GRADE & INSTALL 6' SWLK, —
4" THICK, 6" CONCRETE SWLK
THROUGH DRIVEWAYS





NO.	DATE	REVISIONS	 <div>CITY OF COON RAPIDS ENGINEERING DEPARTMENT 11155 ROBINSON DRIVE COON RAPIDS, MN. 55433-3761 763-755-2880 FAX 163-767-6491</div>	DESIGNED BY: J.W.H.	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA. MARK C. HANSEN P.E.  LICENSE # 43920 DATE: 2/7/2023	23-1 STREET RECONSTRUCTION CITY OF COON RAPIDS, MINNESOTA	PROPOSED SIDEWALK	57
				DRAWING BY: J.W.H.				63
				CHECKED BY: M.C.H.				

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131ST AVE PROPOSED SIDEWALK

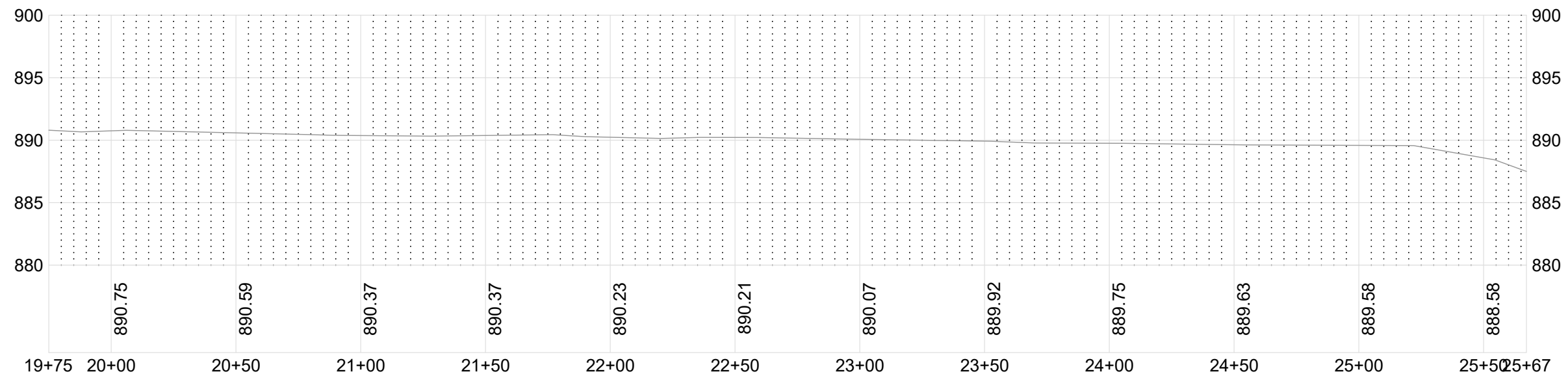




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				DRAWING BY: J.W.H.				
				CHECKED BY: M.C.H.				

REMOVE EX. PED RAMP. F&I 6" PED RAMP, 5' WIDE - 4" SWK, 10 - 40' IN LENGTH & TRUNCATED DOMES. TYPE OF PED RAMP TO BE DETERMINED, BY THE ENGINEER, IN THE FIELD PER THE LATEST MN DOT ADA STANDARDS, SHEETS # 9 - 14.

2123
✓ ALL APRONS BETWEEN CURB
AND NEW SIDEWALK SHALL BE
CONCRETE (TYP).

