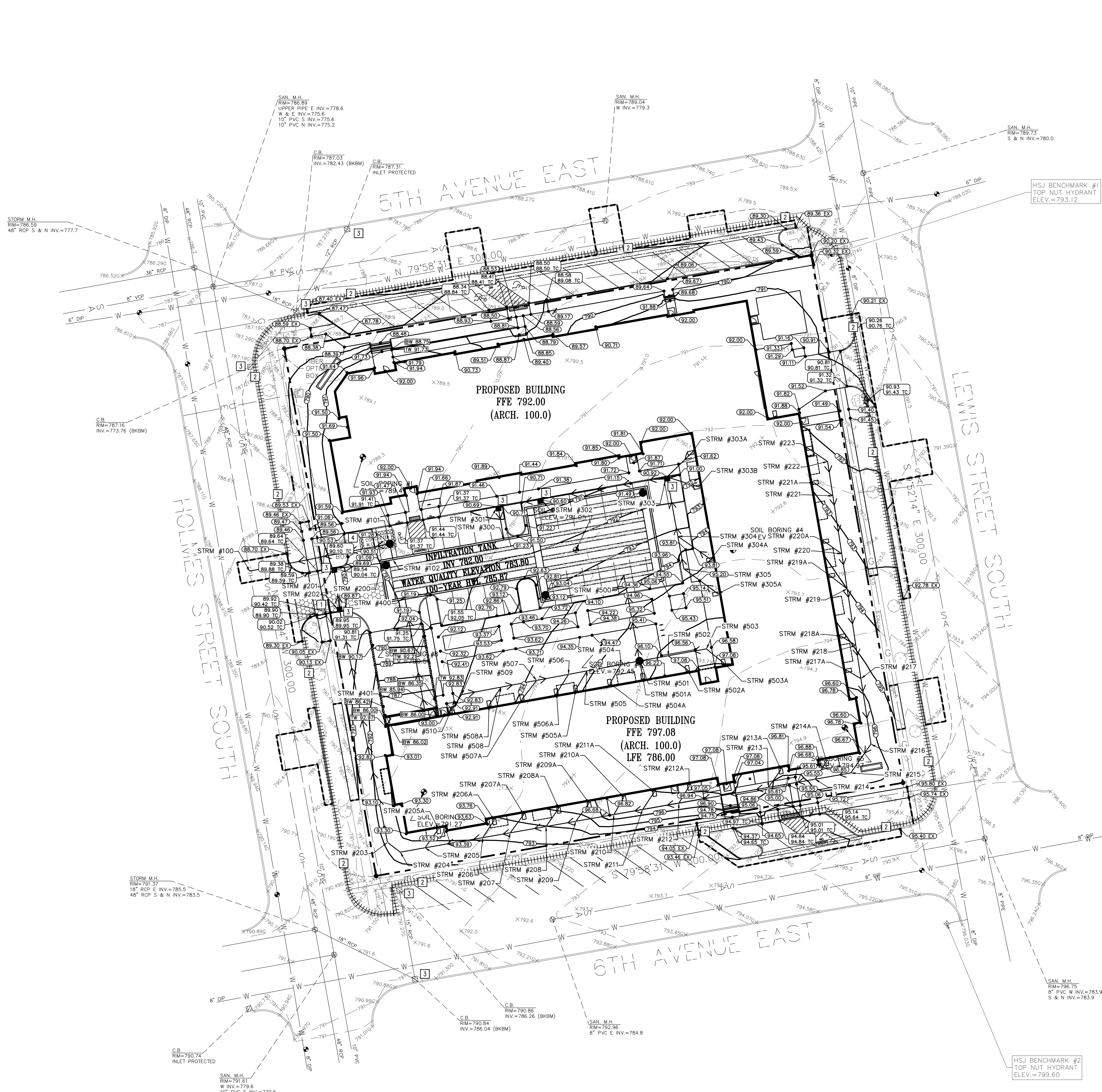




1 GRADING, DRAINAGE, AND EROSION CONTROL PLAN
C200 1" = 30'

PROPOSED PLAN SYMBOLS

CONSTRUCTION LIMITS: Dashed line with cross-ticks

SEDIMENT CONTROL LOG: Dashed line with cross-ticks

PROPERTY LINE: Solid line

SAWTOOTH LINE (APPROX.): Dashed line with cross-ticks

PROPOSED CONTOUR: Solid line with cross-ticks

STORM SEWER: Solid line with cross-ticks

RETAINING WALL: Solid line with cross-ticks

CATCH BASIN: Solid line with cross-ticks

MANHOLE: Solid line with cross-ticks

ROCK CONSTRUCTION: Solid line with cross-ticks

ENTRANCE: Solid line with cross-ticks

DRAINAGE FLOW ARROW: Solid line with cross-ticks

RETAINING WALL SPOT ELEVATION: Solid line with cross-ticks

SPOT ELEVATION: Solid line with cross-ticks

SOIL BORING: Solid line with cross-ticks

CONCRETE WASHOUT AREA: Solid line with cross-ticks

ABBREVIATIONS

BLDG: Building

BM: Benchmark

BS: Bottom of Step

BW: Bottom of Wall

CB: Catch Basin

CONC: Concrete

ELEV: Elevation

EX: Existing

FFE: Finished Floor Elevation

HWL: High Water Level

INV: Invert

LFE: Lower Floor Elevation

MAX: Maximum

MH: Manhole

MIN: Minimum

NWL: Normal Water Level

PVC: Polyvinyl Chloride

RCP: Reinforced Concrete Pipe

