

BOX ELDER COUNTY ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS

SUBMITTED & RECOMMENDED

KENT L. JONES, P.E.
BOX ELDER COUNTY ENGINEER

DATE

APPROVAL

BOX ELDER COUNTY COMMISSION

DATE

BILL GILSON
BOX ELDER COUNTY ROAD DEPARTMENT

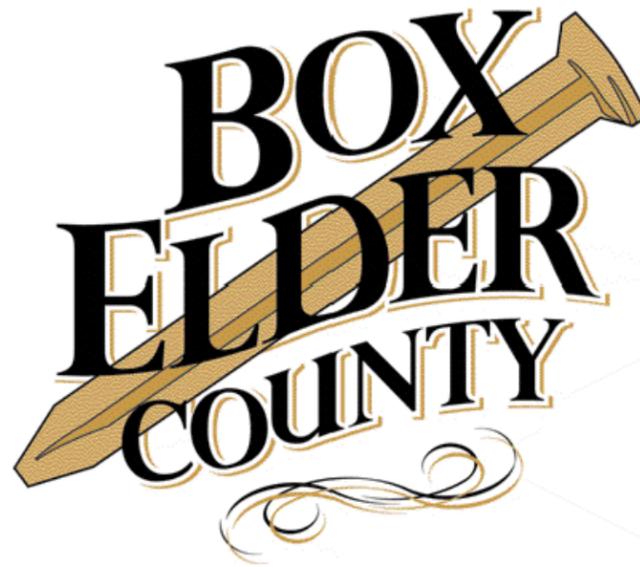
DATE

KEVIN HAMILTON
BOX ELDER COUNTY
COMMUNITY DEVELOPMENT DIRECTOR

DATE

ATTEST, COUNTY RECORDER

DATE



Index of Drawings

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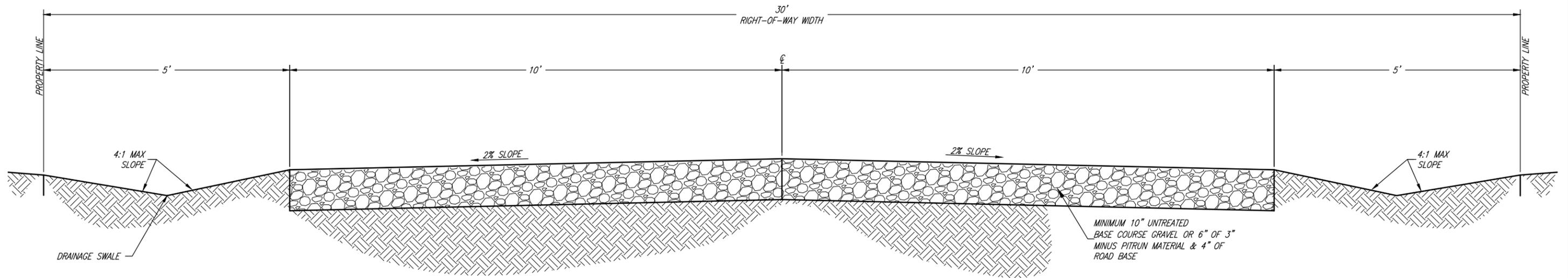
JANUARY 2010



CONSULTING ENGINEERS

1716 East 5600 South
South Ogden, Utah 84403 (801) 476-9767

**MINIMUM RESIDENTIAL ACCESS, PRIVATE ROAD AND PRIVATE DRIVEWAY (SERVING 1 OR 2 LOTS)
FOR DRIVEWAYS OVER 150' LONG**

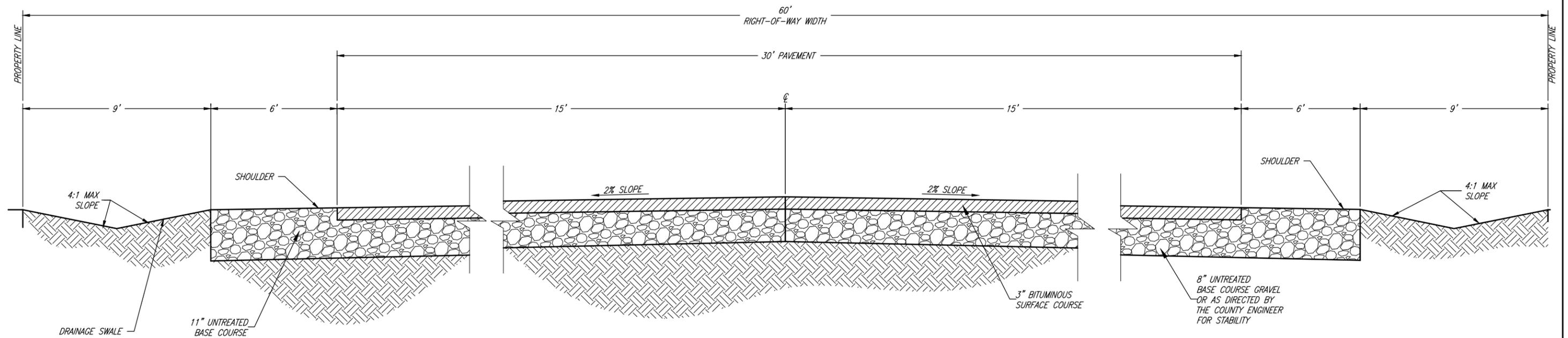


NOTE:

1. THIS GRAVEL BASE COURSE THICKNESS SHALL BE CONSIDERED AS THE COUNTY STANDARD, BUT MAY BE INCREASED BY THE COUNTY ENGINEER WHEN A GREATER DEPTH IS NECESSARY, OR FABRIC ADDED IF IN WET AREAS, TO PROVIDE SUFFICIENT STABILITY. DESIGNER AND / OR DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT DESIGN BASED ON A DETAILED SOILS ANALYSIS FOR APPROVAL BY THE COUNTY ENGINEER WHICH MAY MODIFY THE ROAD THICKNESS, BUT IN NO CASE SHALL THE GRAVEL BASE COURSE BE LESS THEN 4". PRIVATE DRIVEWAYS OVER 150' IN LENGTH NEED TO BE DESIGNED TO CARRY HS-20 TRAFFIC LOADS. IT IS ALSO ACCEPTABLE FOR THE DEVELOPERS ENGINEER TO SUBMIT A DESIGN FOR THE ROAD AND CERTIFY IT FOR REVIEW BY THE COUNTY ENGINEER.

THIS STANDARD WILL BE FOR ALL FUTURE HOMES THAT WILL HAVE ACCESS TO A COUNTY ROAD TO BE IN COMPLIANCE WITH NATIONAL FIRE CODE.

STANDARD PRIVATE ROAD (SERVING 3 OR MORE LOTS)



PROJECT ENGINEER	REV.	DATE	APPR.
DATE			

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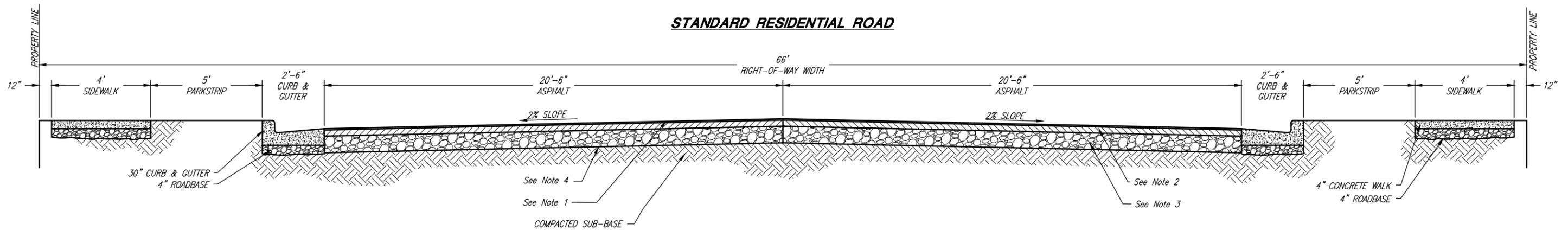
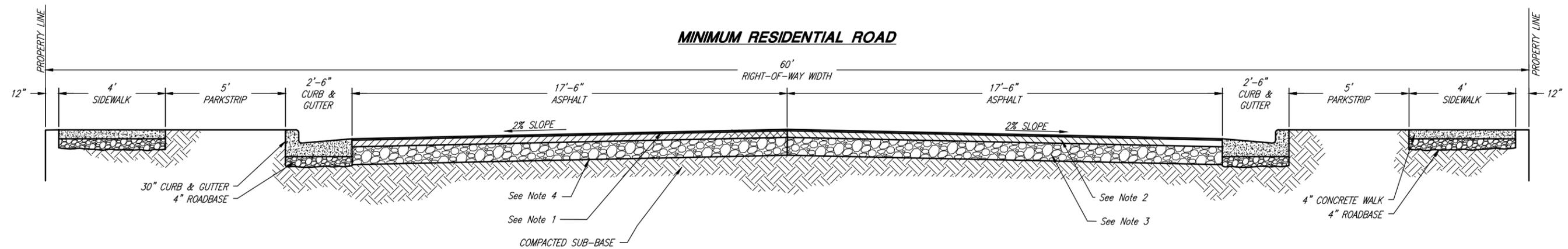
DESIGNED BWS
DRAWN SLS
CHECKED KLJ



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BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS

PRIVATE ROADWAY SECTIONS



NOTES

- 1 SEAL COAT: UDOT TYPE A BITUMINOUS SEAL COAT, SLAG CHIP & SEAL OR TYPE III SLURRY SEAL COAT AS DIRECTED BY COUNTY ENGINEER.
- 2 PAVEMENT: 3" BITUMINOUS SURFACE COURSE PER UDOT 3/4" GRADATION
- 3 BASE COURSE: 8" GRAVEL BASE COURSE PER UDOT 3/4" OR 1" GRADATION.
- 4 GEOTEXTILE FABRIC: IF GEOTEXTILE FABRIC IS REQUIRED ON SUBGRADE USE "GEOTEX" 315-ST OR APPROVED EQUAL.
- 5 THESE PAVEMENT THICKNESS SHALL BE CONSIDERED AS COUNTY STANDARDS AND MAY BE INCREASED BY THE COUNTY ENGINEER WHEN A GREATER DEPTH IS NECESSARY TO PROVIDE SUFFICIENT STABILITY TO CARRY HS-20 LOADS. DESIGNER AND/OR DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT DESIGN BASED ON A DETAILED SOILS ANALYSIS FOR APPROVAL BY THE COUNTY ENGINEER WHICH MAY MODIFY PAVEMENT THICKNESS, BUT IN NO CASE SHALL THE BITUMINOUS SURFACE COURSE BE LESS THAN 3" AND GRAVEL BASE COURSE LESS THAN 4" THICK.

