

**WATERMAIN**

W1 MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH CITY OF BISMARCK SPECIFICATIONS UNLESS NOTED OTHERWISE. BACKFILL SHALL BE 95% OF STANDARD PROCTOR AT RECOMMENDED MOISTURE CONTENT. WATERLINES SHALL BE CHLORINATED AND TESTED.

W2 CONTRACTOR SHALL BORE A PROPOSED 6" WATER SERVICE AND A 1" WATER SERVICE LINE BENEATH 3RD STREET TO THE WESTERN PROPERTY LINE. ANTICIPATED INVERT TO BE 30.2±. VERIFY LOCATION AND ELEVATION WITH CITY BEFORE CONSTRUCTING ON SITE WATERLINES.

W3 GENERAL CONTRACTOR TO COORDINATE PLACEMENT OF WATERLINE WITH MECHANICAL CONTRACTOR TO AVOID CONFLICTS WITHIN BUILDING.

W4 INSTALL APPROXIMATELY 73 LF OF 1" WATER SERVICE LINE AND 6" WATER SERVICE. MAINTAIN 7.5 FEET OF COVER FROM FINAL SURFACE GRADE.

W5 INSTALL APPROXIMATELY 21 LF OF 1" WATER SERVICE AND 45" BEND, 25 LF OF 1" WATER SERVICE AND 45" BEND, 30 LF OF 1" WATER SERVICE AND 90° BEND, AND 35 LF OF 1" WATER SERVICE. INV. 33.5. VERIFY LOCATION AND ELEVATION INTO BUILDING WITH MECHANICAL CONTRACTOR.

W6 INSTALL APPROXIMATELY 21 LF OF 6" WATER SERVICE AND 45" BEND, 24 LF OF 6" WATER SERVICE AND 45" BEND, 35 LF OF 6" WATER SERVICE. INV. 33.5. INSTALL 1" WATER SERVICE, OFFSET 1' NORTH OF 6" WM PROVIDE 1" CURB STOP. INVERT AT BUILDING CONNECTION 1633.50. VERIFY LOCATION AND ELEVATION INTO BUILDING WITH MECHANICAL CONTRACTOR.

**GENERAL LANDSCAPING NOTES FOR ALL SHEETS**

- L1 ALL CONTRACTORS WISHING TO SUBMIT BIDS FOR THIS LANDSCAPING PROJECT SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL CONDITIONS.
- L2 PROTECT THE IMPROVEMENTS ON SITE AND ON THE ADJOINING PROPERTIES. PROVIDE BARRICADES, COVERINGS OR OTHER TYPE OF PROTECTION AS NECESSARY TO PREVENT DAMAGE AND TO SAFEGUARD AGAINST INJURY TO EXISTING UTILITIES.
- L3 DAMAGE THAT OCCURS TO PLANTS DURING TRANSPORTATION AND INSTALLATION WILL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- L4 ALL PLANTING BEDS SHALL BE INSTALLED WITH 3" OF 3/4" CRUSHED ROCK MULCH, LANDSCAPE FABRIC WITH A MINIMUM WEIGHT OF 4 OZ./SY, AND WHERE NECESSARY, 6" COMMERCIAL GRADE BLACK PLASTIC EDGING TO CONTAIN THE PLANTING BED.
- L5 ALL LANDSCAPE PLANTINGS ARE TO BE WATERED BY THE LANDSCAPE CONTRACTOR THE SAME DAY THAT THE PLANTING OCCURS. THE OWNER WILL BE RESPONSIBLE FOR PROVIDING WATER FOR THIS TASK. IF WATER IS NOT AVAILABLE AT THE BUILDING, THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALTERNATIVE METHODS FOR WATERING.
- L6 SOLITARY TREES DO NOT NEED TO BE EGED AROUND, HOWEVER ORGANIC WOOD MULCH SHALL BE PLACED AROUND THE TREE IN A MUTILLE RING THAT CONFORMS TO THE DETAIL PROVIDED FOR TREE PLANTINGS.
- L7 CONTRACTOR SHALL PROVIDE WRITTEN WARRANTIES CONFIRMING THE FOLLOWING:  
FURNISHED TREES AND SHRUBS GUARANTEED TO LIVE AND REMAIN STRONG, VIGOROUS, AND HEALTHY CONDITION FOR 365 DAYS MINIMUM FROM DATE LANDSCAPE INSTALLATION IS ACCEPTED AS COMPLETED.
- L8 LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND CARING FOR ALL PLANT MATERIAL, SEED, SOIL, AND OTHER LANDSCAPING IMPROVEMENTS UNTIL THE DATE OF FINAL INSPECTION AND APPROVAL.

