

**GENERAL EROSION CONTROL NOTES FOR ALL SHEETS:**

- E.1 AN N.O.I. AND SWPPP WILL NEED TO BE PREPARED FOR THIS PROJECT BY THE GENERAL CONTRACTOR. THE CONTRACTOR SHALL SIGN THE DOCUMENTATION AND SUBMIT TO NORTH DAKOTA HEALTH DEPARTMENT. CONTRACTOR SHALL NOT START THE PROJECT UNTIL RECEIVING AN APPROVAL LETTER FROM THE NORTH DAKOTA HEALTH DEPARTMENT.
- E.2 CONTRACTOR SHALL IMPLEMENT APPROPRIATE EROSION CONTROL BEFORE BEGINNING ANY LAND DISTURBING ACTIVITIES AS DESIGNED. NOTE: EROSION CONTROL ITEMS SHOWN NEED TO BE IMPLEMENTED AT APPROPRIATE STAGES OF CONSTRUCTION ONLY.
- E.3 CONTRACTOR SHALL CONTROL DUST THROUGHOUT PROJECT.
- E.4 CONTRACTOR SHALL SEED AND MULCH DISTURBED AREAS. SEEDING SHALL CONSIST OF CLASS III SEED, AND MULCH SHALL BE IN ACCORDANCE WITH CITY OF BISMARCK SPECIFICATIONS SECTION 1200.
- E.5 CONTRACTOR SHALL HAVE A COPY OF THE SWPPP AND EROSION CONTROL PLAN ON-SITE AT ALL TIMES.
- E.6 WEEKLY (PLUS WITHIN 24 HOURS OF A STORM WATER EVENT) INSPECTIONS OF THE CONSTRUCTION SITE WILL BE PERFORMED BY PERSONNEL FAMILIAR WITH ALL ASPECTS OF THE SWPPP AND THE IMPLEMENTED CONTROL PRACTICES. INSPECTIONS WILL INCLUDE THE REVIEW OF ALL DISTURBED AREAS, STRUCTURAL AND NON-STRUCTURAL CONTROL MEASURES, MATERIAL STORAGE AREAS AND VEHICULAR ACCESS POINTS.
- E.7 INSPECTIONS WILL BE PERFORMED AT LEAST ONCE EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM EVENT GREATER THAN 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD.
- E.8 EROSION CONTROL FOR PROJECT DESIGNATES A MINIMUM EFFORT TO CONTROL AND CONTAIN EROSION SEDIMENTS. CONTRACTOR SHALL USE DUE DILIGENCE TO CONTROL EROSION.
- E.9 SEDIMENT TRACKING ONTO ADJACENT STREETS WILL BE PROHIBITED. STREETS SHALL BE CLEANED WITHIN 48 HOURS IF SEDIMENT TRACKING OCCURS.
- E.10 IN GENERAL, SILT FENCE SHALL BE PLACED ON LEVEL GROUND 5' TO 10' AWAY FROM DISTURBED AREAS. WHEN FEASIBLE, SILT FENCE SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
- E.11 ONCE ALL DISTURBED AREAS HAVE BEEN SEEDED AND MULCHED AND THE SITE DEMONSTRATES A MINIMUM OF 70% VEGETATIVE GROWTH, THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR SILT FENCE AND FIBER ROLL REMOVAL.
- E.12 CONCRETE WASHOUT AREAS WILL BE INDICATED BY A SIGN. WASHOUT AREAS WILL CONSIST OF A HOLE IN THE GROUND A MINIMUM OF 1.5 FEET DEEP. CONCRETE WILL BE ROUTINELY REMOVED AND DISPOSED OF OFF-SITE. WASHOUT AREAS SHALL NOT BE LOCATED IN A CONVEYANCE WATERWAY. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF CONCRETE WASHOUT AREAS AT THE END OF THE PROJECT.