PUBLIC ROAD PAVEMENT WIDTHS

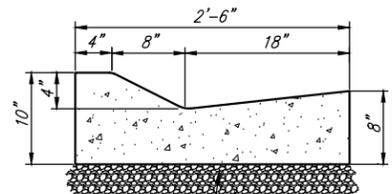
ROAD DESIGNATION	ROW	PAVEMENT WIDTH
STANDARD	60'	35'
COLLECTOR	66'	41'
MAJOR COLLECTOR	80'	55'
MAJOR ARTERIAL	100'	75'

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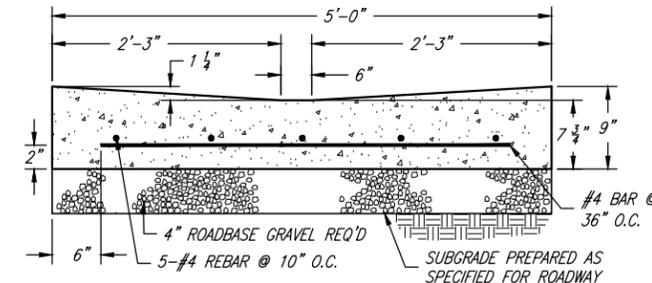
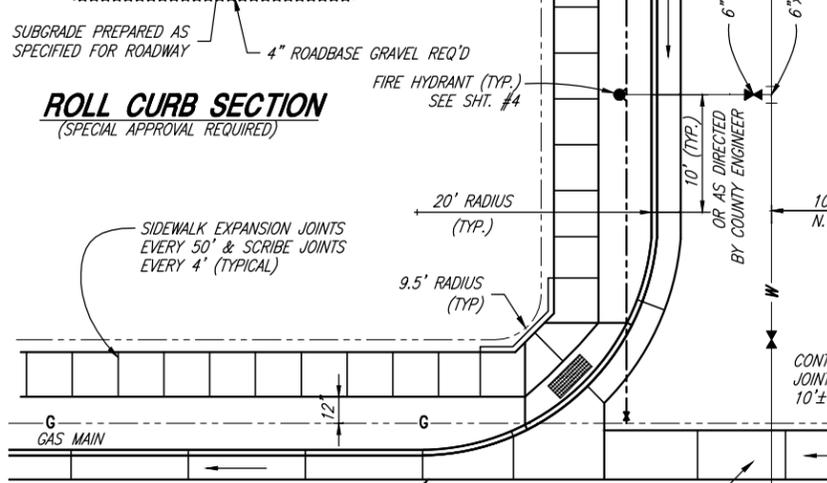
SCALE: N. T.S.
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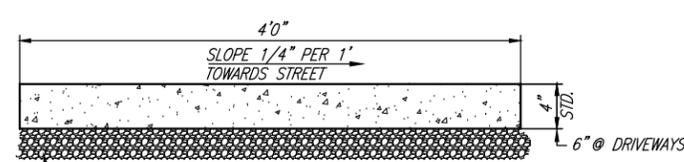
BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS
PUBLIC ROADWAY SECTIONS



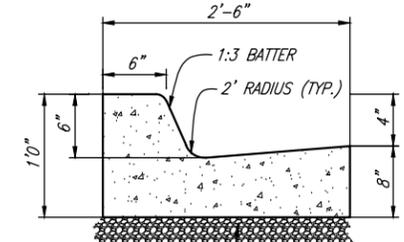
ROLL CURB SECTION
(SPECIAL APPROVAL REQUIRED)



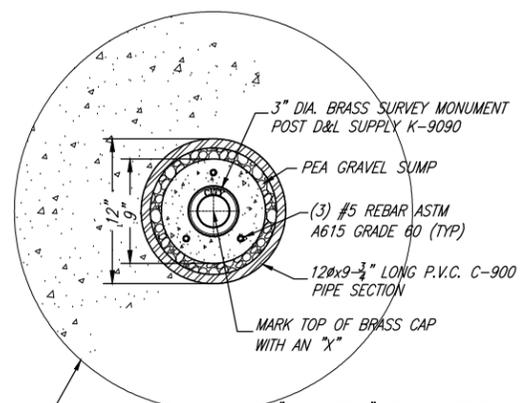
CROSS DRAIN SECTION



SIDEWALK SECTION



CURB & GUTTER SECTION



SURVEY MONUMENT DETAIL

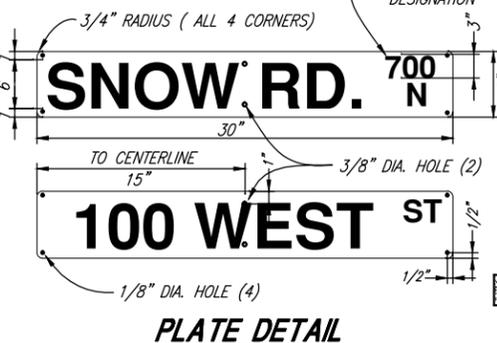
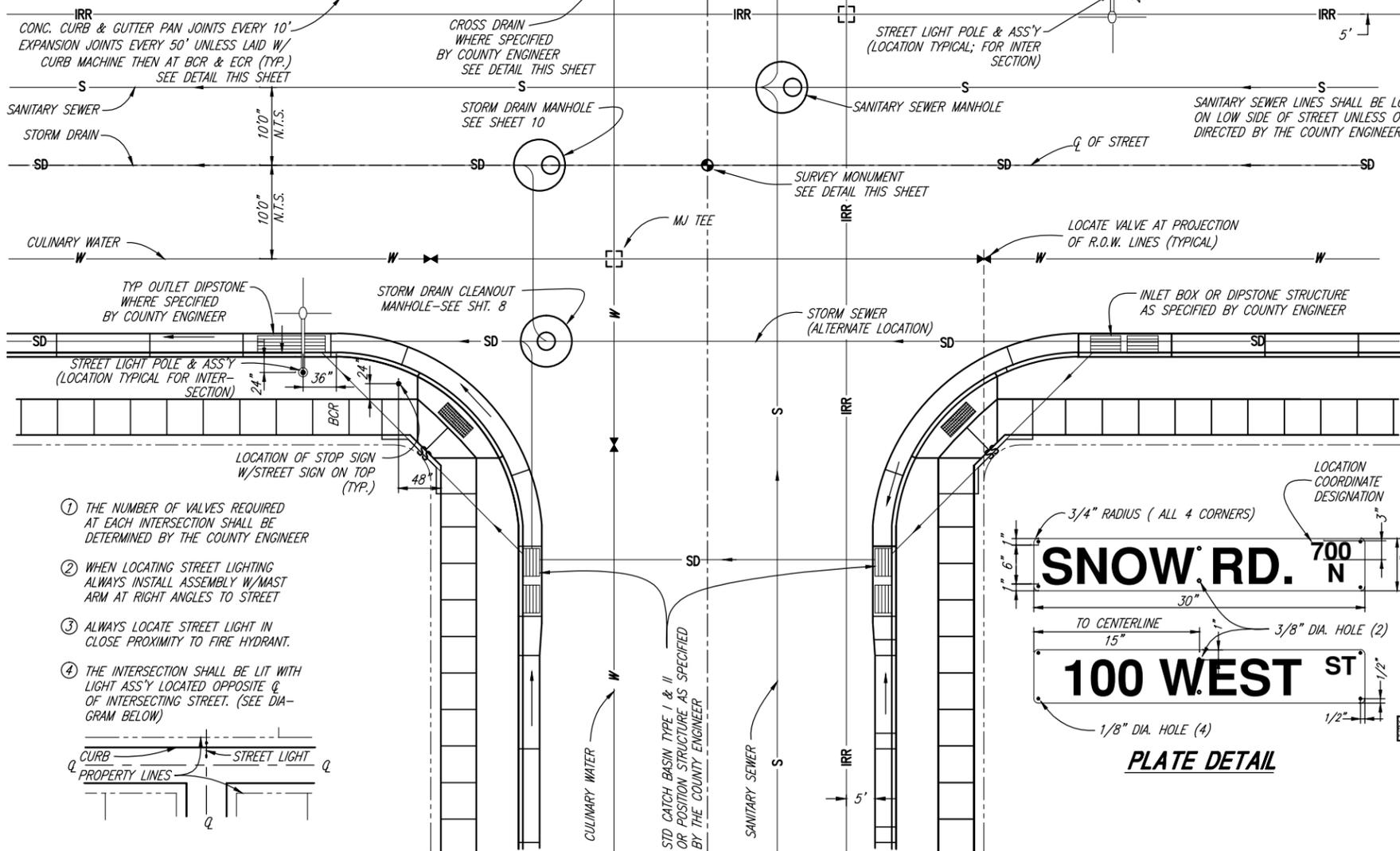
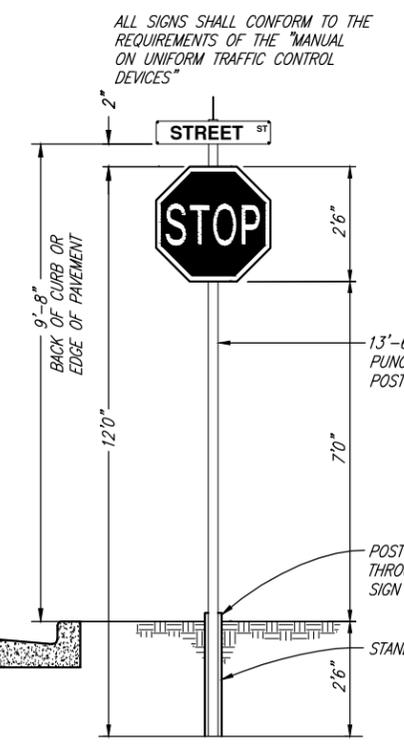
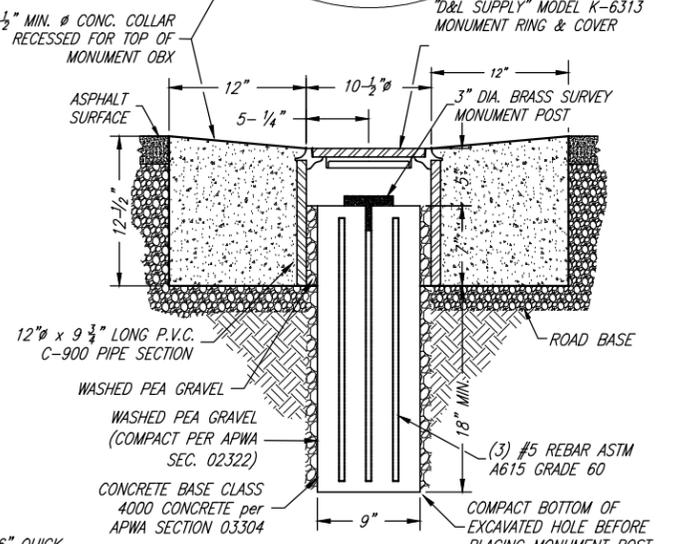