SS: Storm Sewer Structure

TC: Top of Curb

TS: Top of Step

TW: Top of Wall

W.O.: Washout

NOTE: CONSTRUCTION LIMITS ARE ANTICIPATED TO BE PROPERTY LINE UNLESS OTHERWISE SHOWN.

NOTE: STORM SEWER INLETS NOT SHOWN ON PLAN MAY RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INSTALL INLET SEDIMENT PROTECTION PER DETAIL 3/C500 ON ALL STORM INLETS THAT MAY RECEIVE RUNOFF.

APPROXIMATE DISTURBED AREA IS 2.40 ACRES

RETAINING WALL NOTES:

- ALL TOP AND BOTTOM ELEVATIONS CORRESPOND TO THE RESPECTIVE GRADE ELEVATIONS ON EACH SIDE OF THE WALL.
- THE BOTTOM ELEVATION IS THE ELEVATION OF THE LOW-GRADE SIDE OF THE WALL, NOT THE TOP ELEVATION OF THE BURIED BLOCK COURSE.
- ALL RETAINING WALLS SHALL HAVE PROTECTIVE FENCING AT THE TOP WHERE THE VERTICAL HEIGHT EXCEEDS 30 INCHES. REFER TO ARCHITECTURAL AND LANDSCAPE PLANS AND SPECIFICATIONS.
- MODULAR BLOCK RETAINING WALL SHALL BE DESIGNED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT AT LEAST THREE WEEKS PRIOR TO CONSTRUCTION OF WALL.

WALKWAY NOTES:

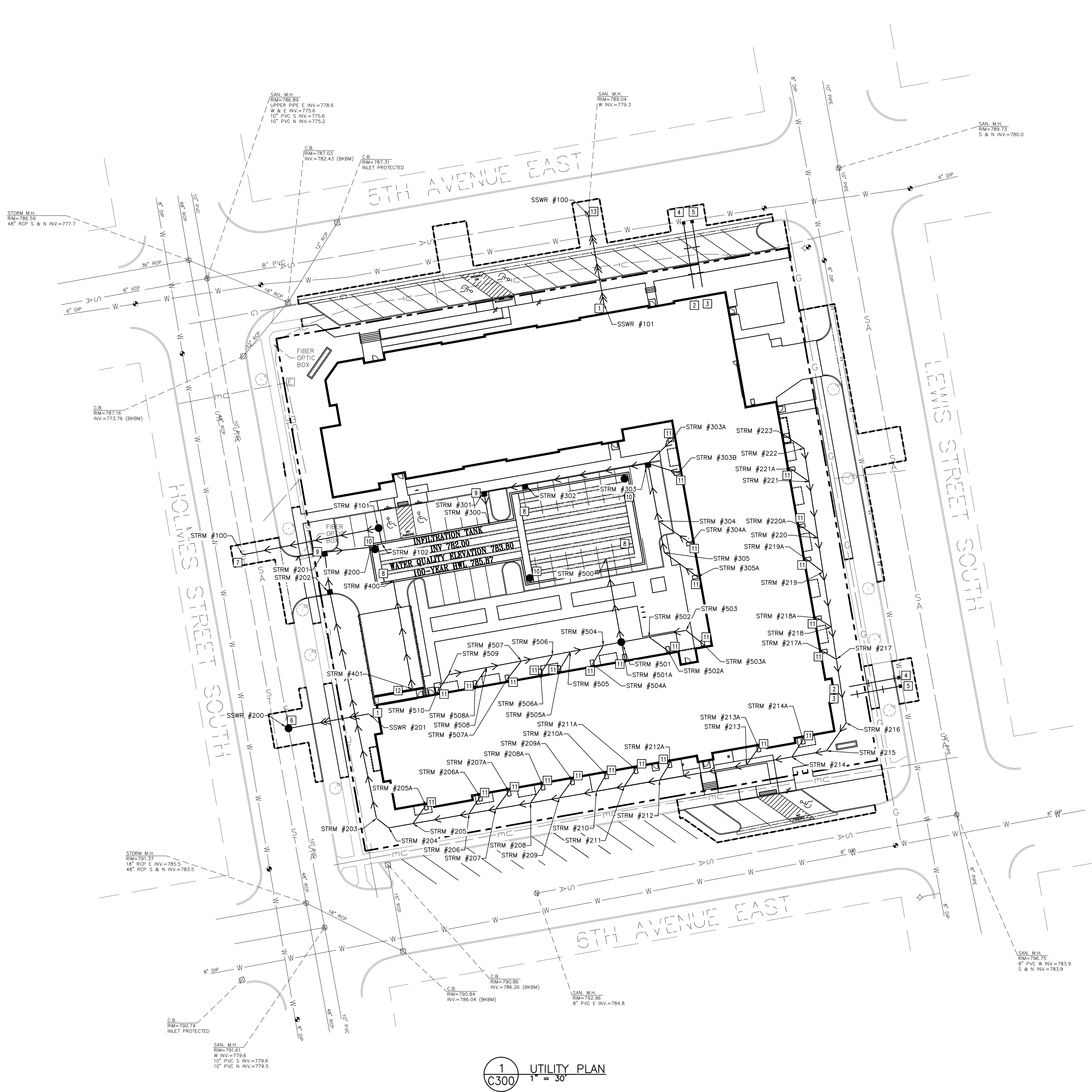
- GRADING CONTRACTOR IS TO COORDINATE WITH PAVING CONTRACTOR SO THAT ALL STEPS AND LANDINGS ARE SLOPED PER CODE.
- ALL SIDEWALK LONGITUDINAL AND TRANSVERSE SLOPES ARE TO BE PER CODE.

