

# STREET IMPROVEMENT DISTRICT NO. 162

## CITY PROJECT NO. 2010-10

### HIT FIRST ADDITION

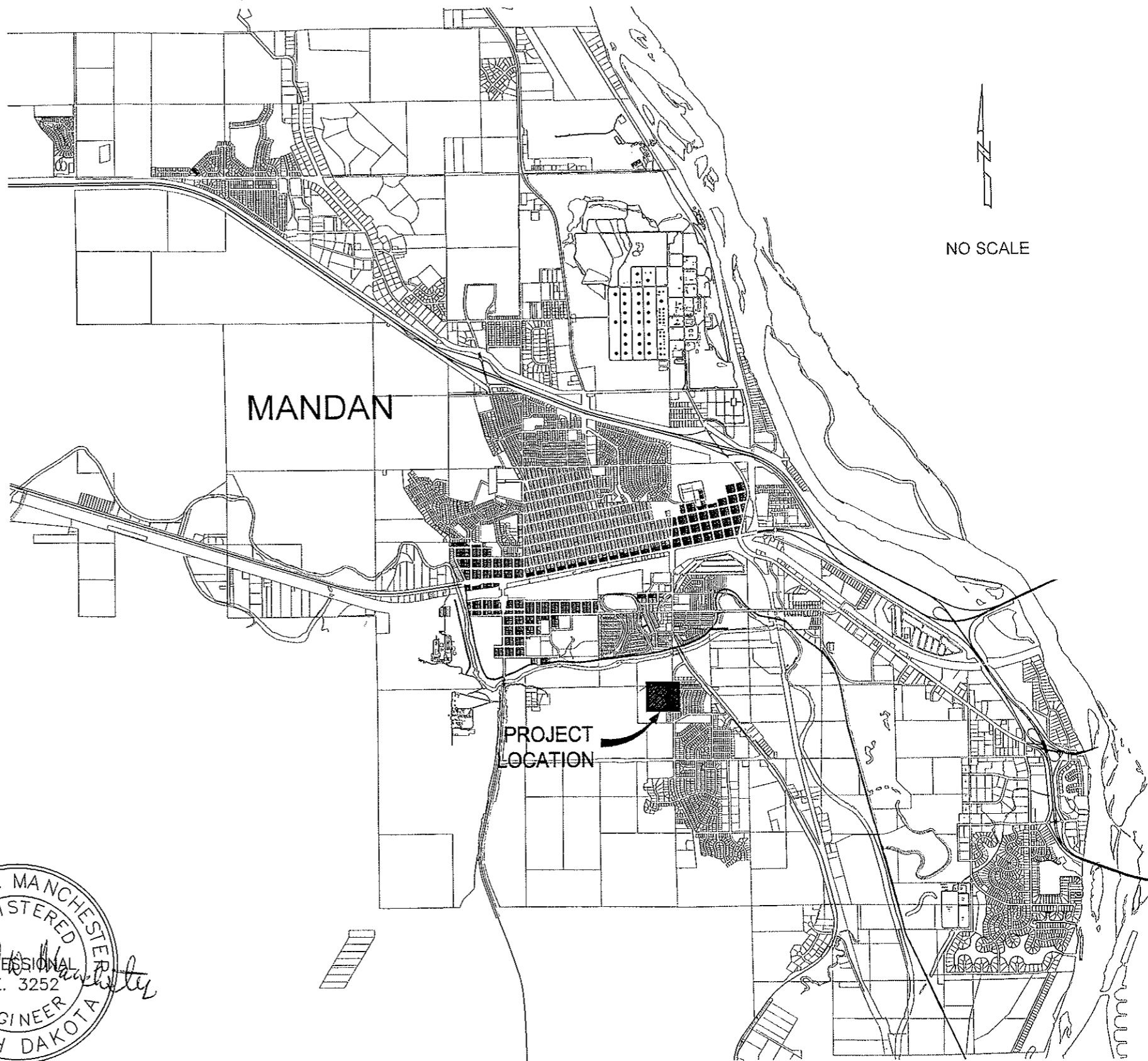
MARCH, 2010

## AS-BUILT

DATE: 11-23-10

#### INDEX OF DRAWINGS

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1	TITLE SHEET
2	PROJECT LAYOUT
3	11TH STREET SE PLAN & PROFILE
4	7TH AVENUE SE PLAN & PROFILE
5	DETAIL SHEET



APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER, MANDAN, ND

PREPARED BY:  
 TOMAN ENGINEERING CO.  
*Ronald W. Manchester*  
 RONALD W. MANCHESTER  
 DATE: 12/6/10



CONTRACTOR:  
 MARINER CONSTRUCTION INC.  
 1771 W. CAVALRY DRIVE  
 BISMARCK, ND 58504-7710  
 PHONE (701) 258-3925

**TOMAN ENGINEERING**  
 501 1st Street NW, Mandan, ND 58554  
 Phone: 701-663-6483 • Fax: 701-663-0923



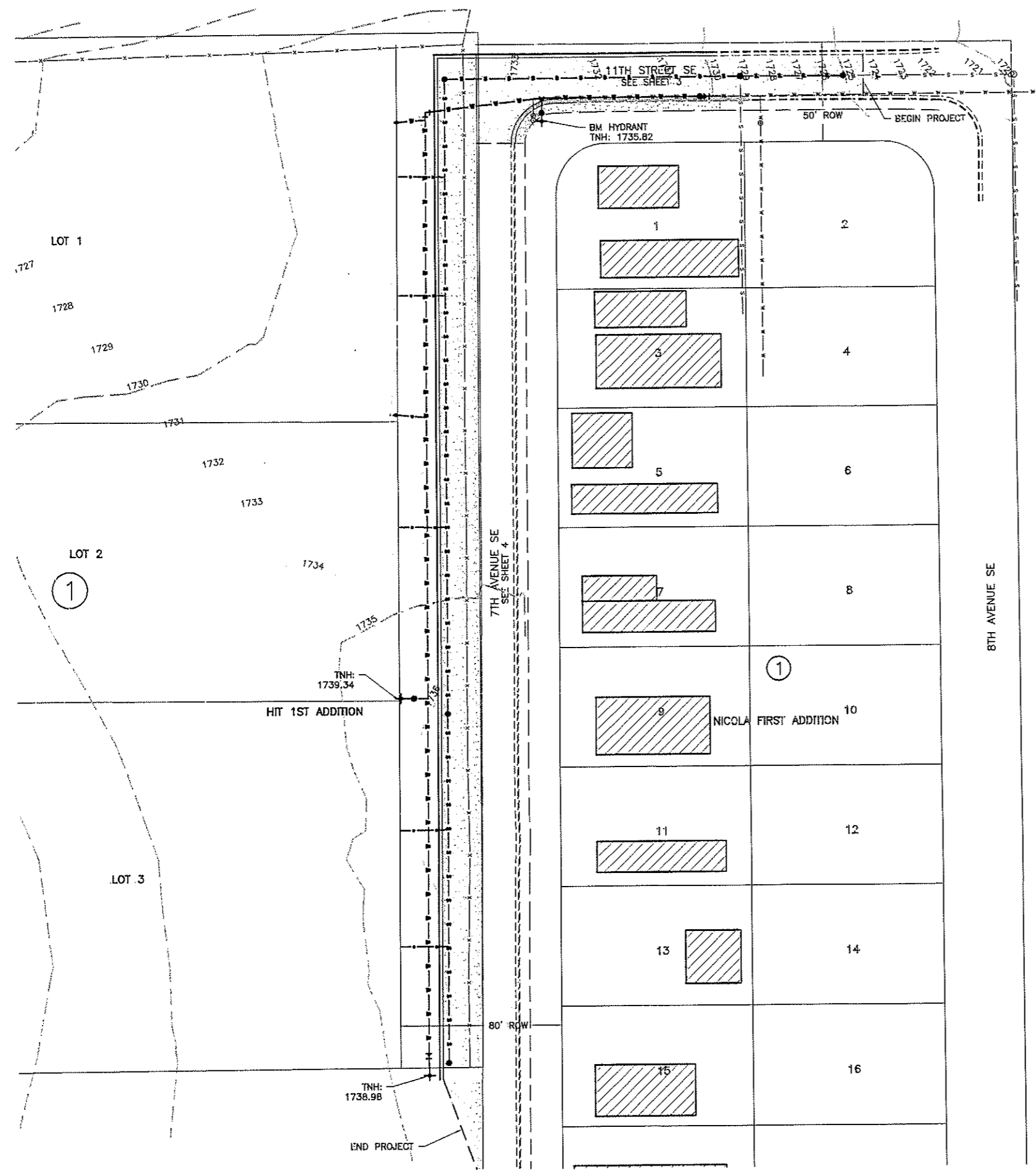
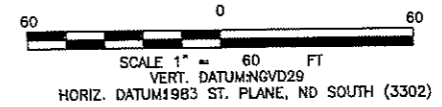
PROJECT:  
 STREET IMPROVEMENT DISTRICT NO. 162  
 HIT FIRST ADDITION  
 TITLE SHEET