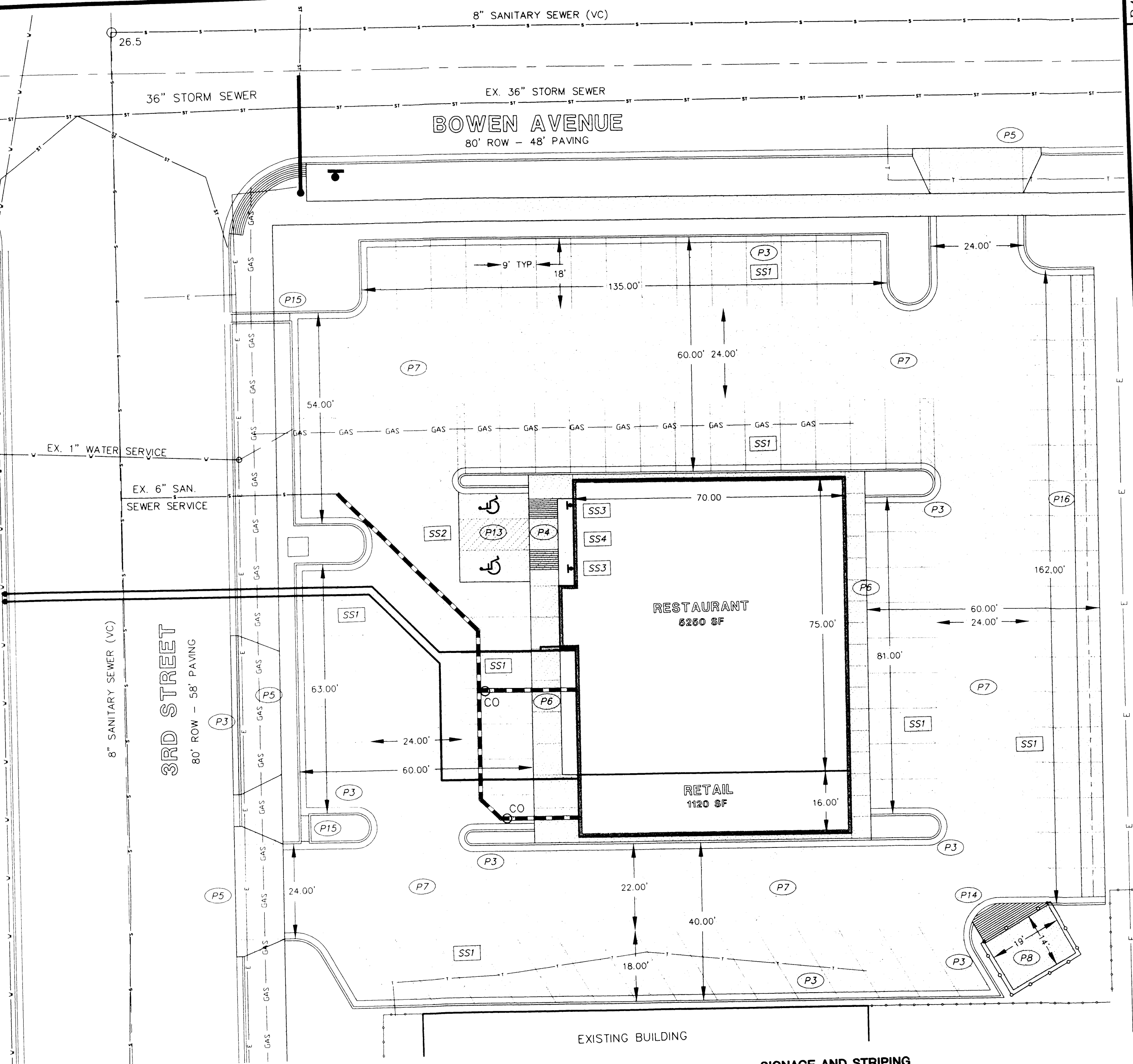
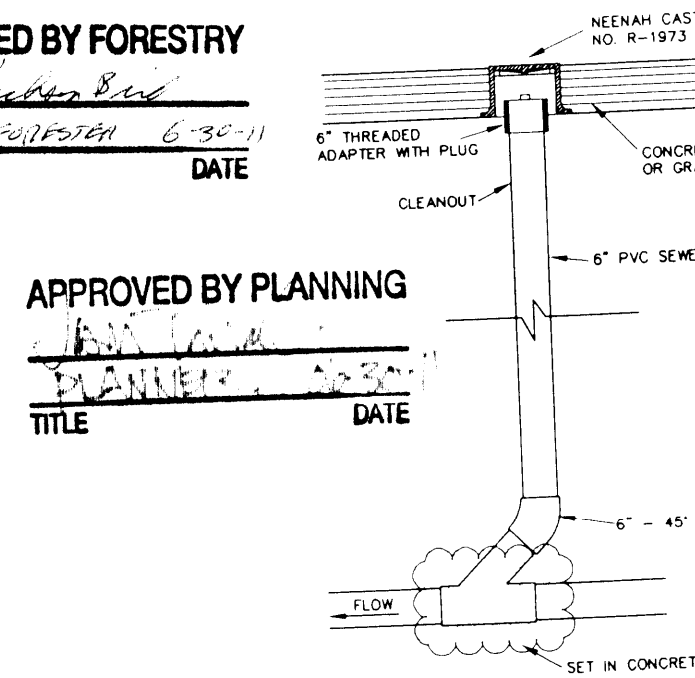
**TOPSOIL & SEEDING NOTES**