GRADING NOTES:

- THE CONTRACTOR SHALL VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND FIELD VERIFY THE EXISTING CONDITIONS PRIOR TO BIDDING. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR WORK THAT COULD HAVE BEEN IDENTIFIED BY A SITE VISIT OR CONSTRUCTION DOCUMENT REVIEW.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION AND MARK ALL EXISTING UTILITIES 48 HOURS BEFORE CONSTRUCTION STARTS. THE ENGINEER, ARCHITECT, OR OWNER DOES NOT GUARANTEE THAT ALL THE UTILITIES ARE MAPPED, OR, IF MAPPED, ARE SHOWN CORRECTLY. CONTACT CUMMINS STATE ONE CALL AT 888-444-0002 FOR FIELD LOCATING EXISTING UTILITIES. CONTACT UTILITY OWNER IF DAMAGE OCCURS DUE TO CONSTRUCTION.
- PROTECT ALL EXISTING STRUCTURES AND UTILITIES WHICH ARE NOT SCHEDULED FOR REMOVAL.
- NOTIFY CITY BUILDING INSPECTOR BEFORE TRENCHING AND EXCAVATION WORK COMMENCES. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS PRIOR TO START OF CONSTRUCTION.
- ALL SPOT ELEVATIONS SHOWN AS 91.50, FOR EXAMPLE, ARE TO BE UNDERSTOOD TO MEAN 91.50.
- ALL SPOT ELEVATIONS ALONG THE CURB-LINE INDICATE THE ELEVATION OF THE GUTTER UNLESS NOTED OTHERWISE.
- NO LANDSCAPED SLOPES ARE TO EXCEED 3:1 (3 FEET HORIZONTAL TO 1 FOOT VERTICAL) UNLESS NOTED OTHERWISE.
- ACCESSIBLE PARKING AREAS SHALL NOT HAVE SLOPES IN ANY DIRECTION THAT EXCEED 2%.
- PROVIDE POSITIVE DRAINAGE FROM BUILDINGS AT ALL TIMES.
- UPON COMPLETION OF THE GRADING AND UTILITY WORK, THE CONTRACTOR SHALL CERTIFY THAT ALL GRADING AND UTILITY WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED GRADING AND UTILITY PERMITS. AN AS-BUILT GRADING AND UTILITY PLAN SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR HIRED BY THE CONTRACTOR. SURVEY SHALL BE PROVIDED TO CIVIL ENGINEER.
- PRIOR TO ISSUANCE OF BUILDING PERMITS, ALL NECESSARY EROSION CONTROL DEVICES MUST BE IN PLACE AND FUNCTIONING. THE CITY AND LOWER MINNESOTA RIVER WATERSHED DISTRICT WILL INSPECT THE SITE TO DETERMINE ITS SUITABILITY FOR BUILDING ACTIVITIES. IF THE PUBLIC UTILITIES HAVE NOT BEEN INSTALLED AT THIS POINT, IT MAY BE NECESSARY TO WITHHOLD BUILDING PERMITS FOR VARIOUS LOTS TO ALLOW THE CONTRACTOR ADEQUATE SPACE TO PERFORM THIS WORK.
- ALL DEBRIS CREATED IN THE PROCESS OF CLEARING AND GRADING THE SITE SHALL BE REMOVED FROM THE SITE. THIS INCLUDES TREES AND SHRUBS. UNDER NO CIRCUMSTANCES SHALL THIS TYPE OF MATERIAL BE BURIED OR BURNED ON THE SITE.
- THE CONTRACTOR MAY STRIP AND SALVAGE TOPSOIL FOR POTENTIAL RE-SPREADING ON THE SITE, IF APPROVED BY THE LANDSCAPE ARCHITECT AND/OR SPECIFICATIONS. SIX INCHES OF TOPSOIL - AFTER COMPACTION - SHALL BE RE-SPREAD PRIOR TO SEEDING AND MULCHING. EXCESS TOPSOIL MAY BE REMOVED FROM THE SITE PROVIDED THERE IS ADEQUATE TOPSOIL REMAINING TO PROPERLY FINISH THE SITE. THE NOTED ABOVE. THE TOPSOIL STRIPPING, STOCKPILING, AND RE-SPREADING SHALL BE DONE IN ACCORDANCE WITH AND NOTED ON THE APPROVED GRADING PLAN AND SPECIFICATIONS. THE CONTRACTOR SHALL REFER TO THE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ANY SPECIAL TOPSOIL OR PLANTING REQUIREMENTS.
- ALL GRADING OPERATIONS SHALL BE CONDUCTED IN A MANNER TO MINIMIZE THE POTENTIAL FOR SITE EROSION. EROSION CONTROL MEASURES SHALL BE INSTALLED TO PREVENT SEDIMENT FROM RUNNING OFF ONTO ADJACENT PROPERTIES. ANY DAMAGE TO ADJACENT PROPERTIES MUST BE CORRECTED AND RESTORED AS SOON AS PERMISSION IS GRANTED FROM THE ADJACENT PROPERTY OWNER(S).
- IF CONSTRUCTION OF THE SITE WORK PROCEEDS THROUGH THE WINTER MONTHS, ANY DISTURBED AREAS OUTSIDE THE BUILDING FOOTPRINTS ARE TO BE MINIMALLY STABILIZED PRIOR TO MARCH 1 AS FOLLOWS: AREAS PLANNED TO RECEIVE PAVEMENTS ARE TO HAVE CLASS 5 BASE INSTALLED; ALL OTHER DISTURBED AREAS ARE TO BE SEEDED, STRAW MULCH PLACED, AND DISC-ANCHORED.
- WINTER MULCHING:
 - SNOW MULCHING SHALL BE DEFINED AS MULCH MATERIAL SPREAD OVER THE TOP OF SNOW SO THAT THE MULCH SELTS THROUGH THE SNOW AND STICKS TO THE EXPOSED SOILS.
 - FROZEN GROUND MULCHING SHALL BE DEFINED AS MULCH MATERIAL SPREAD OVER FROZEN GROUND. MULCH MATERIALS THAT DO NOT REQUIRE DISC-ANCHORING INTO THE SOIL MAY BE PLACED WITHOUT MODIFICATION. MULCH MATERIALS THAT REQUIRE DISC-ANCHORING MAY BE ANCHORED WITH HYDRAULIC SOIL STABILIZERS OR MAY BE FROZEN TO THE SOIL BY APPLYING WATER AT A RATE OF 2000 GALLONS PER ACRE OVER THE MULCH AS A SUBSTITUTION FOR DISC-ANCHORING.
- RETAINING WALLS AND APPROPRIATE SAFETY FENCING ALONG THE TOP OF WALLS ARE TO BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER. SUBMIT RETAINING WALL SHOP DRAWINGS TO PROJECT TEAM PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL LIMIT THE DISTURBED AREA AS MUCH AS POSSIBLE.