TITLE: STREET IMPROVEMENT DISTRICT NO. 162	
NO.	REVISIONS

SHEET NUMBER  
1  
 OF 5 SHEETS

# PROJECT LAYOUT

**AS-BUILT**  
DATE: 11/23/10



- LEGEND**
- EXISTING PROPERTY CORNER
  - ☼ EXISTING STREET LIGHT
  - ⊙ EXISTING POWER POLE
  - ⊞ EXISTING CABLE BOX
  - ⊙ EXISTING TREE
  - ⊞ EXISTING SIGN
  - EXISTING SANITARY SEWER MANHOLE
  - ⊙ EXISTING FIRE HYDRANT
  - ⊙ EXISTING GATE VALVE
  - - - - - EXISTING SANITARY SEWER
  - - - - - EXISTING WATERMAIN
  - - - - - EXISTING FENCE LINE (REMOVED BY OTHERS)
  - ===== EXISTING CURB & GUTTER
  - ▨ EXISTING BUILDING
  - INSTALLED SANITARY SEWER MANHOLE
  - INSTALLED SANITARY SEWER CLEAN OUT
  - ⊙ INSTALLED FIRE HYDRANT
  - ⊙ INSTALLED GATE VALVE
  - ⊙ INSTALLED 45° BEND
  - ===== INSTALLED CURB & GUTTER
  - - - - - INSTALLED SANITARY SEWER MAIN
  - - - - - INSTALLED SANITARY SEWER SERVICE
  - - - - - INSTALLED WATERMAIN
  - - - - - INSTALLED WATER SERVICE
  - - - - - SAW CUT FULL DEPTH
  - ▨ INSTALLED ASPHALT
  - ▨ INSTALLED CONCRETE

**AVOID CUTTING UNDERGROUND UTILITY LINES IN YOUR AREA**

TWO WORKING DAYS BEFORE YOU DIG-DRILL-BLAST IN NORTH DAKOTA - CALL TOLL FREE **1-800-795-0555** UTILITIES UNDERGROUND LOCATION CENTER



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HIT FIRST ADDITION  
PROJECT LAYOUT