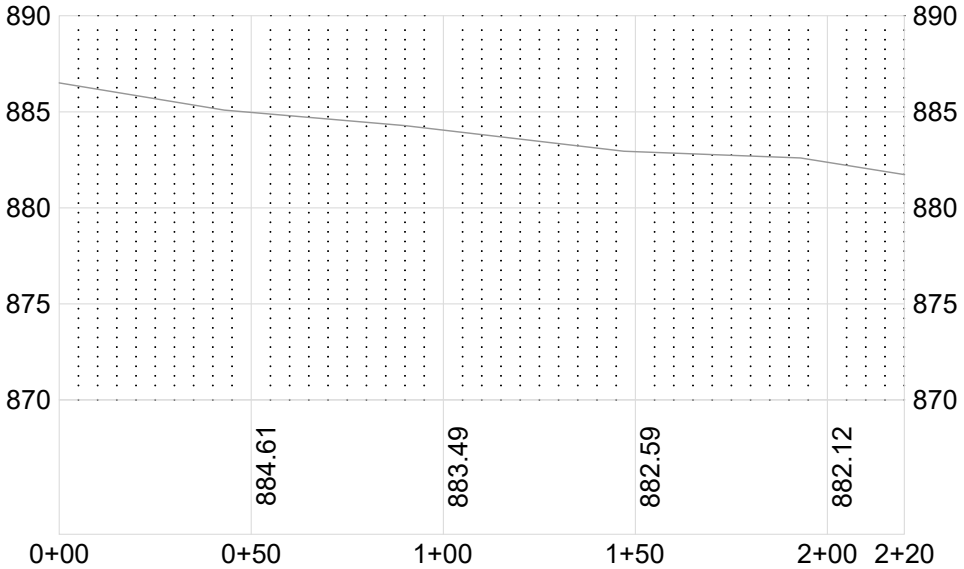
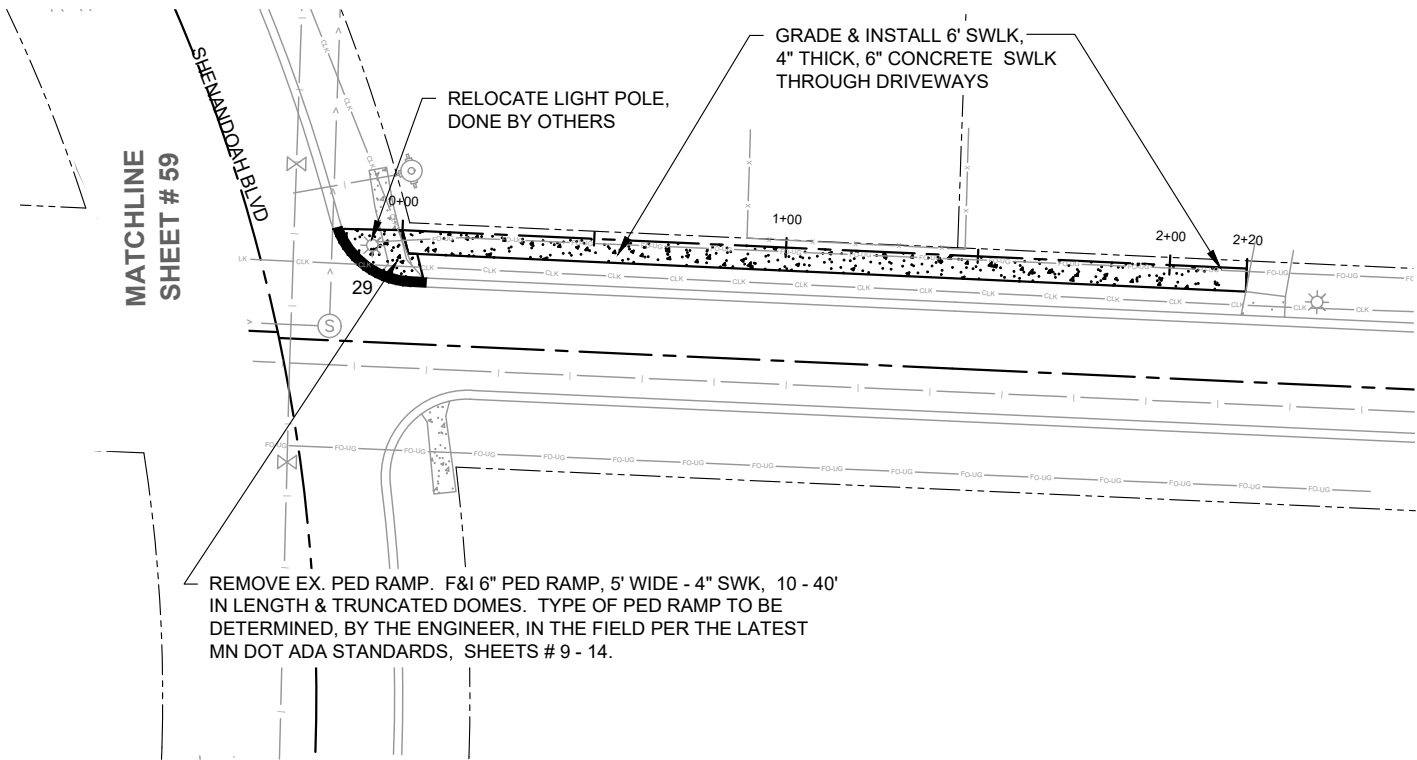
CONSTRUCTION LIMITS
SAW & MILL BUTT JOINT