EROSION CONTROL NOTES:

- ALL EROSION CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY SITE GRADING OPERATIONS. THE CITY ENGINEERING DEPARTMENT AND LOWER MINNESOTA RIVER WATERSHED DISTRICT MUST BE NOTIFIED UPON COMPLETION OF THE INSTALLATION OF THE REQUIRED EROSION CONTROL FACILITIES AND PRIOR TO ANY GRADING OPERATION BEING COMMENCED. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION GRADING MEETING ON-SITE WITH THE CITY AND LOWER MINNESOTA RIVER WATERSHED DISTRICT. IF DAMAGED OR REMOVED DURING CONSTRUCTION, ALL EROSION CONTROL FACILITIES SHALL BE RESTORED AND IN PLACE AT THE END OF EACH DAY.
- ANY EROSION CONTROL FACILITIES DEEMED NECESSARY BY THE CITY OR LOWER MINNESOTA RIVER WATERSHED DISTRICT, BEFORE, DURING, OR AFTER THE GRADING ACTIVITIES, SHALL BE INSTALLED AT THEIR REQUEST.
- NO DEVIATIONS SHALL BE MADE FROM THE ELEVATIONS SHOWN ON THE APPROVED GRADING PLAN WITHOUT PRIOR APPROVAL FROM THE CIVIL ENGINEER.
- FOR SITES GREATER THAN 1.0 ACRE, AS REQUIRED BY THE MPCA PERMIT REQUIREMENTS, THE PERMIT APPLICANT MUST KEEP AN EROSION CONTROL INSPECTION LOG. INSPECTION MUST BE MADE ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER EVERY RAIN EVENT. THE INSPECTION RECORD MUST BE MADE AVAILABLE TO THE CITY AND LOWER MINNESOTA RIVER WATERSHED DISTRICT WITHIN 24 HOURS OF REQUEST.
- FLAWS FROM DIVERSION CHANNELS OR PIPES (TEMPORARY OR PERMANENT) SHALL BE ROUTED TO SEDIMENTATION BASINS OR APPROPRIATE ENERGY DISSIPATORS TO PREVENT TRANSPORT OF SEDIMENT TO OUTFLOW TO LATERAL CONVEYORS AND TO PREVENT EROSION AND SEDIMENTATION WHEN RUNOFF FLOWS INTO THESE CONVEYORS.
- SITE ACCESS ROADS SHALL BE GRADED OR OTHERWISE PROTECTED WITH SILT FENCES, DIVERSION CHANNELS, OR DIKES AND PIPES TO PREVENT SEDIMENT FROM EXITING THE SITE VIA THE ACCESS ROADS. SITE-ACCESS ROADS/DRIVEWAYS SHALL BE SURFACED WITH CRUSHED ROCK WHERE THEY ADJOIN EXISTING PAVED ROADWAYS.
- SOILS TRACKED FROM THE SITE BY MOTOR VEHICLES OR EQUIPMENT SHALL BE CLEANED DAILY FROM PAVED ROADWAY SURFACES, OR MORE FREQUENTLY IF REQUESTED BY THE CITY OR LOWER MINNESOTA RIVER WATERSHED DISTRICT, THROUGHOUT THE DURATION OF CONSTRUCTION.
- DUST CONTROL MEASURES SHALL BE PERFORMED PERIODICALLY WHEN CONDITIONS REQUIRE AND/OR AS DIRECTED BY THE CITY OR LOWER MINNESOTA RIVER WATERSHED DISTRICT.
- ALL EROSION CONTROL MEASURES SHALL BE USED AND MAINTAINED FOR THE DURATION OF SITE CONSTRUCTION. IF CONSTRUCTION OPERATIONS OR NATURAL EVENTS DAMAGE OR INTERFERE WITH THESE EROSION CONTROL MEASURES, THEY SHALL BE RESTORED TO SERVE THEIR INTENDED FUNCTION AT THE END OF EACH DAY OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AS SOON AS POSSIBLE. ANY AREAS WHICH HAVE BEEN FINISHED GRADED OR AREAS THAT HAVE BEEN DISTURBED AND FOR WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY SHALL BE SEEDED AND MULCHED AS SET FORTH IN THE FOLLOWING PARAGRAPHS WITHIN 7 DAYS:
 - ALL SEEDED AREAS SHALL BE EITHER MULCHED AND DISC-ANCHORED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION. TEMPORARY STRAW MULCH SHALL BE DISC-ANCHORED AND APPLIED AT A UNIFORM RATE OF NOT LESS THAN TWO TONS PER ACRE AND NOT LESS THAN 80% COVERAGE.
 - IF THE GRADED AREA IS ANTICIPATED TO BE RE-DISTURBED/DEVELOPED WITHIN SIX MONTHS, PROVIDE A TEMPORARY VEGETATIVE COVER CONSISTING OF MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT) SEED MIXTURE 21-111 (DATS), OR 21-112 (WINTER WHEAT), AT A RATE OF 100 POUNDS PER ACRE.
 - IF GRADED AREA WILL NOT BE DEVELOPED FOR A PERIOD GREATER THAN SIX MONTHS, PROVIDE A SEMI-PERMANENT VEGETATIVE COVER OF SEED MIXTURE MNDOT 22-112 AT A RATE OF 40 POUNDS PER ACRE.
 - GRADING BONDS OR THE EQUIVALENT SECURITIES SHALL BE RETAINED UNTIL TURF HAS GERMINATED AND SURVIVED A 60-DAY GROWING PERIOD.
 - ALL AREAS THAT WILL NOT BE MOWED OR MAINTAINED AS PART OF THE ULTIMATE DESIGN WILL BE PERMANENTLY RESTORED USING SEED MIXTURE MNDOT 25-141 AT A RATE OF 50 POUNDS PER ACRE.
 - UNLESS SPECIFIED ELSEWHERE WITHIN THE CONSTRUCTION DOCUMENTS (I.E. ARCHITECTURAL SITE PLAN OR LANDSCAPE PLAN), PERMANENT TURF RESTORATION SHALL CONSIST OF SOD.
 - WHENEVER OTHER EROSION AND SEDIMENT CONTROL PRACTICES ARE INADEQUATE, TEMPORARY ON-SITE SEDIMENT BASINS THAT CONFORM TO THE CRITERIA FOR ON-SITE DETENTION BASINS SHALL BE PROVIDED.
 - MULCH, HYDROMULCH, AND TACKIFIERS MAY NOT BE USED FOR STABILIZATION IN SWALES OR DRAINAGE DITCHES UNLESS THE LONGITUDINAL SLOPE IS LESS THAN 2 PERCENT.
 - RUNOFF SHALL BE PREVENTED FROM ENTERING ALL STORM SEWER CATCH BASINS PROVIDING THEY ARE NOT NEEDED DURING CONSTRUCTION. WHERE STORM SEWER CATCH BASINS ARE NECESSARY FOR SITE DRAINAGE DURING CONSTRUCTION, SEDIMENT PROTECTION DEVICES AS DETAILED SHALL BE INSTALLED AND MAINTAINED AROUND ALL CATCH BASINS UNTIL THE TRIBUTARY AREA TO THE CATCH BASIN IS RESTORED.
- GRADING ACTIVITIES PROPOSED TO BEGIN AFTER OCTOBER 15 WILL REQUIRE AN APPROVED PHASING SCHEDULE. THE AREA OF LAND THAT THE CITY WILL ALLOW TO BE DISTURBED AT THIS TIME OF YEAR WILL BE SEVERELY LIMITED. THE CITY WILL ALSO REQUIRE ADDITIONAL EROSION CONTROL DEVICES, I.E., TEMPORARY SEDIMENT BASINS, DORMANT SEEDING AND HIGH RATES OF APPLICATION OF BOTH SEED AND MULCH.
- TO MINIMIZE EROSION, ALL 3:1 SLOPES SHALL BE COVERED WITH A MW/DOT 3885 CATEGORY 20 STRAW EROSION CONTROL BLANKETS OR STAKED SOD.
- ACCUMULATION OF ALL SEDIMENT OCCURRING IN STORM SEWERS SHALL BE REMOVED PRIOR TO, DURING, AND AFTER COMPLETION OF GRADING ACTIVITIES.
- EROSION CONTROL ITEMS AND DEVICES SHALL BE REMOVED ONLY AFTER THE AREA HAS RECEIVED FINAL STABILIZATION OR AS DIRECTED BY THE CITY AND/OR LOWER MINNESOTA RIVER WATERSHED DISTRICT.