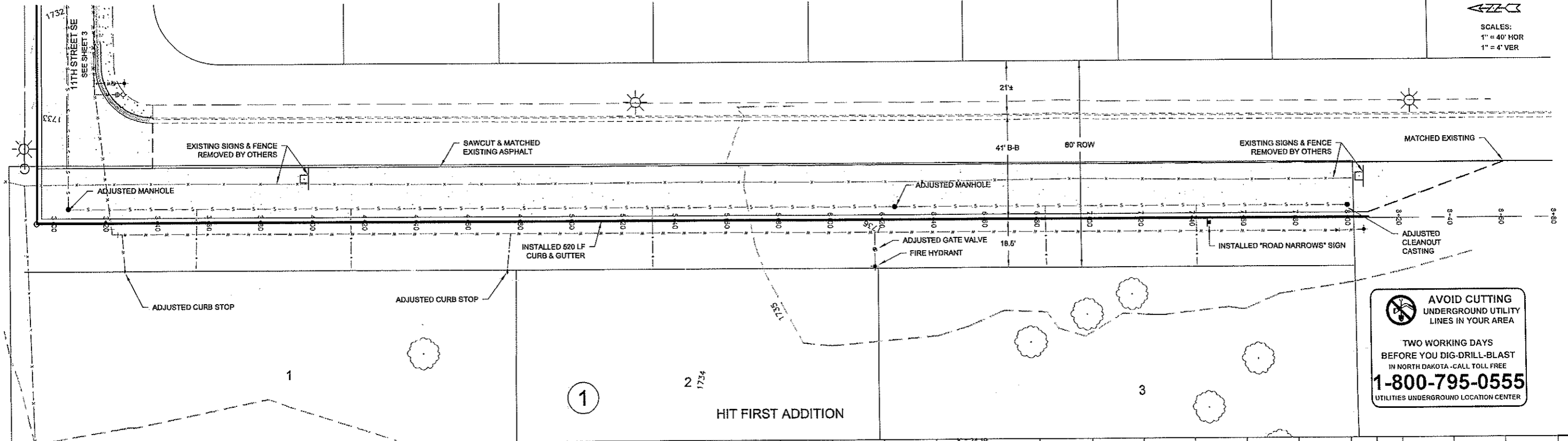
TITLE	DATE	BY	DATE	BY	DATE
STREET IMPROVEMENT DISTRICT NO. 162					
REVISIONS					

SHEET NUMBER  
**2**  
OF 5 SHEETS



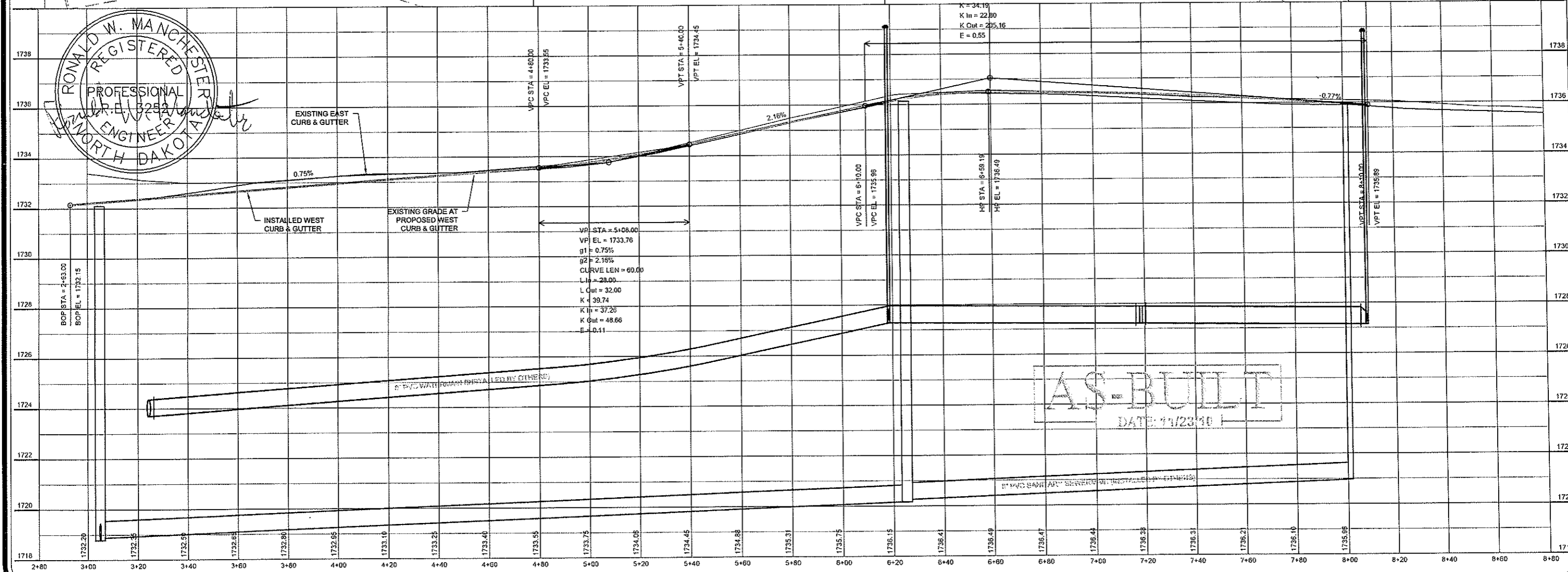
# 7TH AVENUE SE IMPROVEMENTS

SCALES:  
1" = 40' HOR  
1" = 4' VER



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7TH AVENUE SE IMPROVEMENTS

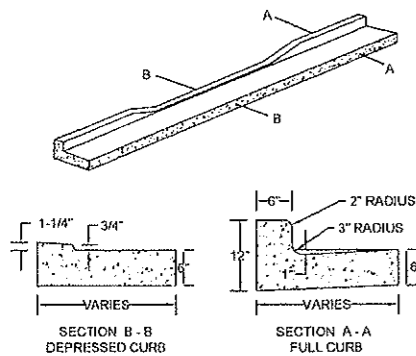
NO.	DATE	BY	REVISIONS
1	11/23/10	AW	AS-BUILT