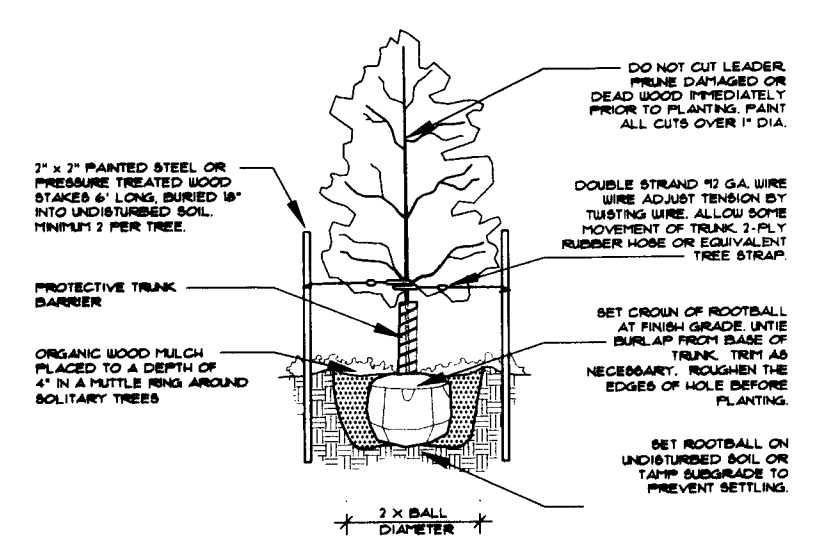
**EROSION CONTROL DURING CONSTRUCTION PROCESS:**

- D.1 PLACE EROSION CONTROL AROUND NORTH EDGE OF PHASED PROJECT. EARTHEN BERM OR STRAW WATTLES SHOULD BE USED TO CONTROL EROSION.
- D.2 INSTALL FIBER ROLLS AROUND INLETS BEFORE DISTURBING PROPERTY.
- D.3 CONCRETE WASHOUT AREA SHOULD BE MARKED WITH A SIGN. CONSTRUCT WASHOUT AREAS A MINIMUM OF 1.5 FEET DEEP.
- D.4 PROTECT DOWNSTREAM EDGE OF TOPSOIL STOCKPILE WITH EARTHEN BERM OR WITH STRAW WATTLES.

**LANDSCAPING**

STREET TREE PLANTINGS SHALL CONFORM TO THE CITY OF BISMARCK SPECIFICATIONS.

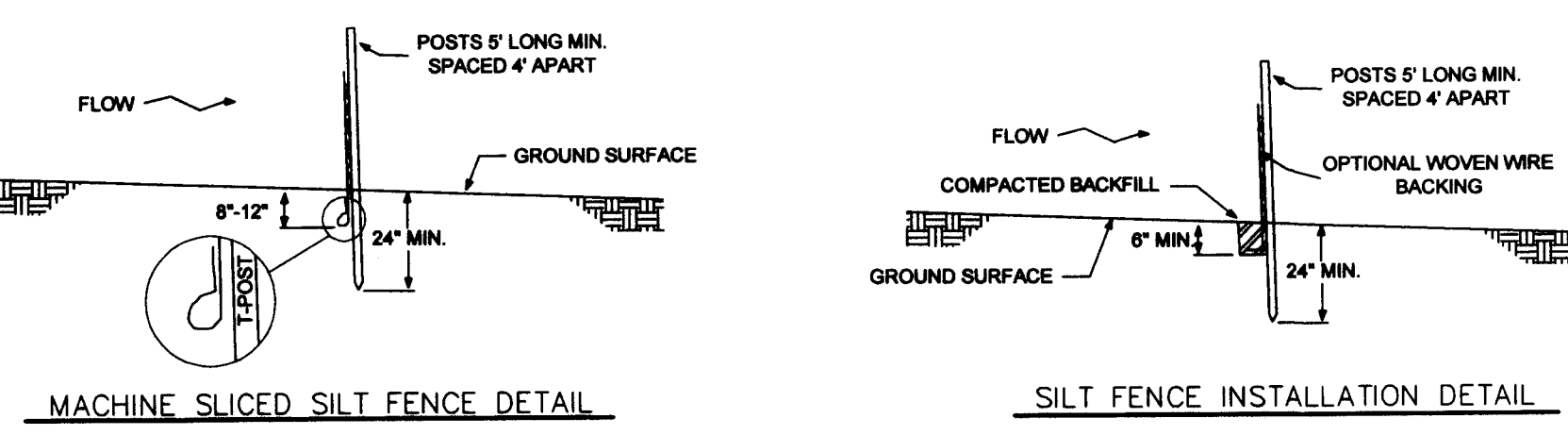
ALL PORTIONS OF THE SITE NOT RECEIVING OTHER IMPROVEMENTS SHALL BE SEEDED. SEEDING SHALL CONFORM TO THE CITY OF BISMARCK SPECIFICATIONS FOR TYPE II SEEDING. ALL PORTIONS OF THE SITE THAT ARE TO BE SEEDED SHALL BE HYDROMULCHED WITH A WOOD CELLULOSE FIBER MULCH. HYDROMULCH SHALL CONFORM TO THE CITY OF BISMARCK SPECIFICATIONS.