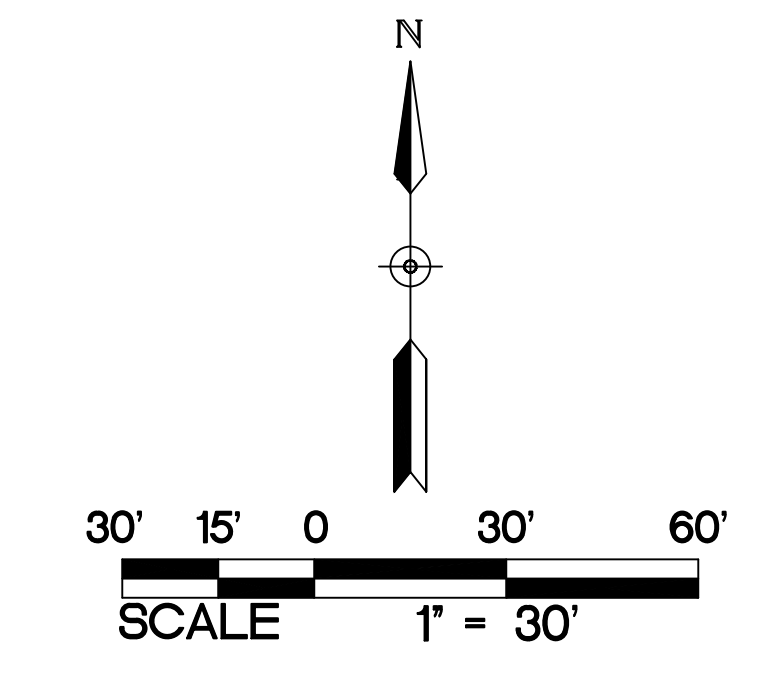
PROPOSED PLAN SYMBOLS

CONSTRUCTION LIMITS	---
PROPERTY LINE	---
SAWCUT LINE (APPROX.)	- - - -
SANITARY SEWER	—>—>
WATER PIPE	—+—+—
STORM SEWER	—+—+—
RETAINING WALL	—o—o—o—
GATE VALVE	—X—X—
CATCH BASIN	—●—●—
MANHOLE	—○—○—

ABBREVIATIONS

BDG	Building
BM	Benchmark
CB	Catch Basin
CONC	Concrete
DIP	Ductile Iron Pipe
ELEV	Elevation
EX	Existing
FFE	Finished Floor Elevation
HDPE	High Density Polyethylene
INV	Invert
MAX	Maximum
MH	Manhole
MIN	Minimum
PIV	Post Indicator Valve
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
RD	Roof Drain

NOTE:
REFER TO C301 FOR STORM SEWER TABLES.