- T1 ALL PORTIONS OF THE SITE NOT RECEIVING CONCRETE, CURB & GUTTER OR OTHER IMPROVEMENTS SHALL BE COVERED WITH A MINIMUM OF 6" OF TOPSOIL.
- T2 ALL IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE, FINE, SANDY-LOAM TOPSOIL. IT SHALL BE FREE FROM SUBSOIL, NOXIOUS WEEDS, STONES, LIME, CEMENT, ASHES, SLAG, OR OTHER DELETERIOUS MATTER.
- T3 TOPSOIL SHALL BE PLACED AND SEED AS SOON AS PRACTICAL TO MINIMIZE WIND AND WATER EROSION. BACKFILL BEHIND CURB AND GUTTERS AND SIDEWALK AS SOON AS REASONABLE TO PREVENT STANDING WATER AND PROTECT THE IMPROVEMENTS.
- T4 ALL PORTIONS OF THE SITE NOT RECEIVING OTHER IMPROVEMENTS SHALL BE SEED ACCORDING TO THE CITY OF BISMARCK SPECIFICATIONS FOR TYPE II SEED.

APPROVED BY FORESTRY  
*[Signature]*  
 TITLE DATE

APPROVED BY PLANNING  
*[Signature]*  
 TITLE DATE

**CLEAN OUT DETAIL**



**PAVEMENT**

- P1 ON SITE EXTERIOR CONCRETE MATERIALS AND CONSTRUCTION MATERIALS SHALL CONFORM TO CITY OF BISMARCK SPECIFICATIONS EXCEPT AS MODIFIED HEREIN. AIR CONTENT SHALL BE 5% TO 7% STRENGTH AT 28 DAYS SHALL BE 4000 PSI.
- P2 ASPHALT PAVING SHALL BE CLASS 'B' PER CITY OF BISMARCK SPECIFICATIONS. NO SEAL COAT IS REQUIRED UNLESS THERE IS A COURSE ASPHALT SURFACE THAT WOULD ALLOW AIR AND WATER TO RAVEL THE SURFACE EARLIER THAN NORMAL WEAR.
- P3 STANDARD VERTICAL FACE CURB AND GUTTER. SEE NOTE THIS SHEET.
- P4 DROP CURB FOR RAMP.
- P5 CITY SIDEWALK PER CITY OF BISMARCK SPECIFICATIONS - THICKEN SIDEWALK AT DRIVEWAYS TO 8" AND PROVIDE KEYWAY PER CITY SPECIFICATIONS.
- P6 THICKENED EDGE 4 1/2" CONCRETE SIDEWALK WITH FIBERMESH.
- P7 4" ASPHALT ON 6" GRANULAR BASE.
- P8 6" REINFORCED CONCRETE WITH #4 REBAR O.C. EACH WAY ON 6" OF SUBGRADE PREPARATION - DUMPSTER PAD.
- P9 ISOLATION JOINTS WILL BE REQUIRED ALONG THE BUILDING, STOOPS AND ALL FIXED ITEMS. LEAVE JOINT 1/2" LOW AND SEAL ISOLATION JOINTS SHALL BE SEALED USING A ONE PART POLYURETHANE TYPE SEALANT.
- P10 CONSTRUCTION JOINTS WILL BE PLACED TO CONCLUDE WITH CONSTRUCTION JOINT SPACING. CONSTRUCTION JOINT FOR UNREINFORCED CONCRETE SHALL HAVE A MINIMUM 1/2" DIAMETER HALF ROUND KEYWAY OR APPROVED EQUAL. CONSTRUCTION JOINTS FOR REINFORCED CONCRETE SHALL BE 1/2" X 12" DOWELS AT 12 O/C.
- P11 JOINT SPACING SHALL TYPICALLY BE SPACED AT 1-1/2 TIMES THE THICKNESS OF THE PAVEMENT (MEASURED IN INCHES) IN FEET (4" SWK EQUALS 6 FOOT SPACING). IN NO CASE SHALL THE JOINT SPACING EXCEED TWO TIMES THE THICKNESS.
- P12 SUBGRADE PREPARATION UNDER AREAS TO BE PAVED SHALL BE 6" THICK AND SHALL COMPLY WITH CITY OF BISMARCK SPECIFICATIONS EXCEPT DENSITY SHALL BE 95% OF ASTM D 698.
- P13 4 1/2" CONCRETE PAVING FOR ADA STALLS.
- P14 DROP CURB FOR DUMPSTER PAD.
- P15 TRENCH DRAIN PER DETAIL THIS PAGE.
- P16 CONCRETE VALLEY GUTTER PER CITY OF BISMARCK SPECIFICATIONS.