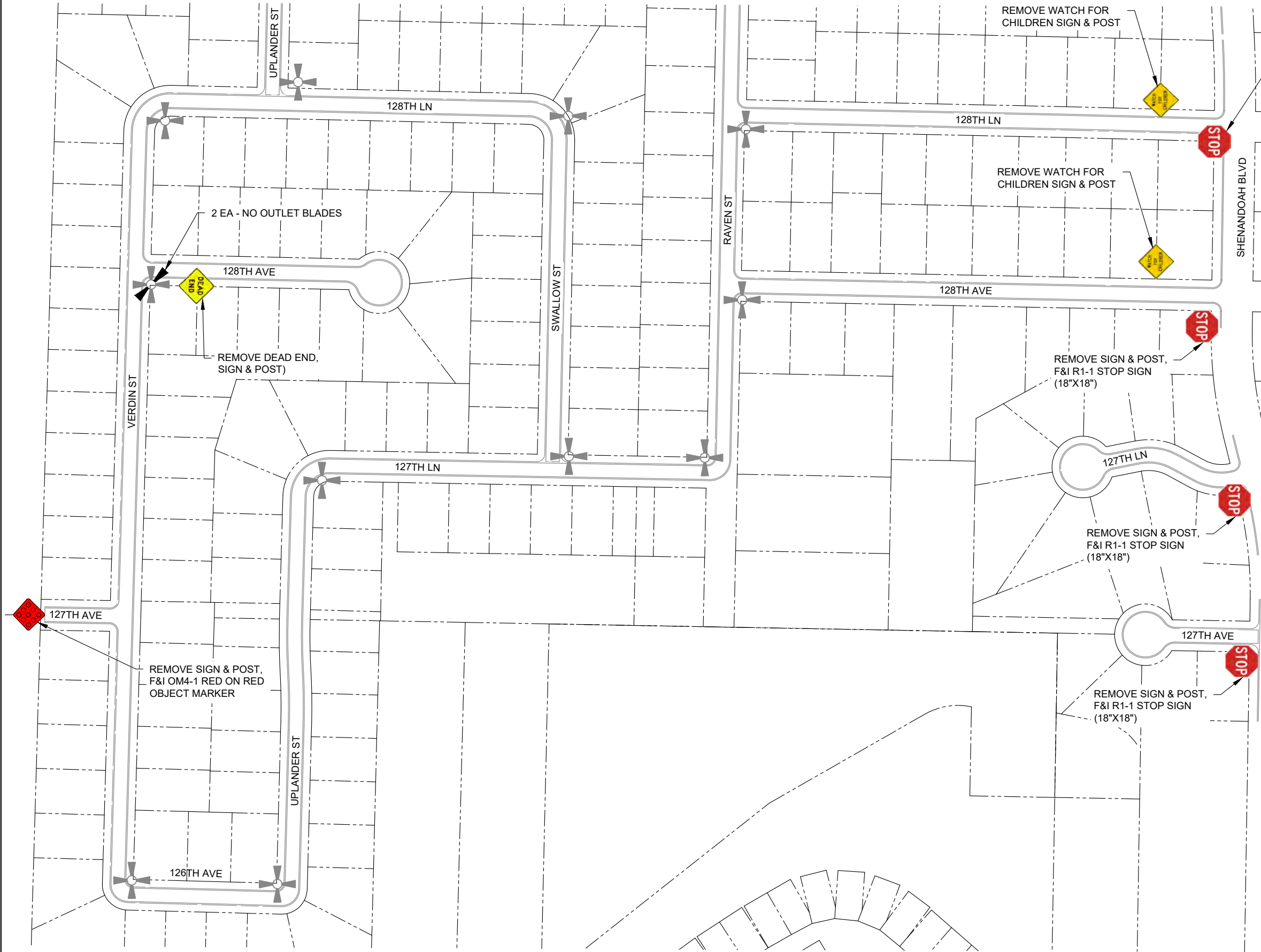
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				DRAWING BY: J.W.H.					
						CHECKED BY: M.C.H.			

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131ST AVE PROPOSED SIDEWALK



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				DRAWING BY: J.W.H.		CITY OF COON RAPIDS, MINNESOTA			
				CHECKED BY: M.C.H.					



IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO HAUL & LOAD REMOVED SIGNS / POSTS TO THE CITY'S PUBLIC WORKS FACILITY.

9"

9"

3" MIN.