- KEYED NOTES ARE DENOTED BY [X] ON PLAN.
- LOCATION OF PROPOSED SANITARY SEWER SERVICE. REFER TO SANITARY SEWER TABLE FOR INVERT ELEVATIONS AND PIPE SIZES. **COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH MECHANICAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.**
 - STUB 6-INCH FIRE PROTECTION LINE TO WITHIN 5-FEET OF THE PROPOSED BUILDING. TOP OF WATER SERVICE SHALL BE 7.5 FEET BELOW FINISHED GRADE AT THE PROPOSED CONNECTION POINT. **COORDINATE EXACT LOCATION WITH MECHANICAL AND STRUCTURAL PLANS PRIOR TO THE START OF CONSTRUCTION.**
 - STUB 3-INCH DOMESTIC WATERLINE TO WITHIN 5-FEET OF THE PROPOSED BUILDING. TOP OF WATER SERVICE SHALL BE 7.5 FEET BELOW FINISHED GRADE AT THE PROPOSED CONNECTION POINT. **COORDINATE EXACT LOCATION WITH MECHANICAL AND STRUCTURAL PLANS PRIOR TO THE START OF CONSTRUCTION.**
 - INSTALL 6-INCH WET TAP. REFER TO DETAIL 7/C500.
 - INSTALL 3-INCH WET TAP. REFER TO DETAIL 7/C500.
 - CONTRACTOR SHALL INSTALL MANHOLE IN LINE WITH EXISTING 10-INCH PVC PIPE. APPROXIMATE INVERT OF EXISTING PIPE IS 778.30. PRIOR TO INSTALLATION OF MANHOLE, CONTRACTOR SHALL CONTACT CIVIL ENGINEER WITH EXACT INVERT ELEVATION.
 - CONTRACTOR SHALL CONNECT TO EXISTING 48-INCH RCP PIPE WITH 12-INCH SADDLE TEE. REFER TO STORM SEWER TABLE FOR PROPOSED PIPE INVERT. APPROXIMATE INVERT OF EXISTING PIPE IS 780.36. PRIOR TO INSTALLATION OF TEE, CONTRACTOR SHALL CONTACT CIVIL ENGINEER WITH EXACT INVERT ELEVATION.
 - INSTALL INFILTRATION SYSTEM PER DETAIL 8/C501. INFILTRATION SYSTEM SHALL HAVE AN INFILTRATION VOLUME OF 8,872 CUBIC FEET, A TOTAL VOLUME OF 20,326 CUBIC FEET, AND MEET THE RATE CONTROL REQUIREMENTS INDICATED ON SHEET C500. SYSTEM FOOTPRINT IS BASED ON CMP PIPE DESIGN. ANY ALTERNATE DESIGNS MUST BE APPROVED BY CIVIL ENGINEER PRIOR TO CONSTRUCTION.
 - INSTALL SUMP CATCH BASIN WITH SNOUT, ENVIROHOOD, OR APPROVED EQUAL. REFER TO DETAIL 7/C501.
 - INSTALL ACCESS RISER PER MANUFACTURER'S SPECIFICATIONS.
 - LOCATION OF PROPOSED ROOF DRAIN LEAD. REFER TO STORM SEWER TABLE FOR INVERT ELEVATIONS AND PIPE SIZES. **REFER TO DETAIL 12/C501. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH MECHANICAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.**
 - INSTALL TRENCH DRAIN. REFER TO DETAIL 13/C501.
 - CORE DRILL EXISTING MANHOLE FOR PROPOSED PIPE CONNECTION. PROVIDE WATERTIGHT SEAL WITH FLEXIBLE COMPRESSION JOINT. CEMENT MORTAR JOINTS ARE PERMITTED ONLY FOR REPAIRS AND CONNECTIONS OF EXISTING LINES CONSTRUCTED WITH SUCH JOINTS.
- UTILITY NOTES:
- CONTRACTOR SHALL FOLLOW ALL CITY OF SHAKOPEE STANDARDS AND SPECIFICATIONS.