SHEET NUMBER **4**  
OF 5 SHEETS

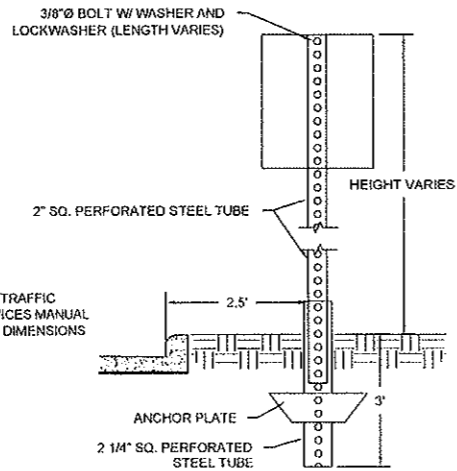
# STREET & EROSION CONTROL DETAILS

NO SCALE

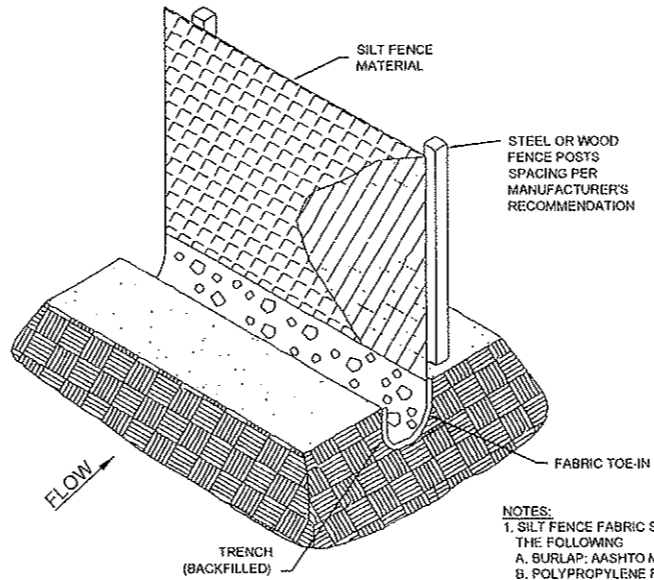
SIGN SUMMARY			
TITLE	# SIGNS	TYPE	SIZE
ROAD NARROWS	1	WS-1	30" X 30"
ARROW	1	WI-6R	35" X 18"



TYPICAL CURB & GUTTER



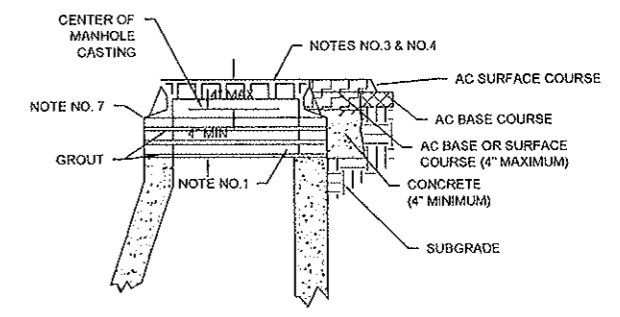
TYPICAL SIGN DETAIL



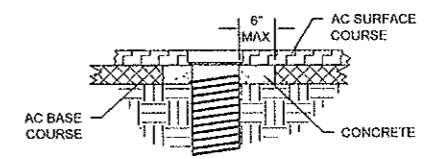
SILT FENCE DETAIL

**AVOID CUTTING UNDERGROUND UTILITY LINES IN YOUR AREA**  
 TWO WORKING DAYS BEFORE YOU DIG-DRILL-BLAST IN NORTH DAKOTA - CALL TOLL FREE  
**1-800-795-0555**  
 UTILITIES UNDERGROUND LOCATION CENTER