COON RAPIDS

SUFFIX ABBREVIATIONS

STREET -ST
AVENUE-AVE
LANE-LN
CIRCLE-CIR
BOULEVARD-BLVD
DRIVE-DR
PLACE-PL

2 3/8" O.D. 12 GAUGE GALVANIZED STEEL POST

PROPOSED FINISHED GRADE

BREAKAWAY SLEEVE (INSTALLED 2" ABOVE GROUND) CONCRETE (12"DIA.)

ORNAIMENTAL TOP NUT

USE FOR CUL DE SAC & DEAD END STREETS ONLY

PLATE HOLDER WITH STAR HOLE

5/8-INCH SQUARE CENTER ROD

NAME PLATES

ROD IS WELDED TO POST CAP

POST CAP WITH ALLEN SET SCREWS

THIS PICTURE IS FOR BLADE MOUNTING ONLY. SEE LEFT, NOTES BELOW AND CITY SPECIFICATIONS FOR BLADE & LETTERING REQUIREMENTS.

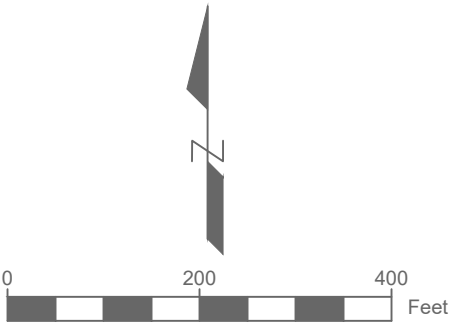
NOTES:

1. SIGN BLADE SIZE IS 9" FOR 40 MPH AND LESS, 12" FOR 45 MPH AND GREATER, ARE MADE OUT OF .080" THICK ALUMINUM AND HAVE ROUNDED CORNERS.
2. BLADE LENGTH SHALL BE 24" MIN. OR AS NECESSARY TO FIT NAME AND LOGO.
3. BLADES SHALL BE SINGLE FACED AND FASTENED TOGETHER WITH STAINLESS STEEL BOLTS WITH NYLON INSERT LOCK NUTS.
4. LETTER SIZE IS 6" UPPER CASE & 4.5" LOWER CASE FOR STREET NAME ON 9" BLADES, 8" UPPER CASE & 6" LOWER CASE FOR STREET NAME ON 12" BLADES, 3" UPPER CASE & 2.5" LOWER CASE FOR SUFFIX ON 9" & 12" BLADES. NO OUTLET ALL UPPER CASE.
5. THE FONT TO USE FOR LETTERING IS SERIES B.
6. WHITE DIAMOND GRADE SHEETING, GREEN BACKGROUND FOR PUBLIC STREETS, BLUE BACKGROUND FOR PRIVATE STREETS, EC 1170 UV LAMINATE FILM OVERLAY WITH LOGO AND NO BORDER. GREEN BACKGROUND SHALL CONSIST OF FEDERAL GREEN R-19, G-109 AND B-84.
7. THE CITY LOGO WILL PRECEDE THE STREET NAME ON BLADE.
8. STREET NAMES SHALL BE SPELLED COMPLETELY EXCEPT FOR SUFFIXES.
9. SIGN BRACKETS SHALL BE LYLE SIGNS NO. E450 OR E650 FOR NO OUTLET.
10. SIGN POST SHALL BE 2 3/8" O.D. X 12' LONG GALVANIZED ROUND TUBE AND INSTALLED WITH BREAKAWAY SLEEVE IN CONCRETE.
11. A SIGN PLAN SHOWING SIGN COLORS, SIZES AND LETTERING MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.
12. SEE CITY SPECIFICATIONS FOR MORE DETAILS ON MATERIALS AND LAYOUT.
13. PERMANENT SIGNS SHALL BE PLACED SUCH THAT OBSTACLES DO NOT BLOCK THEM FROM BEING VIEWED BY APPROACHING ROAD USERS. OBSTACLES MAY INCLUDE, BUT ARE NOT LIMITED TO, LIGHT POLES, TREES, SIGNS, AND BUILDINGS.