**PLANT PALETTE**

SYM.	COMMON NAME	SCIENTIFIC NAME	SIZE	QNTY.
CH	COMMON HACKBERRY	<i>Celtis occidentalis</i>	2" Cal.	12

**APPROVED TYPES OF SILT FENCE INSTALLATION**



**DETAIL OF SILT FENCE INSTALLATION**

**SILT FENCE - MATERIALS**  
 FILTER FABRIC SHOULD HAVE A MINIMUM HEIGHT OF 36 INCHES.  
 WOOD POSTS SHOULD BE TREATED AND BE A MINIMUM OF 6 FT LONG WITH MINIMUM DIMENSIONS OF 2 INCH DIAMETER FOR ROUND POSTS OR 1 1/2 INCHES BY 1 1/2 INCHES (2 INCH X 2 INCH NOMINAL) FOR RECTANGULAR POSTS.  
 STEEL POSTS SHOULD BE A MINIMUM OF 5 FT LONG, WEIGH A MINIMUM OF 1.3 LBS/FT, HAVE WELDED PLATE NEAR THE BOTTOM, AND HAVE PROJECTIONS TO AID IN FASTENING THE WIRE TO THE FABRIC.  
 BACKING OF THE SILT FENCE IS REQUIRED, A STEEL WIRE FENCE FABRIC SHALL BE USED. THE WOVEN WIRE SHOULD BE AT LEAST 32 INCHES HIGH, HAVE A MAXIMUM OPENING SIZE OF 6 INCHES BY 6 INCHES, AND BE A MINIMUM OF 14-GAUGE GRADE 60.  
 REBARCEMENT SILT FENCES WILL NOT BE ALLOWED.  
**PLACEMENT**  
 THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.  
 FOR SLOPE PROTECTION, THE SILT FENCE SHOULD FOLLOW THE CONTOURS OF THE SITE AS CLOSELY AS POSSIBLE.  
 DO NOT PLACE A SILT FENCE DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.

**UTILITY NOTE**

The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the owner or its representative. The contractor shall determine the exact location of all existing utilities before commencing work, and agree to be fully responsible for any and all damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities.

**WATERMAIN**

- W.1 MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH CITY OF BISMARCK SPECIFICATIONS. ALL BACKFILL SHALL BE 95% OF STANDARD PROCTOR AT RECOMMENDED MOISTURE CONTENT. WATERLINES SHALL BE CHLORINATED, PRESSURE TESTED AND FLUSHED. TESTING IS CONSIDERED INCIDENTAL.
- W.2 DISCONNECT 1" SERVICE. REMOVE EXISTING CURB STOP. INSTALL CORPORATION STOP. CONTACT CITY OF BISMARCK PUBLIC WORKS DEPARTMENT FOR APPROVAL PRIOR TO BACKFILLING.
- W.3 CONNECT TO EXISTING 8" WATERMAIN; INV. 25.6±. INSTALL 8"x2" TAPPING SLEEVE AND 52 LF OF 2" WATER SERVICE. PROVIDE 2" CURB STOP, INV. 26.00. INSTALL 32 LF OF 2" WATER SERVICE & CAP. VERIFY LOCATION AND ELEVATION INTO BUILDING WITH MECHANICAL CONTRACTOR.
- W.4 CONNECT TO EXISTING 8" WATERMAIN; INV. 18.7±. INSTALL 8"x2" TAPPING SLEEVE, 9 LF 2" WATER SERVICE & 2" CURB STOP; INV. 19.0. INSTALL 23 LF OF 2" WATER SERVICE & CAP; INV. 23.00.