PLATE DETAIL



TRAFFIC SIGN & POST



- TRAFFIC SIGN NOTES:**
- BACKGROUND SHALL BE GREEN, HIGH INTENSITY REFLECTIVE SHEETING 9FP-85 TYPE IIIA)
 - LEGEND SHALL BE WHITE LETTERS, HIGH INTENSITY REFLECTIVE SHEETING 9FP-85 IIIA)
 - SIGN BLANK SHALL BE 6081-T6 HEAT TREATED HIGH TENSILE DEGREASED ALUMINUM W/ALODINE 1200 FINISH-THICKNESS SHALL BE 0.10"
 - EACH SIGN SHALL CONSIST OF TWO PLATES RIVETED TOGETHER & MOUNTED AS SHOWN
 - SIGN ON PRIVATE ROADS SHALL MEET ALL SPECIFICATIONS FOR STANDARD SIGNS, EXCEPT BACKGROUND SHALL BE BLUE
 - ALL STREETS WITH NAMES MUST ALSO SHOW LOCATIONS COORDINATE DESIGNATION
 - ADDRESS COORDINATOR MUST BE CONTACTED PRIOR TO MAKING SIGNS TO VERIFY PROPER NAMES AND COORDINATES
 - IF STREET HAS CONCRETE CURB, SIGN POST TO BE PLACED AT THE POINT OF CURVE (PC) OF THE INTERSECTION APPROACH CURB, OTHERWISE SIGN SHALL BE PLACED AT PC OF ASPHALT RADIUS APPROACH

- THE NUMBER OF VALVES REQUIRED AT EACH INTERSECTION SHALL BE DETERMINED BY THE COUNTY ENGINEER
- WHEN LOCATING STREET LIGHTING ALWAYS INSTALL ASSEMBLY W/MAST ARM AT RIGHT ANGLES TO STREET
- ALWAYS LOCATE STREET LIGHT IN CLOSE PROXIMITY TO FIRE HYDRANT.
- THE INTERSECTION SHALL BE LIT WITH LIGHT ASS'Y LOCATED OPPOSITE Q OF INTERSECTING STREET. (SEE DIAGRAM BELOW)

PROJECT ENGINEER			
DATE	REV.	DATE	APPR.

SCALE: N. T.S.

DESIGNED BWS
DRAWN BEB
CHECKED KLJ

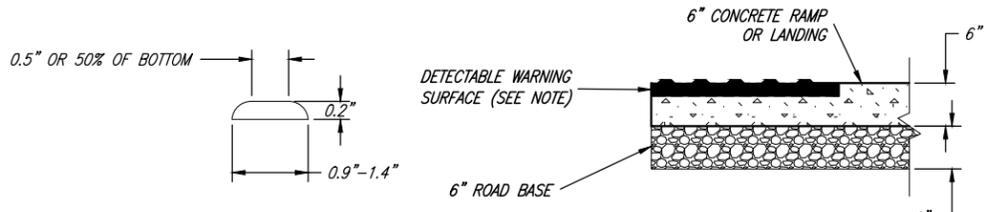
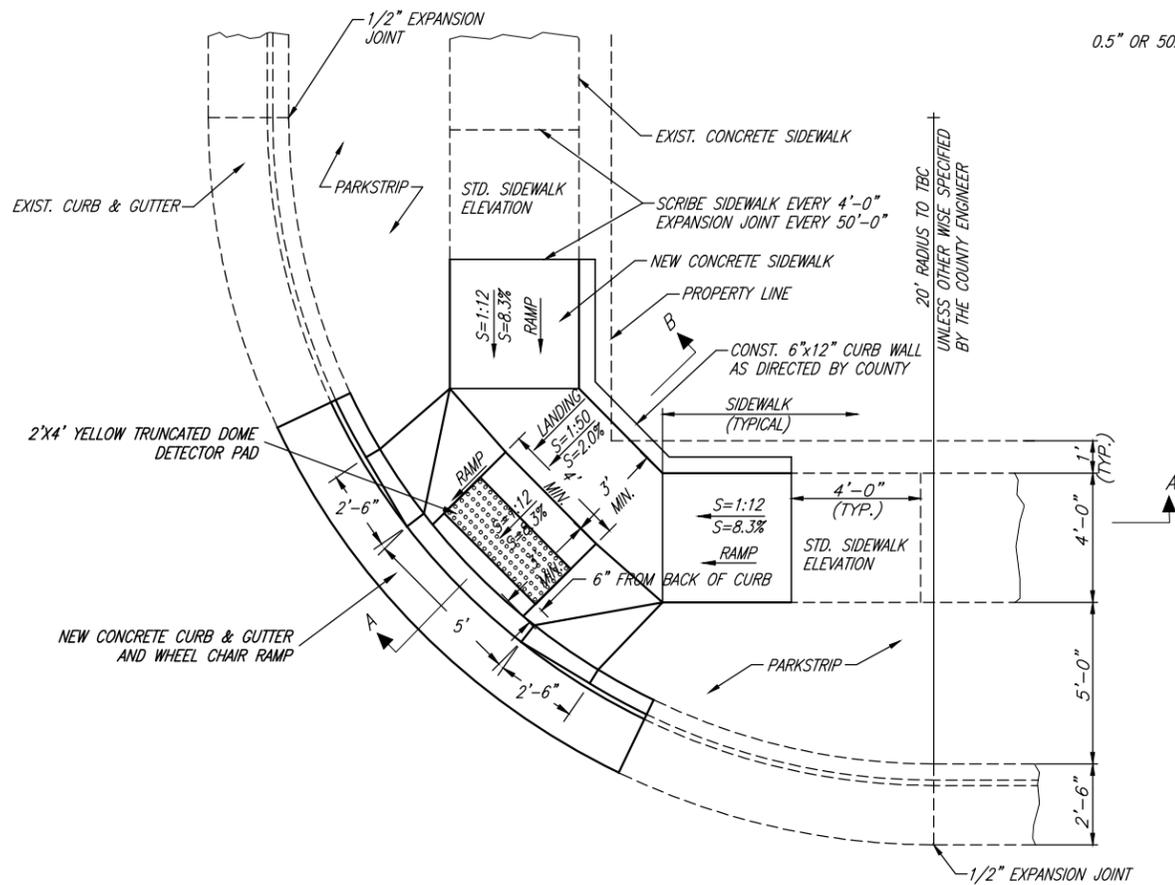
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BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS

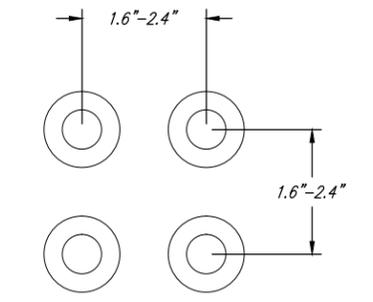
STANDARD STREET INTERSECTION DETAILS

SHEET: **5**
OF 12 SHEETS



NOTES:
1. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

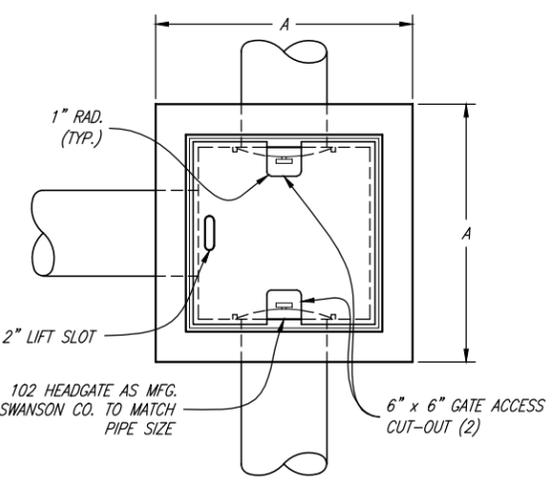
TILE DETAIL



NOTES:
1. LOCATE DETECTABLE WARNINGS SO THAT THE EDGE NEAREST THE BACK OF CURB OR OTHER POTENTIAL HAZARD IS 6 INCHES FROM THE BACK OF CURB OR OTHER POTENTIAL HAZARD. PROVIDE 2-FOOT MINIMUM DEPTH.

SEE FIGURE FOR TRUNCATED DOME SIZE AND SPACING DIMENSION DETAILS.

TRUNCATED DOME DETAIL



PLAN

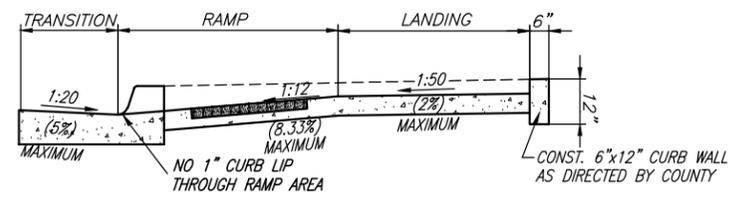
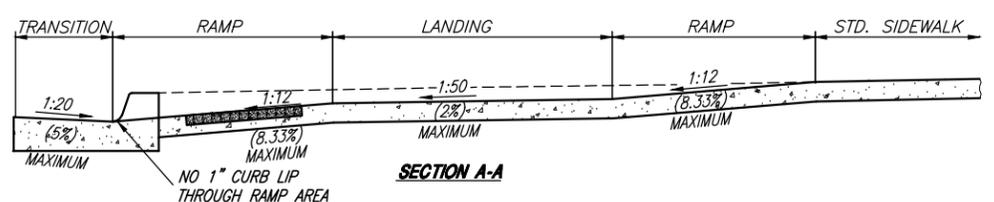
MODEL 102 HEADGATE AS MFG. BY THE SWANSON CO. TO MATCH PIPE SIZE

GENERAL NOTES:
A. THE DETECTABLE WARNING SURFACE DOMES SHALL BE ORIENTED SUCH THAT THE ROWS ARE PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL TO THE RAMP ON THE OPPOSITE SIDE OF THE STREET.