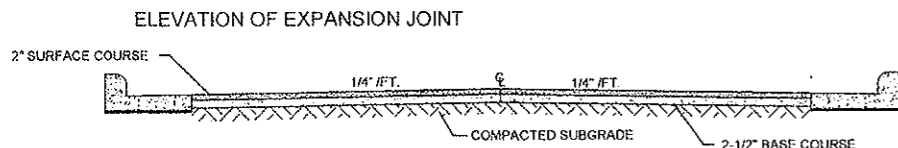
MANHOLE & VALVE BOX ADJUSTMENT



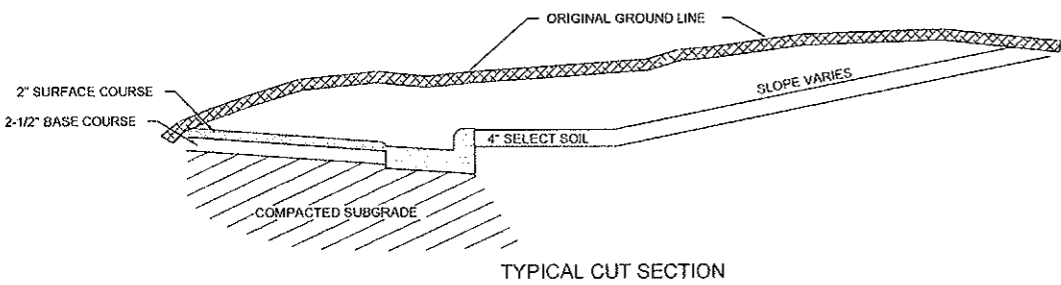
MANHOLE CASTING STANDARD ADJUSTMENT



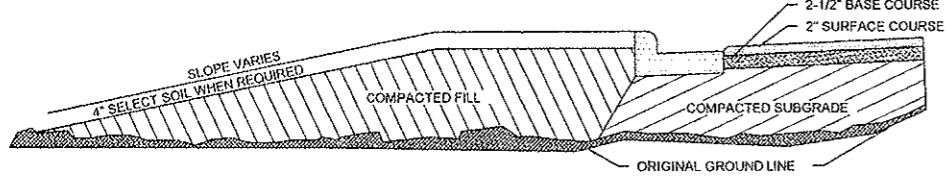
VALVE BOX ADJUSTMENT



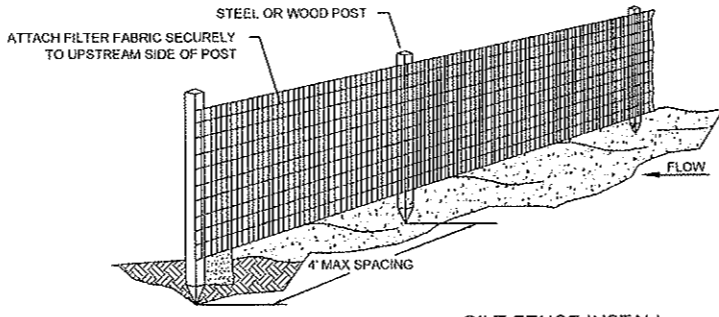
TYPICAL STREET SECTION



TYPICAL CUT SECTION



TYPICAL FILL SECTION

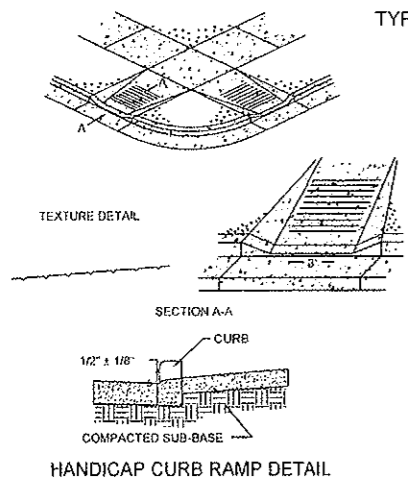


SILT FENCE INSTALL

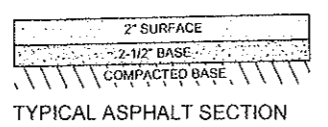
- NOTES:
- SILT FENCE FABRIC SHALL BE ONE OF THE FOLLOWING:
    - A. SURLAP: AASHTO M182
    - B. POLYPROPYLENE FABRIC: ASTM D4397
    - C. NYLON NETTING REINFORCED FABRIC
    - D. PREMANUFACTURED SILT FENCE MEETING EQUAL PROPERTIES OF ABOVE
  - SILT FENCE FABRIC SHALL HAVE A MINIMUM BURSTING STRENGTH 150 PSI
  - SILT FENCE FABRIC SHALL HAVE EDGES TREATED TO PREVENT UNRAVELING.
  - MINIMUM HEIGHT OF THE SILT FENCE TO BE 2'-6" WITH A MINIMUM OF 6" CLEARANCE BETWEEN THE TOP OF THE SILT FENCE AND THE TOP OF THE POSTS.
  - INSTALL THE POSTS ON SLIGHT ANGLE TOWARDS THE ANTICIPATED RUNOFF SURFACE.

- NOTE NO. 1 - USE PRECAST CONCRETE ADJUSTING RINGS FOR ADJUSTMENT OF MANHOLES AND TYPE 24" INLET AND TYPE 24" INLET/MANHOLE. USE CONCRETE BLOCKS FOR ADJUSTMENT OF TYPE 36" AND TYPE 72" INLETS. GROUT SHALL BE PLACED BETWEEN ALL SURFACES. GROUT ON THE INSIDE EDGE OF ADJUSTING RINGS SHALL HAVE A SMOOTH FINISH