COON RAPIDS Minnesota

STREET SIGN INSTALLATION

DRAWN: R.L.S. DATE: 12/22/2022 SCALE: NONE PLATE NO: STR-13



NO.	DATE	REVISIONS

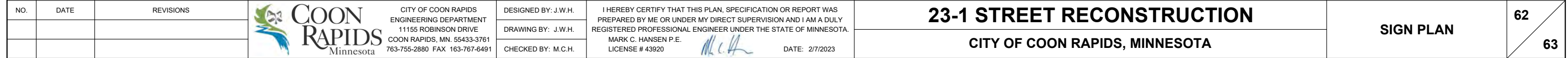


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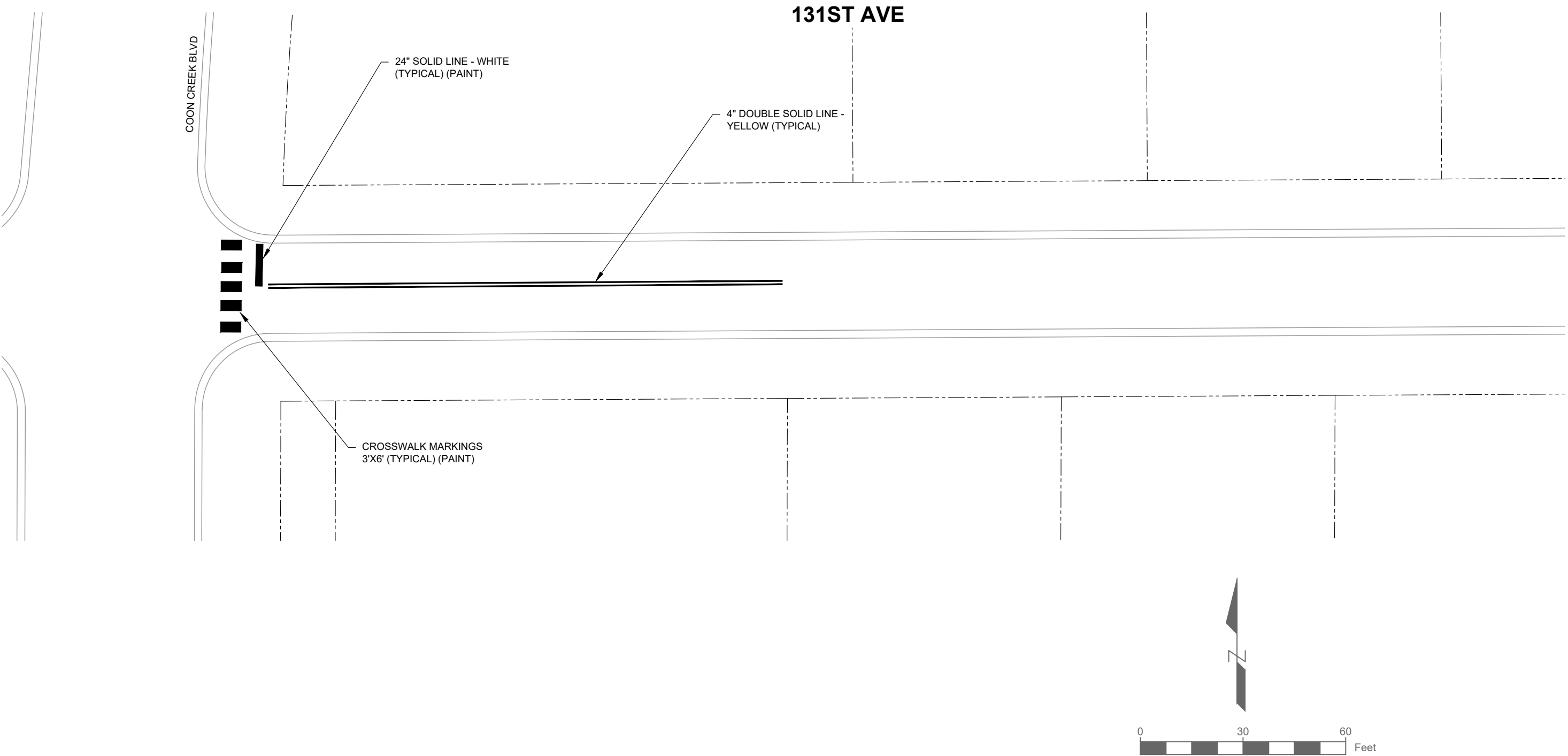
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DRAWING BY: J.W.H.	MARK C. HANSEN P.E. LICENSE # 43920
CHECKED BY: M.C.H.	DATE: 2/7/2023



23-1 STREET RECONSTRUCTION
CITY OF COON RAPIDS, MINNESOTA

SIGN PLAN	61
	63



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				DRAWING BY: J.W.H.					
				CHECKED BY: M.C.H.					