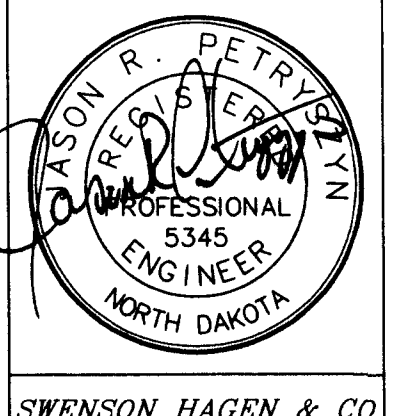
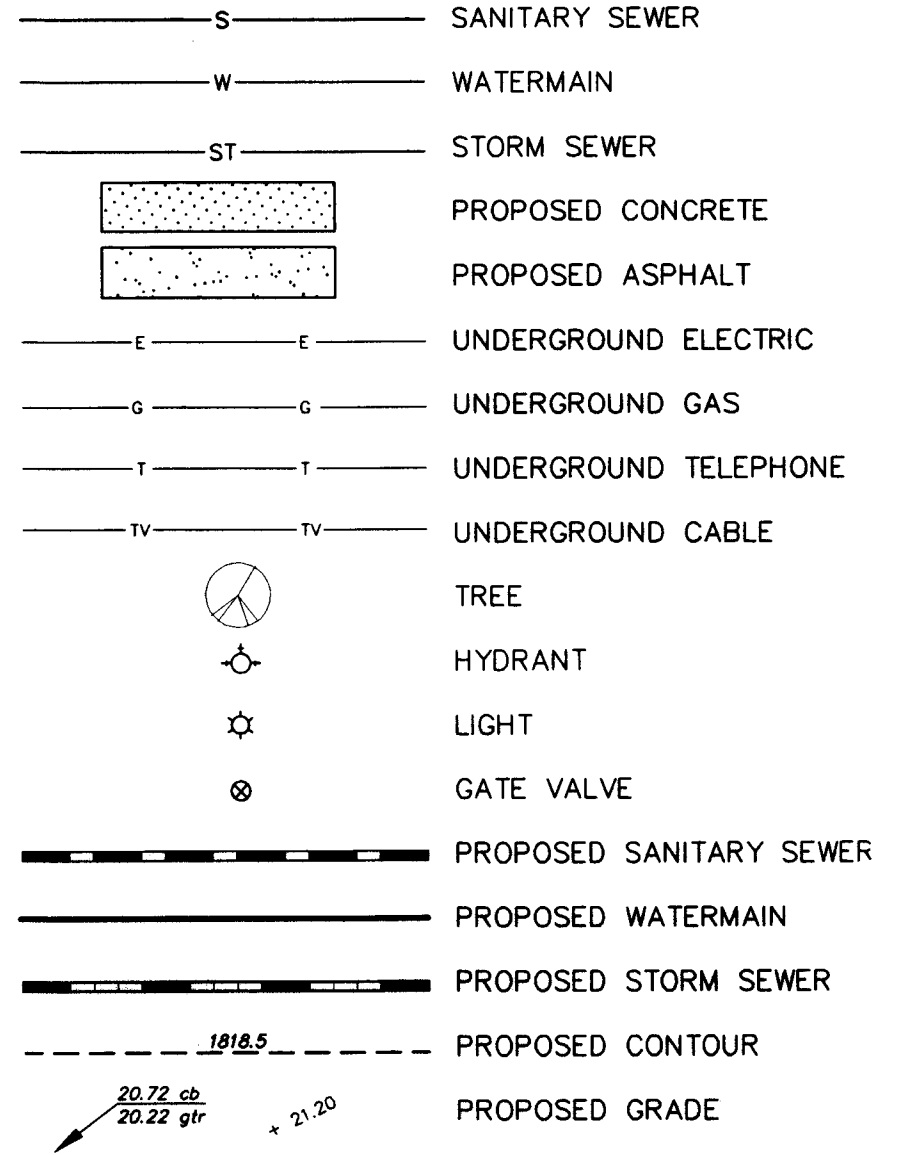
**SANITARY SEWER**

- S.1 MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH CITY OF BISMARCK SPECIFICATIONS. ALL BACKFILL SHALL BE 95% OF STANDARD PROCTOR AT RECOMMENDED MOISTURE CONTENT. TESTING IS CONSIDERED INCIDENTAL.
- S.2 CONNECT INTO EXISTING 4" SANITARY SEWER, PROVIDE 4" CLEAN OUT; INV. 23.1±. INSTALL 18 LF 4" SANITARY SEWER @ 10% & CAP; INV. 25.4±.
- S.3 CONNECT TO EXISTING 6" SANITARY SEWER, PROVIDE 6" CLEAN OUT; INV. 21.5±. INSTALL 8 LF 6" SANITARY SEWER & CAP; INV. 22.3±.