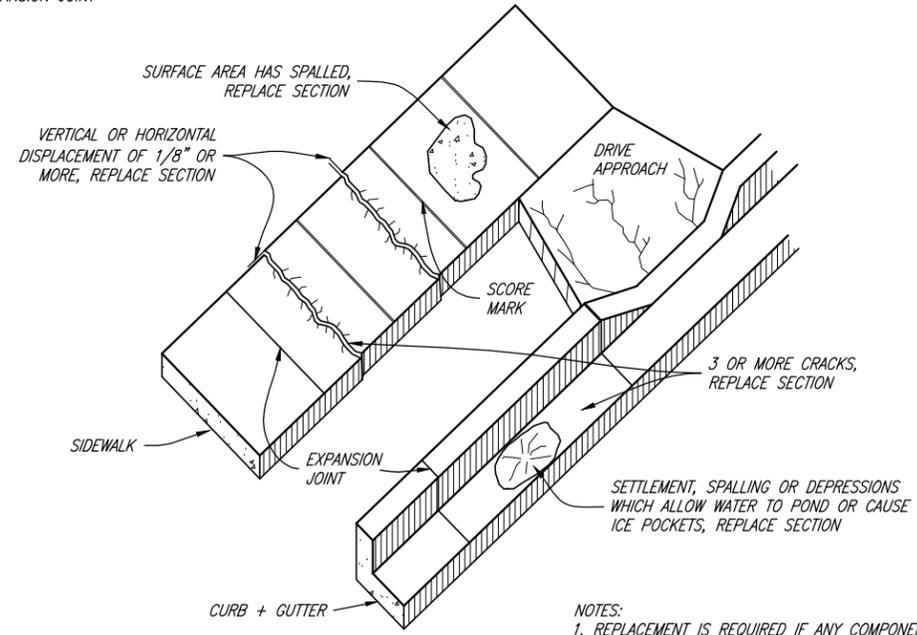
B. THE COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE YELLOW IN COLOR AS APPROVED BY THE COUNTY OR AUTHORIZED REPRESENTATIVE.

C. WHEN A DETECTABLE WARNING SURFACE DOME IS CUT, THE REMAINING PORTION OF THE DOME SHALL BE BEVELED TO A MAXIMUM SLOPE OF 1:2.

DIMENSION	TYPE I	TYPE II
A	3'-0"	4'-0"
B	2'-1 1/2"	3'-1 1/2"
C	2'-1"	3'-1"
D	2'-0"	3'-0"

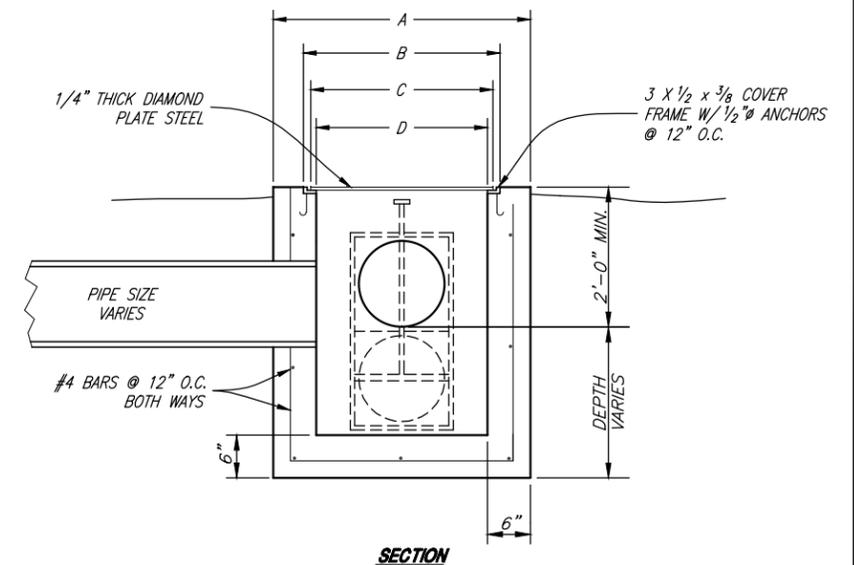


TYPICAL WHEEL CHAIR RAMP



NOTES:
1. REPLACEMENT IS REQUIRED IF ANY COMPONENT HAS ONE OR MORE OF THE CONDITIONS SHOWN ABOVE.
2. ANYTIME CONCRETE IS CUT TO REPLACE A DEFECTIVE COMPONENT, THE CUT SHOULD EXTEND COMPLETELY THROUGH THE PIECE BEING REPLACED.

DEFECTIVE CONCRETE REPLACEMENT CRITERIA



NOTES:
1. PIPE MATERIALS & SIZE SHALL BE APPROVED BY IRRIGATION COMPANY.
2. HORIZONTAL & VERTICAL ALIGNMENT TO BE APPROVED BY COUNTY & IRRIGATION COMPANY.

IRRIGATION BOX

PROJECT ENGINEER	REV.	DATE	APPR.
DATE			

SCALE:
N. T.S.

DESIGNED BWS
DRAWN BEB
CHECKED KLJ

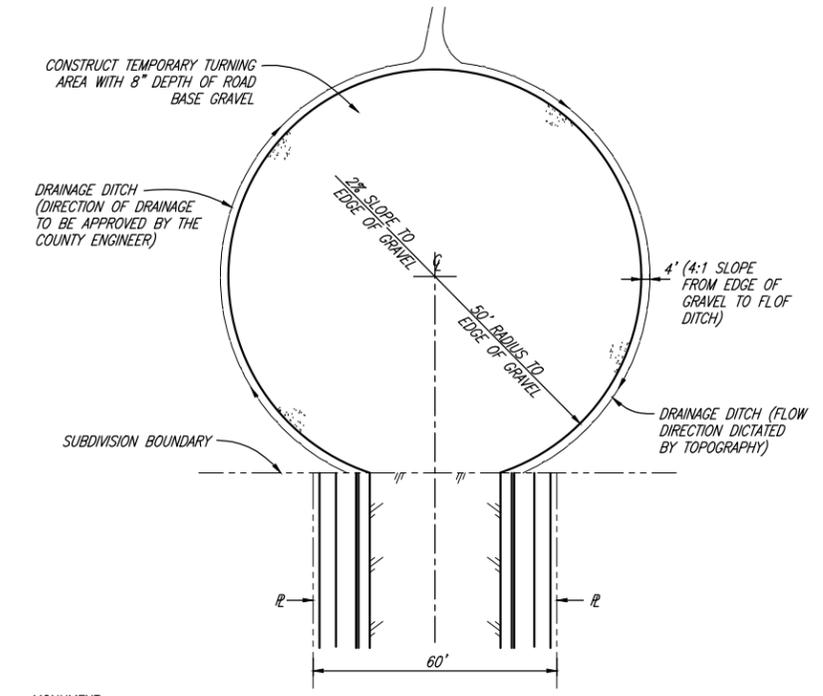
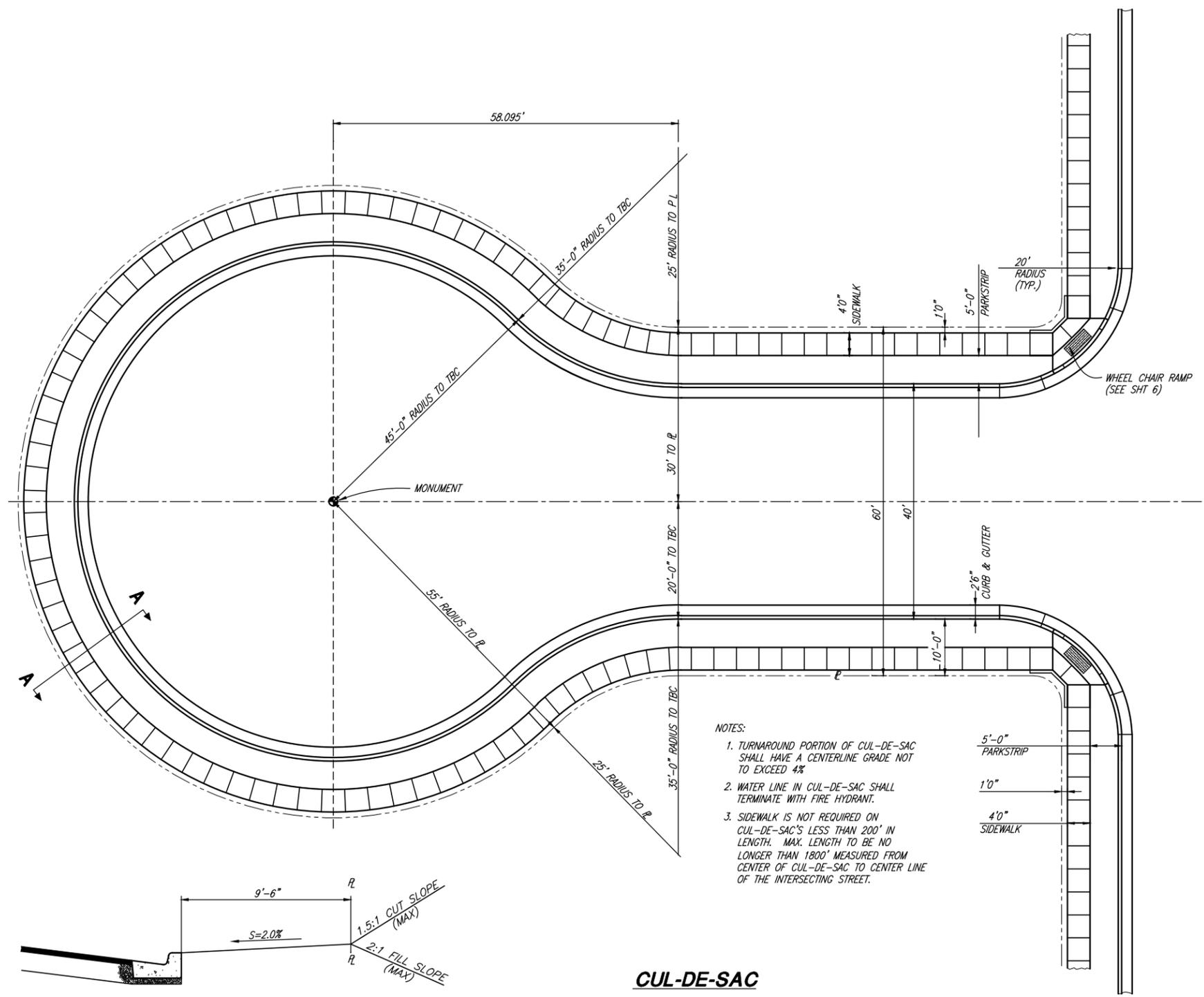
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BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS

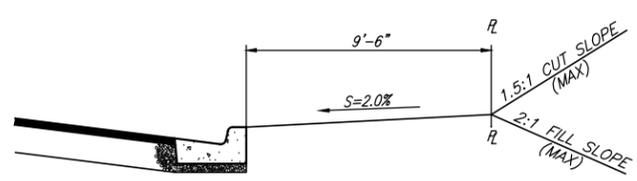
TYPICAL WHEELCHAIR RAMP



TEMPORARY TURNAROUND

NOTE: WHEN TURNAROUND CANNOT BE CONSTRUCTED OUTSIDE OF THE SUBDIVISION, IT SHALL BE LOCATED ON A PORTION OF THE SUBDIVISION LOTS (AS NEEDED) WITH THE SUBDIVIDER PLACING IN ESCROW AN AMOUNT OF MONEY SUFFICIENT TO COMPLETE THE STREET IMPROVEMENTS TO THE SUBDIVISION BOUNDARY. THESE FUNDS WILL BE USED AT SUCH TIME THE STREET IS EXTENDED.