**STREET LIGHTING NOTE**

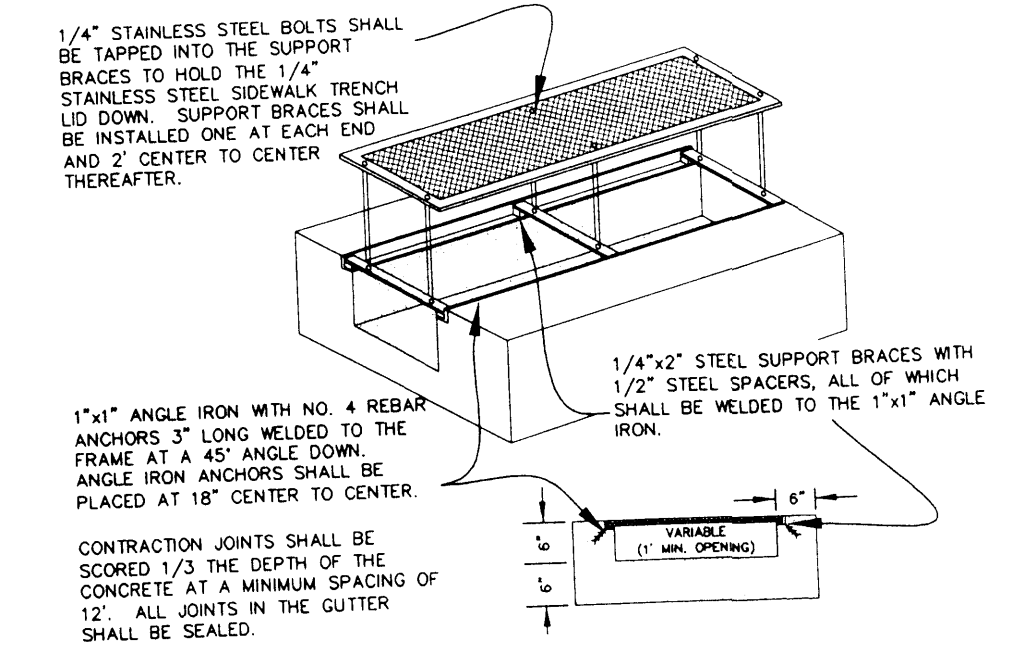
- LT TWO STREET LIGHTS ARE TO BE RELOCATED, COORDINATE WITH THE CITY OF BISMARCK ON THE RELOCATION OF THESE FIXTURES. 355-1505.

**SIGNAGE AND STRIPING**

- SS1 ALL NON-ADA STRIPING SHALL BE 4" WIDE NON REFLECTORIZED PAINT MEETING THE REQUIREMENTS OF AASHTO M28 APPLIED AT A RATE OF 110 SQUARE FEET PER GALLON. COLOR SHALL BE YELLOW. TYPICAL FOR ALL STRIPING UNLESS OTHERWISE NOTED.
- SS2 ADA STRIPING FOR LANES AND SYMBOLS SHALL BE BLUE PAINT MEETING THE REQUIREMENT OF AASHTO M28 APPLIED AT A RATE OF 110 SQUARE FEET PER GALLON. PAINT FACE AND TOP OF CURB (6" WIDE) IN FRONT OF ALL HANDICAP STALLS.
- SS3 PROVIDE AND INSTALL ADA SIGNS AND POSTS.
- SS4 PROVIDE AND INSTALL SIGN AND POST THAT INDICATES "VAN ACCESSIBLE". SIGNS MUST INDICATE "100 FINE".