**NOTES:**

- P.1 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.
- P.2 STANDARD VERTICAL FACE CURB AND GUTTER, SEE DETAIL. TIP GUTTER AS APPROPRIATE.
- P.3 DROP CURB FOR RAMP, SEE DETAIL.
- P.4 4-1/2" THICK REINFORCED CONCRETE SIDEWALK REINFORCEMENT SHALL BE #4 REBAR SPACED 24" ON CENTER IN BOTH DIRECTIONS.
- P.5 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.
- P.6 CONSTRUCTION JOINTS WILL BE PLACED TO COINCIDE 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.
- P.7 JOINT SPACING SHALL TYPICALLY BE SPACED AT 1-1/2 TIMES THE THICKNESS OF THE PAVEMENT (MEASURED IN INCHES) IN FEET (4" SDWK EQUALS 6 FOOT SPACING). IN NO CASE SHALL THE JOINT SPACING EXCEED TWO TIMES THE THICKNESS. SIDEWALK AND CURB AND GUTTER JOINT SPACING SHALL MATCH.
- P.8 CONCRETE COMMERCIAL DRIVEWAY AND CITY SIDEWALK SHALL CONFORM TO THE BISMARCK CONSTRUCTION SPECIFICATIONS FOR MUNICIPAL PUBLIC WORKS IMPROVEMENTS, STANDARD DETAIL 600-10.
- P.9 CONCRETE STOOP SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION, SEE STRUCTURAL SHEETS.
- P.10 ADJUST EXISTING CLEANOUTS TO FINISH GRADE.
- P.11 MECHANICAL EQUIPMENT, COORDINATE WITH MECHANICAL CONTRACTOR.
- P.12 CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING ALL TESTING. CONTRACTOR SHALL PAY FOR ALL TESTING. OWNER SHALL SELECT TESTING COMPANY. TESTING RESULTS SHALL BE FORWARDED TO THE OWNER.