- NOTES:
1. TURNAROUND PORTION OF CUL-DE-SAC SHALL HAVE A CENTERLINE GRADE NOT TO EXCEED 4%.
 2. WATER LINE IN CUL-DE-SAC SHALL TERMINATE WITH FIRE HYDRANT.
 3. SIDEWALK IS NOT REQUIRED ON CUL-DE-SAC'S LESS THAN 200' IN LENGTH. MAX. LENGTH TO BE NO LONGER THAN 1800' MEASURED FROM CENTER OF CUL-DE-SAC TO CENTER LINE OF THE INTERSECTING STREET.



SECTION A-A

REQUIRED GRADING BETWEEN TBC AND PROPERTY LINE

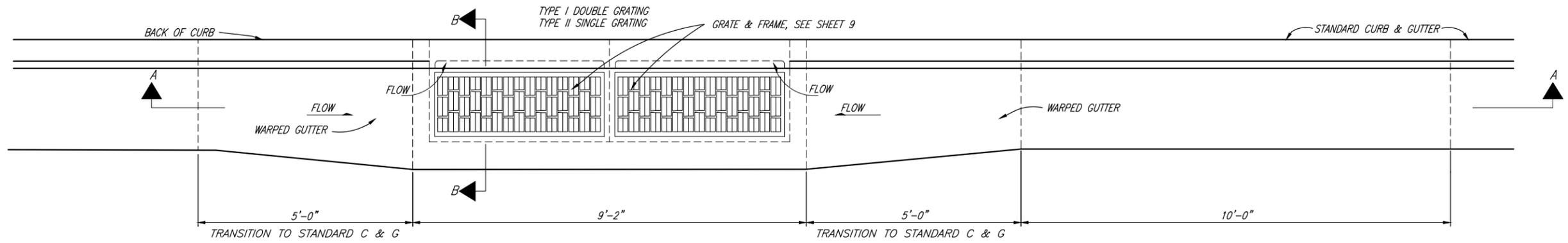
CUL-DE-SAC

PROJECT ENGINEER			
DATE	REV.	DATE	APPR.

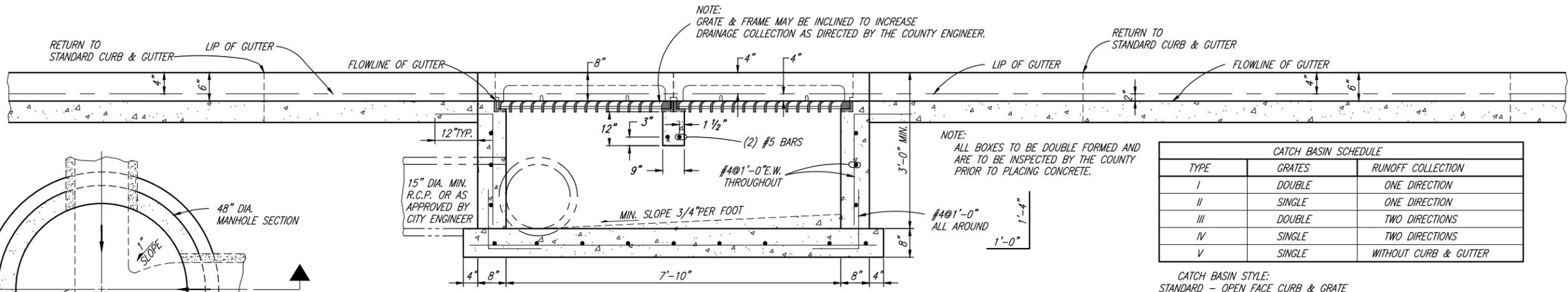
SCALE:	DESIGNED <u>BWS</u>
N. T.S.	DRAWN <u>BEB</u>
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BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS
CUL-DE-SAC DETAILS



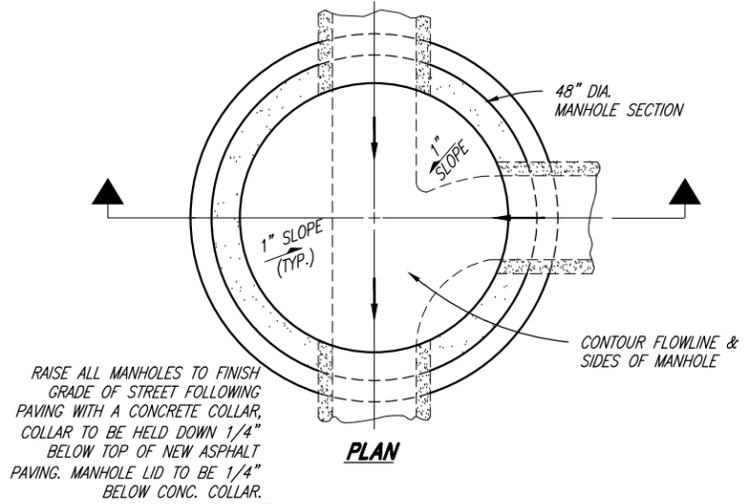
PLAN



**SECTION A-A
TYPE I CATCH BASIN**

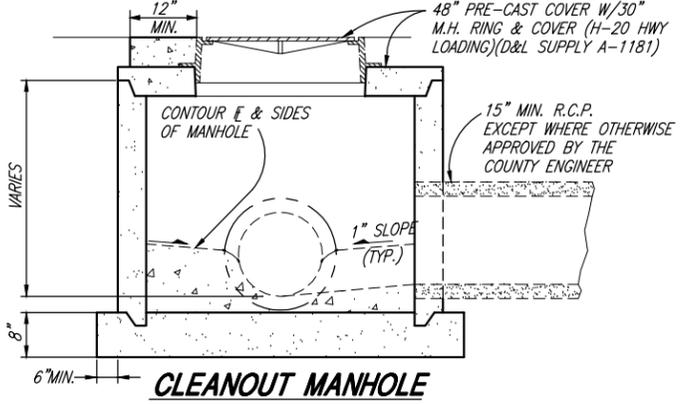
CATCH BASIN SCHEDULE		
TYPE	GRATES	RUNOFF COLLECTION
I	DOUBLE	ONE DIRECTION
II	SINGLE	ONE DIRECTION
III	DOUBLE	TWO DIRECTIONS
IV	SINGLE	TWO DIRECTIONS
V	SINGLE	WITHOUT CURB & GUTTER

CATCH BASIN STYLE:
 STANDARD - OPEN FACE CURB & GRATE
 ALTERNATE 1 - STD. CURB & GRATE
 ALTERNATE 2 - PVC CATCH BASIN

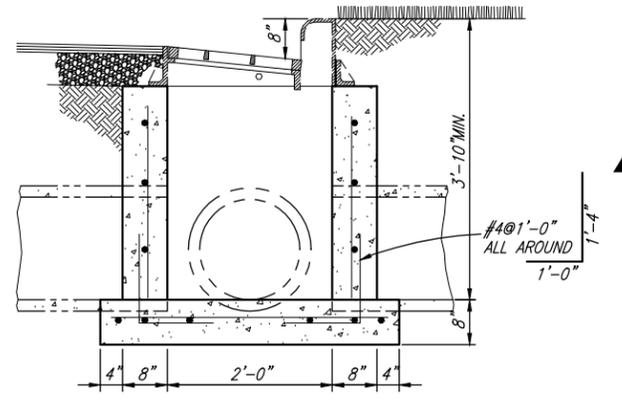


PLAN

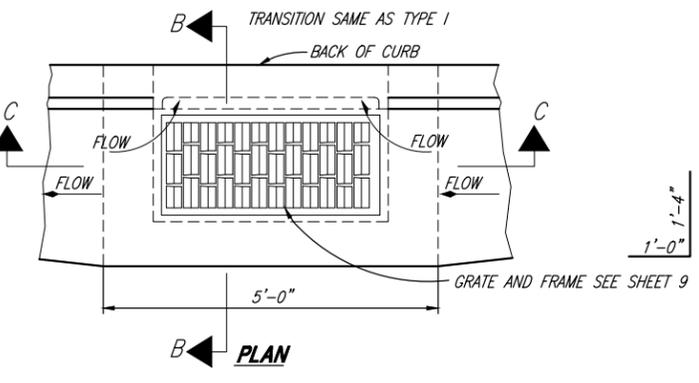
RAISE ALL MANHOLES TO FINISH GRADE OF STREET FOLLOWING PAVING WITH A CONCRETE COLLAR, COLLAR TO BE HELD DOWN 1/4" BELOW TOP OF NEW ASPHALT PAVING. MANHOLE LID TO BE 1/4" BELOW CONC. COLLAR.