**FENCING NOTE**

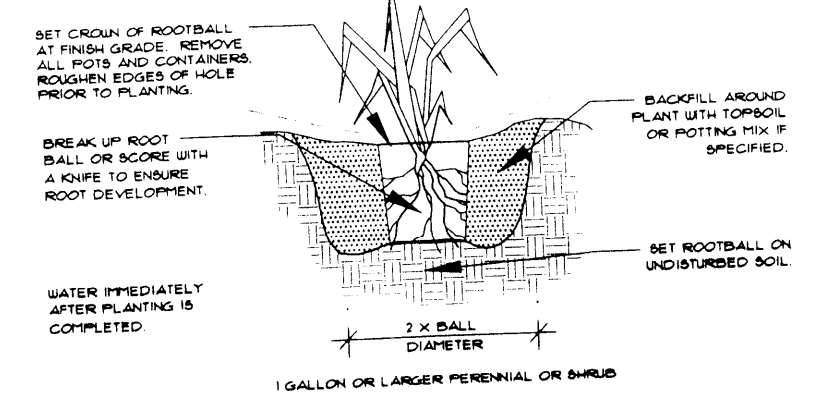
- F1 INSTALL 6" HIGH OPAQUE VINYL FENCE AROUND THE PERIMETER OF DUMPSTER PAD. INSTALL SWINGING GATE ON THE NORTH SIDE OF THE FENCE FOR ACCESS BY GARBAGE TRUCKS.



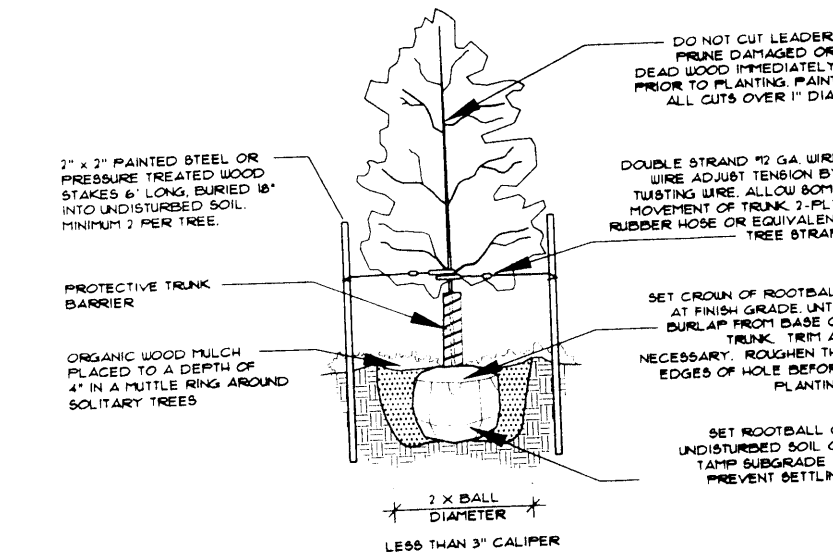
**TRENCH DRAIN**

NOT TO SCALE

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**SHRUB/PERENNIAL PLANTING DETAIL**



**TREE PLANTING DETAIL**

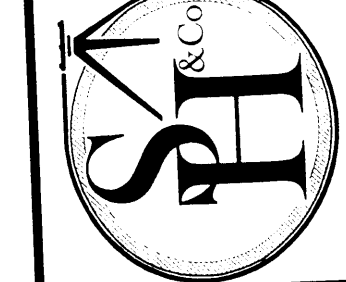
SYM.	COMMON NAME	SCIENTIFIC NAME	SIZE	QNTY.
HL	HONEY LOCUST	Gleditsia triacanthos	1 1/2" Cal.	5
LL	LITTLE LEAF LINDEN	Tilia cordata	1 1/2" Cal.	5
EC	EUROPEAN CRANBERRY BUSH	Viburnum opulus	2 Gallon	39
EU	DWARF BURNING BUSH	Euonymus alata 'Compactus'	2 Gallon	36
DK	DWARF KOREAN LILAC	Syringa meyeri 'Palibin'	2 Gallon	6
OG	DWARF GLOBE BLUE SPRUCE	Picea pungens 'Glauca Globosa'	2 Gallon	6

DATE: \_\_\_\_\_

REVISION: \_\_\_\_\_

SWENSON, HAGEN & COMPANY P.C.  
 GRADING, DIMENSION, UTILITY & LANDSCAPING  
 LOT 4 AND PART OF LOT 5, BLOCK 4  
 WACHTER'S ADDITION  
 BISMARCK, NORTH DAKOTA

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