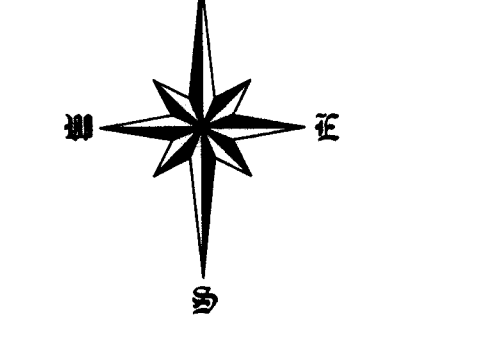
**LEGEND**



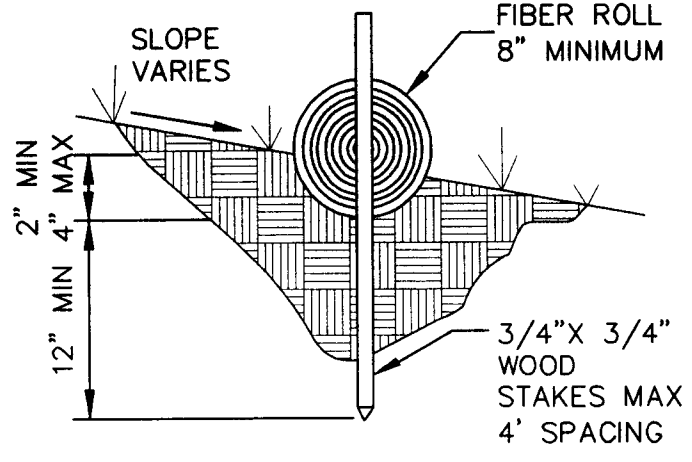
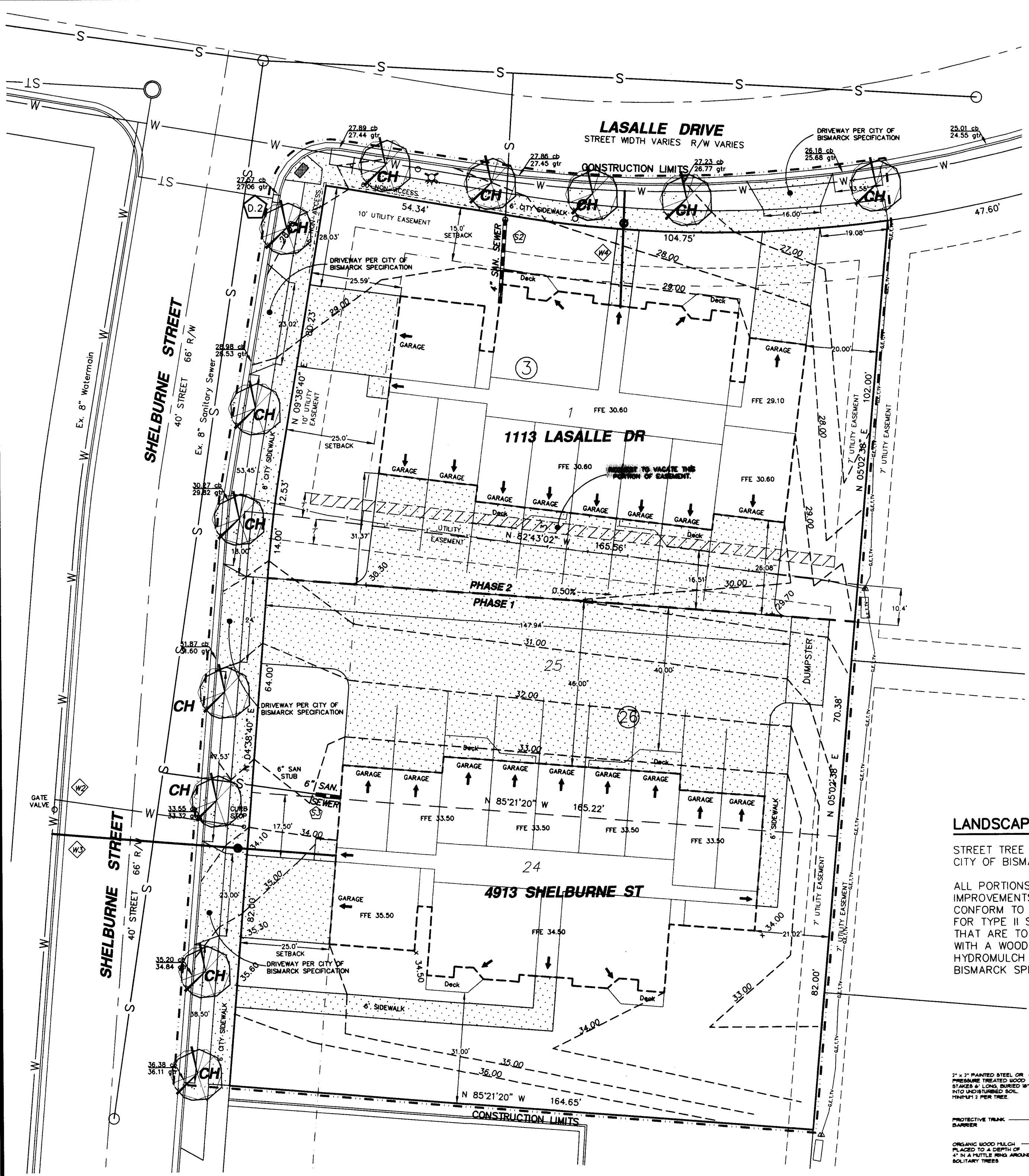
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APPROVED BY PLANNING  
 JRP  
 PLANNER  
 DATE 06-16-11

APPROVED BY FORESTRY  
 JRP  
 DATE 06-16-11



SCALE - 1"=20'  
 JUNE 7, 2011



**DETAIL OF STRAW WATTLE INSTALLATION**

STAKE WATTLES INTO A 2 TO 4 INCH DEEP TRENCH WITH A WIDTH EQUAL TO THE DIAMETER OF THE WATTLE.  
 DRIVE STAKES AT THE END OF EACH WATTLE AND SPACED 4 FEET MAXIMUM ON CENTER.  
 USE WOOD STAKES WITH A NOMINAL CLASSIFICATION OF 0.75 BY 0.75 INCH AND MINIMUM LENGTH OF 24 INCHES.  
 IF MORE THAN ONE STRAW WATTLE IS PLACED IN A ROW, THE WATTLES SHOULD OVERLAP, NOT ABUTTED.

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