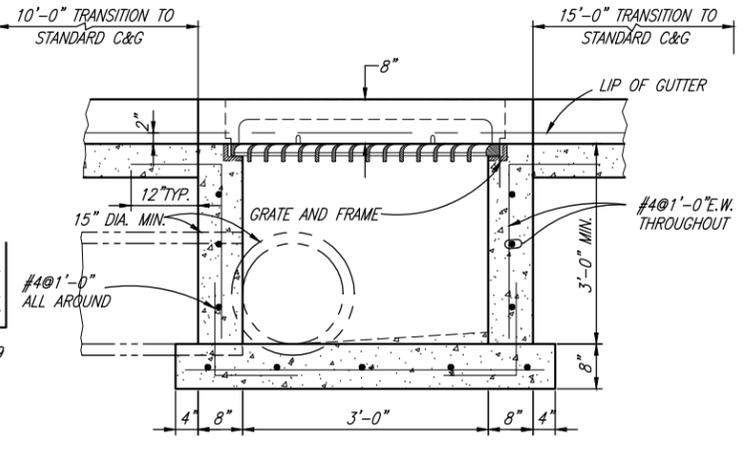
CLEANOUT MANHOLE



SECTION B-B



TYPE II CATCH BASIN



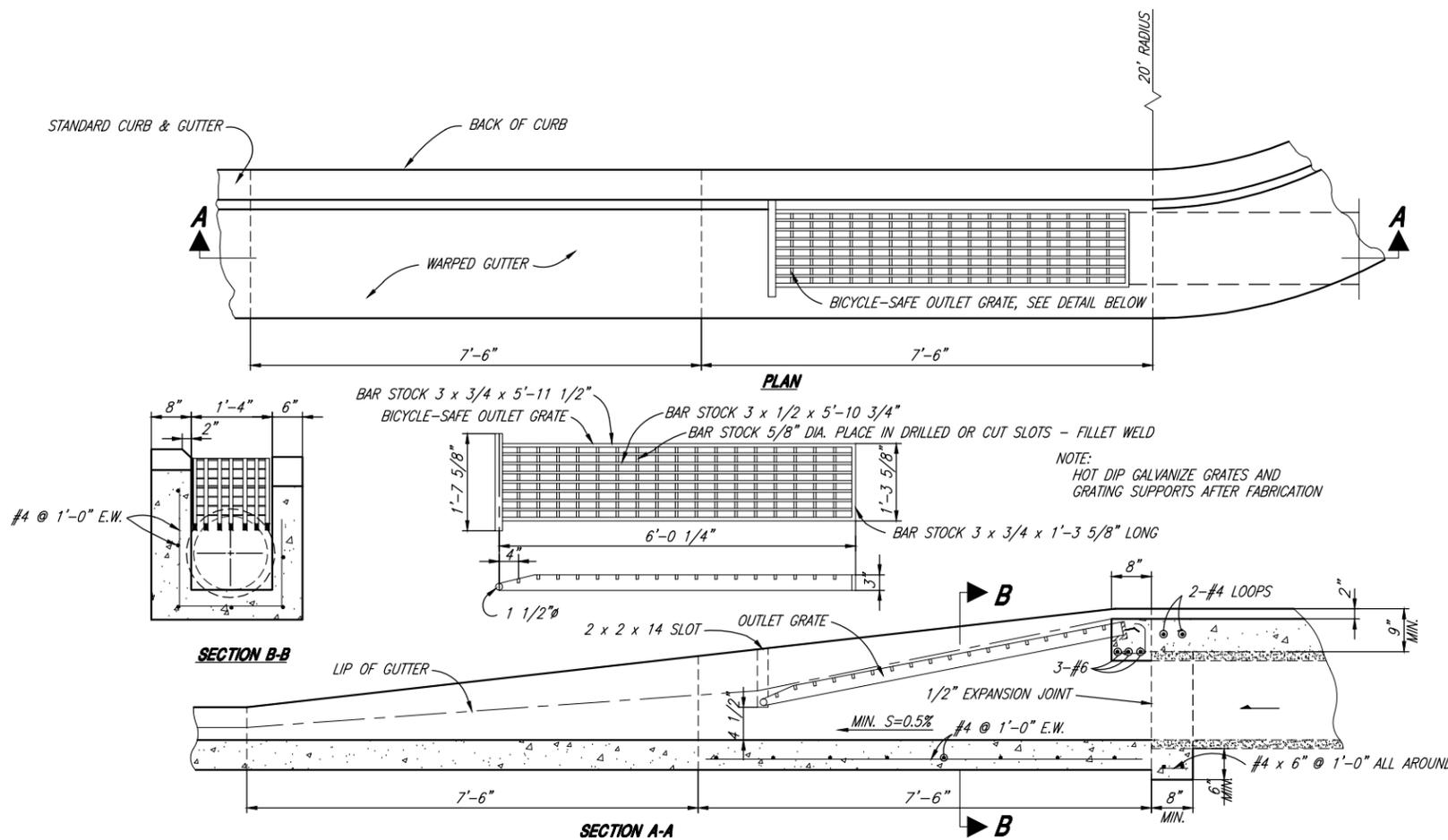
SECTION C-C

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DATE			

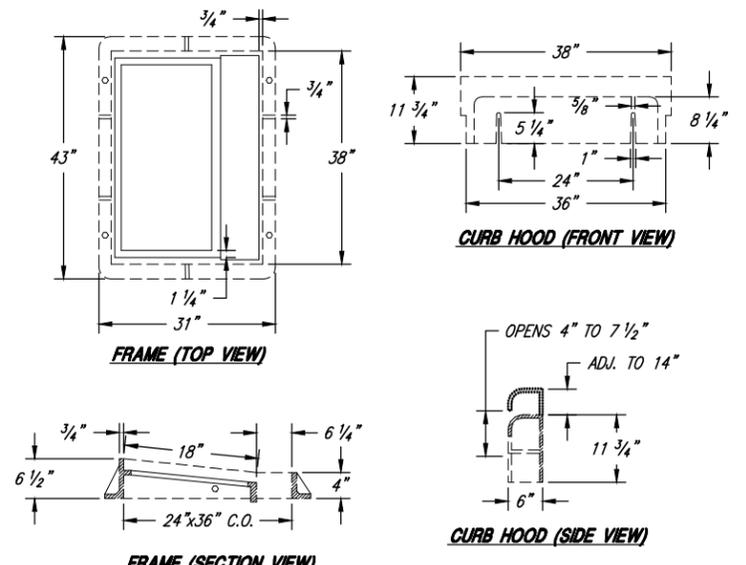
SCALE: N.T.S.
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 DRAWN: BEB
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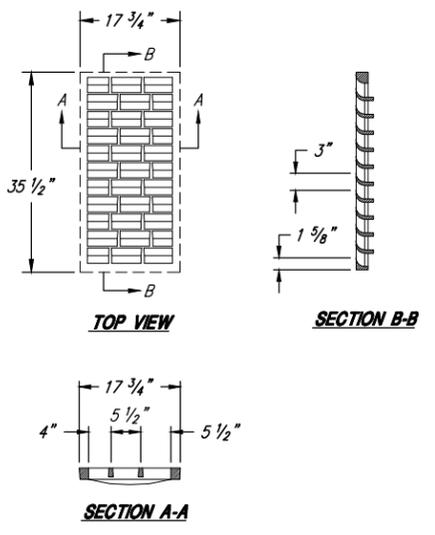
BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS
CATCH BASINS & STORM DRAIN CLEANOUT MANHOLE DETAILS



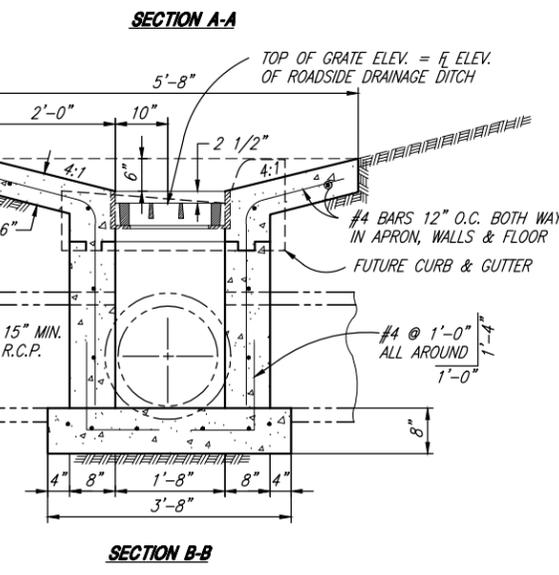
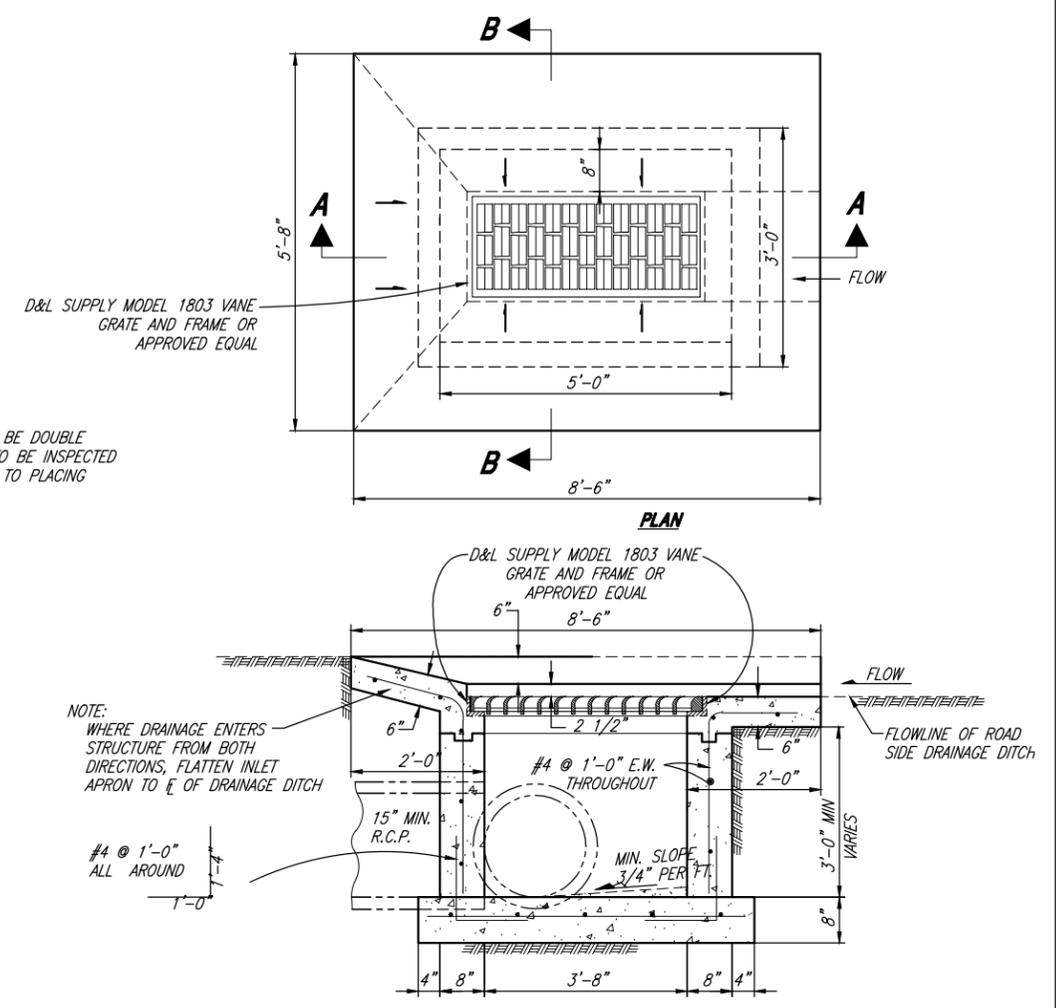
OUTLET DIPSTONE



FRAME AND REINFORCED CURB HOOD
D&L SUPPLY I-3516-R2 AND I-3516-06



TYPE "L" GRATE (STD.)
D&L SUPPLY I-3517-02



TYPE V CATCH BASIN

NOTES:
ALL BOXES ARE TO BE DOUBLE FORMED AND ARE TO BE INSPECTED BY THE CITY PRIOR TO PLACING CONCRETE.