- NOTE NO. 2 - INLET BACK SHALL BE ADJUSTED TO CONFORM WITH CURB & GUTTER GRADES AND CURB ALIGNMENT.
- NOTE NO. 3 - MANHOLE CASTING SHALL BE ADJUSTED TO CONFORM WITH SLOPE AND GRADE OF PROPOSED CONCRETE OR PAVEMENT.
- NOTE NO. 4 - MANHOLE CASTING SHALL BE ADJUSTED AFTER THE AC LEVELING COURSE OR THE AC BASE COURSE HAS BEEN PLACED.
- NOTE NO. 5 - INLET AND MANHOLE CASTING SHALL BE CONSIDERED ADJUSTED ONLY WHEN RAISED OR LOWERED BY ADDING OR REMOVING ADJUSTING RINGS OR GROUT.
- NOTE NO. 6 - ADAPTOR RING SHALL BE AMERICAN HIGHWAY PRODUCTS MANHOLE RISER OR AN APPROVED EQUAL.
- NOTE NO. 7 - EXTERIOR MANHOLE CHIMNEY SEAL AS MANUFACTURED BY CRETEX OR AN APPROVED EQUAL, IF SPECIFIED.

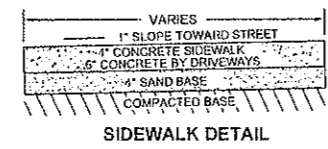
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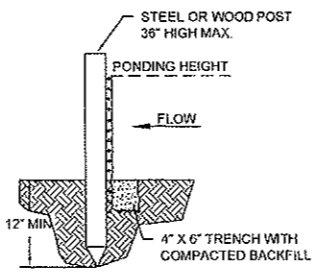
HANDICAP CURB RAMP DETAIL



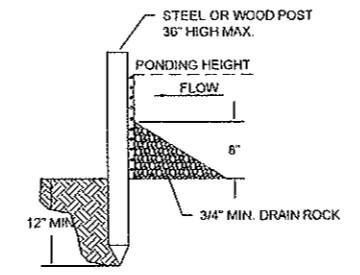
TYPICAL ASPHALT SECTION



SIDEWALK DETAIL



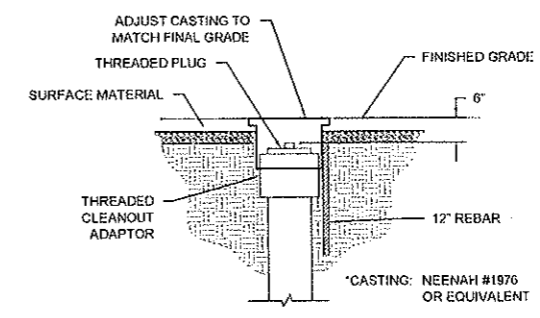
TRENCH DETAIL



INSTALLATION WITHOUT TRENCH

- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY
- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
- REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

CLEANOUT ADJUSTMENT



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