 - COORDINATE SERVICE CONNECTION LOCATIONS AT THE BUILDING WITH THE MECHANICAL CONTRACTOR PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR UNCOORDINATED WORK.
 - COORDINATE UTILITY INSTALLATION WITH STRUCTURAL PRIOR TO START OF CONSTRUCTION. UTILITIES SHALL NOT BE INSTALLED WITHIN THE ZONE OF INFLUENCE OF ANY STRUCTURAL ELEMENTS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR UNCOORDINATED WORK.
 - ALL SEWER SERVICE CONNECTIONS WITH LESS THAN 5 FEET OF COVER OVER THE TOP OF PIPE SHALL BE INSULATED. INSULATION SHALL BE INSTALLED FROM THE CONNECTION OF THE SERVICE AT THE BUILDING TO THE POINT WHICH THE SERVICE ATTAINS 5 FEET OF COVER. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM ARCHITECT OR ENGINEER PRIOR TO INSTALLATION OF INSULATION.
 - PROTECT ALL EXISTING STRUCTURES AND UTILITIES WHICH ARE NOT SCHEDULED TO BE REMOVED.
 - ALL SEWER AND WATER CROSSINGS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 1.5 FEET AND HORIZONTAL SEPARATION OF 10 FEET. FOLLOW ALL HEALTH DEPARTMENT AND CITY OF SHAKOPEE STANDARDS.
 - ALL WATER MAINS SHALL BE DUCTILE IRON PIPE, CLASS 52, UNLESS NOTED OTHERWISE.
 - ALL WATER MAIN SHALL HAVE A MINIMUM DEPTH OF COVER OF 7.5 FEET OVER TOP OF WATER MAIN.
 - PROVIDE THRUST BLOCKING ON ALL WATER MAIN PER CITY OF SHAKOPEE. PROVIDE MECHANICAL JOINT RESTRAINTS ON ALL BENDS, VALVES, TEES, PLUGS, AND HYDRANT LEADS.
 - SANITARY SEWER PIPING SHALL BE SDR 35 PVC UNLESS NOTED OTHERWISE.
 - STORM SEWER PIPING SHALL BE REINFORCED CONCRETE PIPE (RCP), UNLESS NOTED OTHERWISE. ALL 12-INCH THROUGH 18-INCH RCP STORM SEWER PIPE SHALL BE CLASS 5. RCP PIPE LARGER THAN 18-INCH SHALL BE CLASS 3 UNLESS NOTED OTHERWISE. ALL STORM SEWER PIPE THAT IS EXTENDED TO THE BUILDING FOR ROOF DRAIN SERVICES SHALL BE ASTM D1785 OR ASTM D2665 SCHEDULE 40 PVC.
 - CONTRACTORS SHALL COORDINATE ALL WORK WITH GAS, ELECTRIC, TELEVISION, AND TELEPHONE COMPANIES PRIOR TO START OF CONSTRUCTION.
 - ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10-FEET OF THE BUILDING OR WATER SERVICE LINE SHALL BE TESTED IN ACCORDANCE WITH MN PLUMBING CODE. PIPING MATERIAL SHALL BE SCHEDULE 40 PVC.
 - ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE GAS TIGHT OR WATER TIGHT IN ACCORDANCE TO MN PLUMBING CODE. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATER TIGHT CONNECTIONS TO MANHOLES, CATCH BASINS, AND OTHER STRUCTURES. RESILIENT WATER-STOP GROUTING RINGS ARE AN ACCEPTABLE ALTERNATE. CEMENT MORTAR JOINTS ARE PERMITTED ONLY FOR REPAIRS AND CONNECTIONS OF EXISTING LINES CONSTRUCTED WITH SUCH JOINTS.

1 UTILITY PLAN
C300 1" = 30'