NOTE:
WHERE DRAINAGE ENTERS STRUCTURE FROM BOTH DIRECTIONS, FLATTEN INLET APRON TO E OF DRAINAGE DITCH

PROJECT ENGINEER			
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SCALE:	DESIGNED <u>BWS</u>
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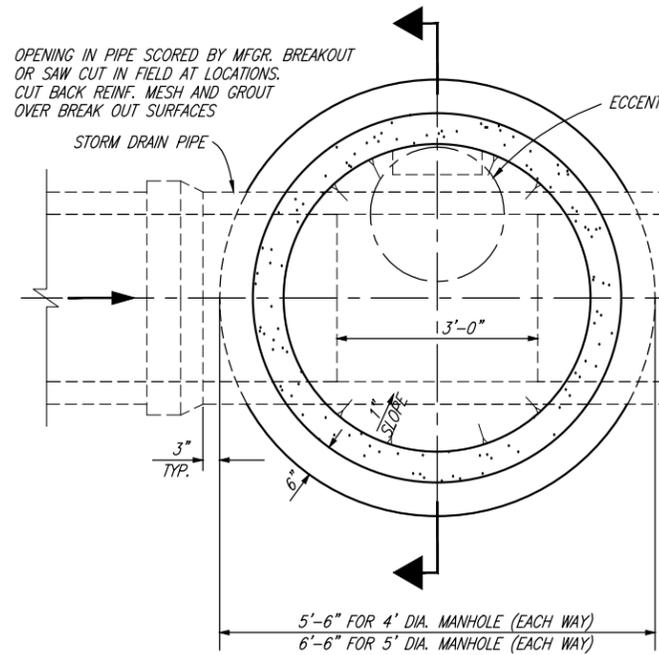
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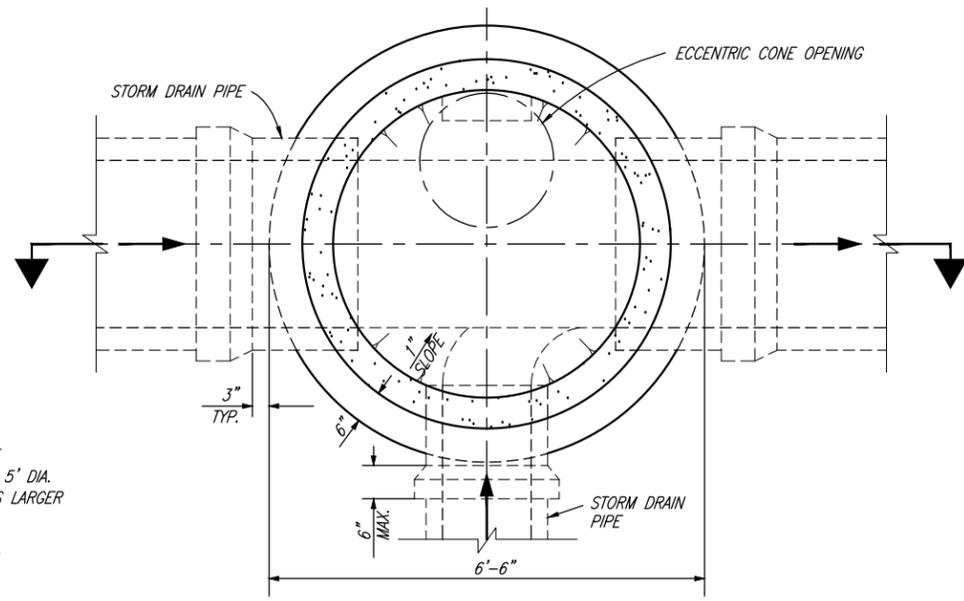
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ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS

TYPE V CATCH BASIN & OUTLET DIPSTONE DETAILS

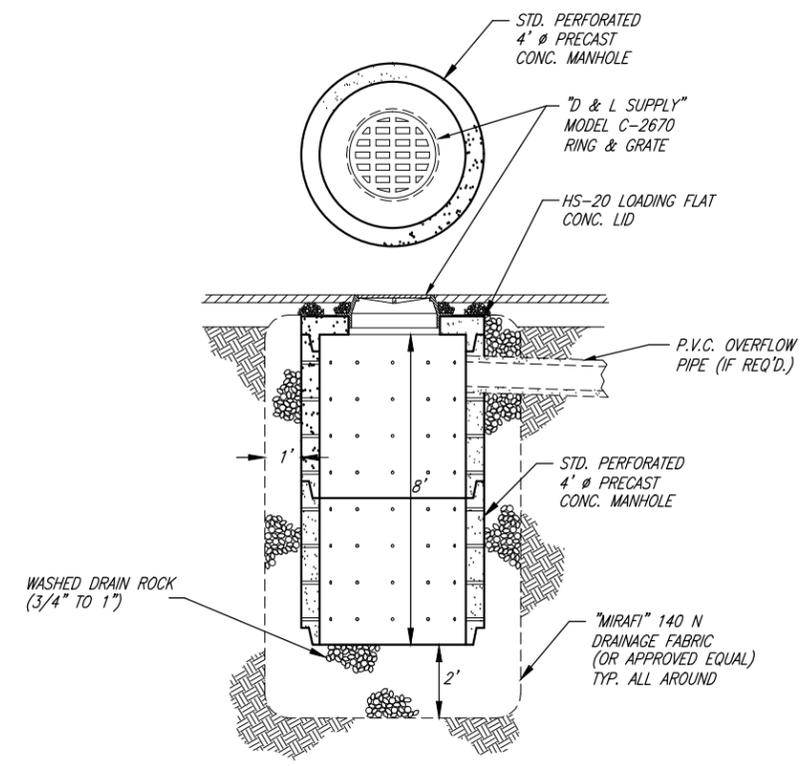


TYPICAL LINE MANHOLE

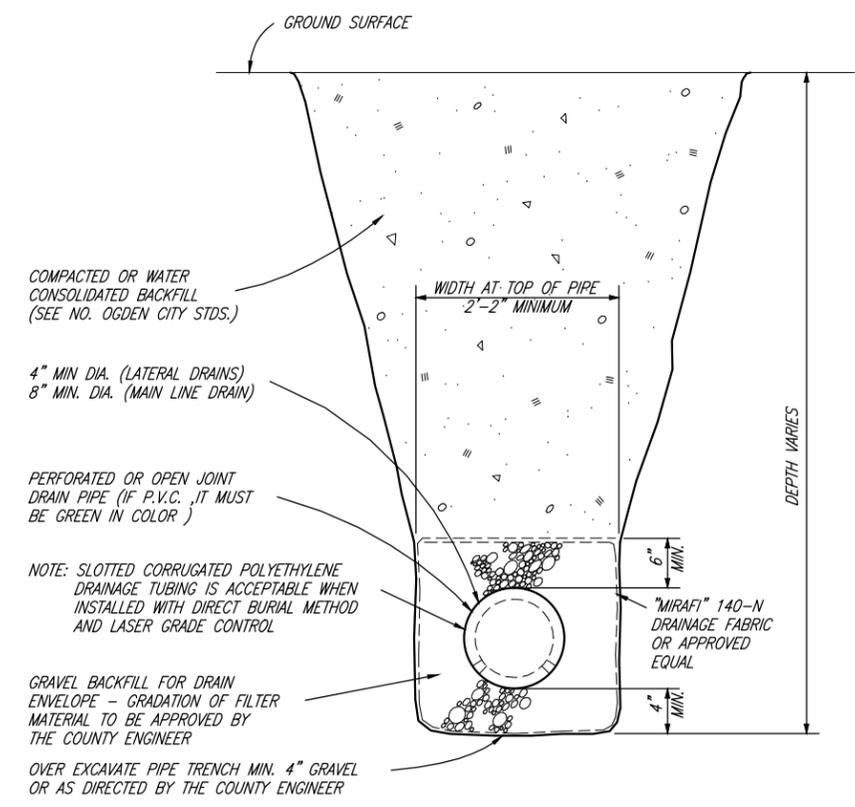
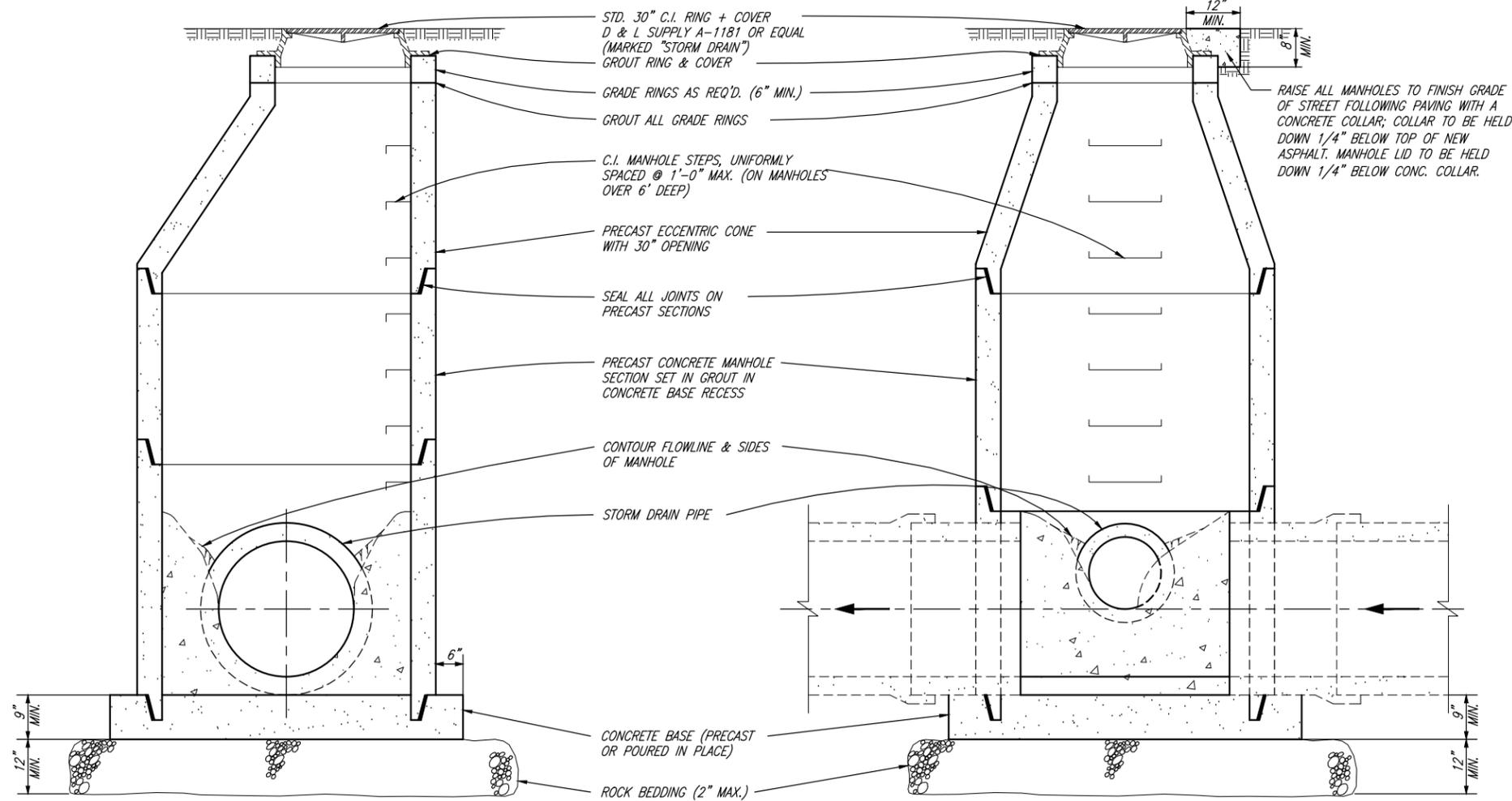
NOTES:
 1. 4' DIA. MANHOLE REQ'D WHERE LINE SIZE IS 21" OR SMALLER, 5' DIA. MANHOLE REQ'D WHERE LINE SIZE IS LARGER THAN 21"
 2. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE



TYPICAL JUNCTION MANHOLE



TYPICAL SUMP DETAIL

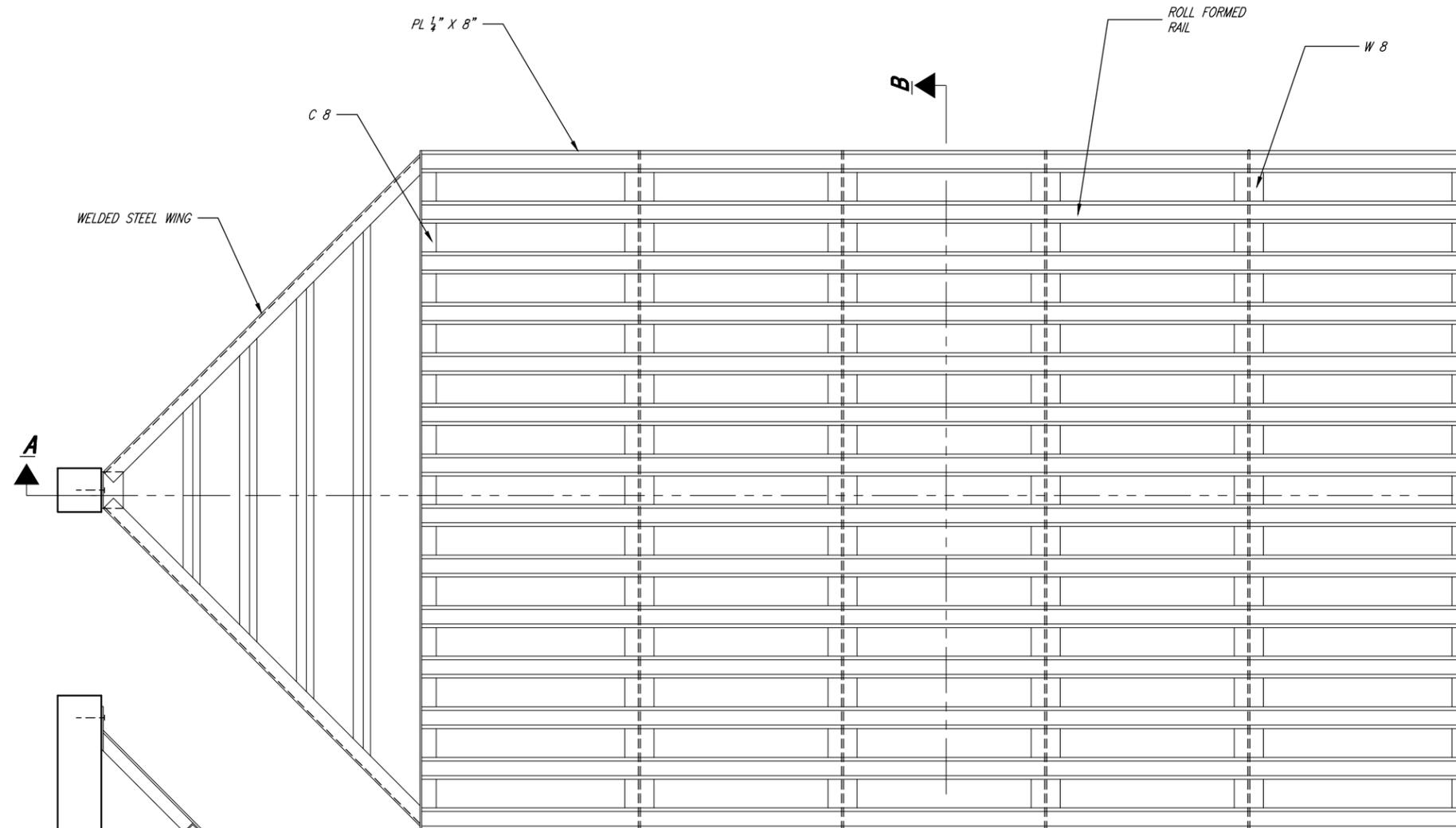


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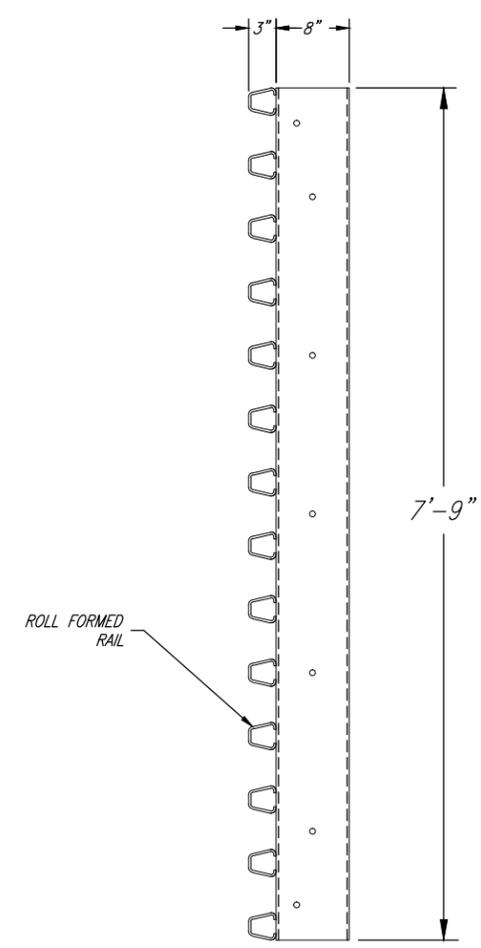
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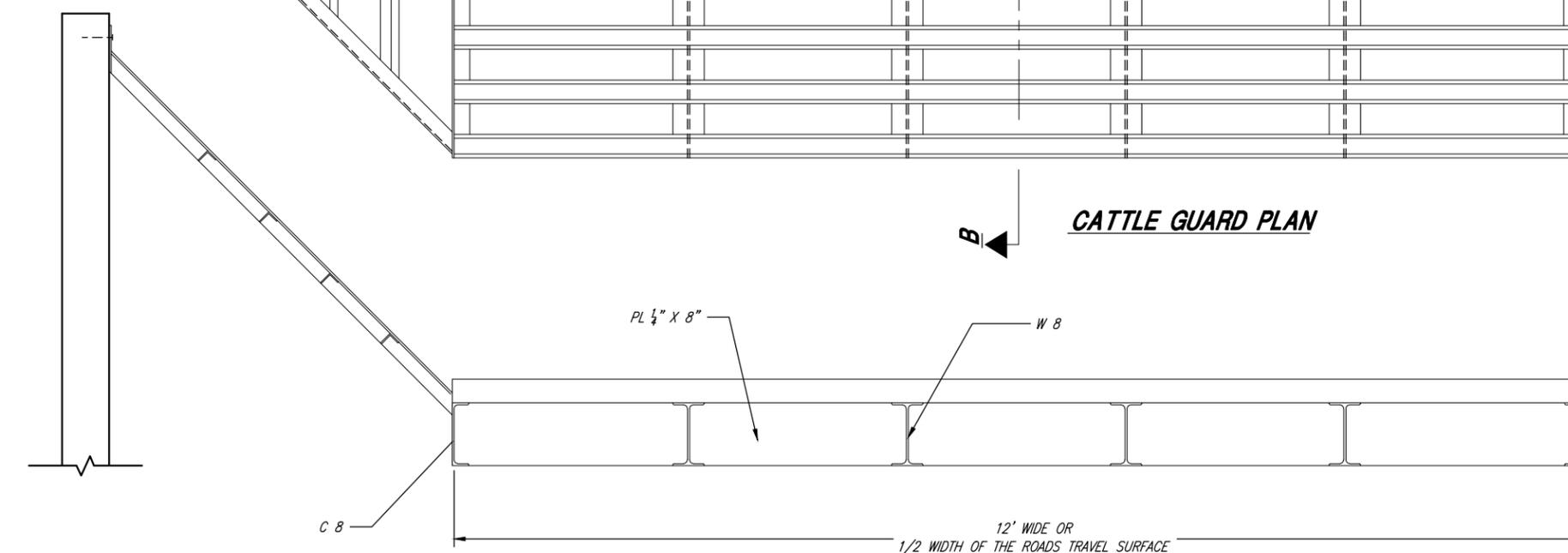
BOX ELDER COUNTY
ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS
STORM DRAIN M.H. & SUBSURFACE DRAIN DETAILS



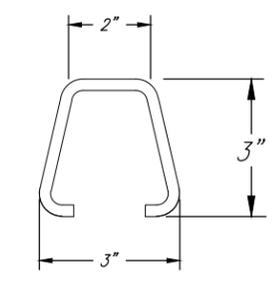
CATTLE GUARD PLAN



SECTION B-B



SECTION A-A



RAIL DETAIL

NOTE:
DRAWINGS BASED ON DETAILS FURNISHED
BY "BIG R MANUFACTURING LLC" GREENLEY, COLORADO

PROJECT ENGINEER			
DATE	REV.	DATE	APPR.

SCALE:
N. T. S.

DESIGNED BWS
DRAWN JSC
CHECKED KLJ

JA
JONES & ASSOCIATES

CONSULTING ENGINEERS

1716 East 5600 South
South Ogden, Utah 84403 (801) 476-9767

BOX ELDER COUNTY

ROAD, STORM DRAIN, AND FENCING STANDARD DRAWINGS

CATTLE GUARD DETAIL