

# BIOSCIENCE I - WEST PARKING LOT SITE PLAN AMENDMENT

[illegible]



CITY OF AURORA UTILITY NOTES:

1.

ALL MATERIALS, WORKMANSHIP, CONSTRUCTION DETAILS, AND TESTING FOR WATER LINE CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS FOR WATER DISTRIBUTION LINES AS SET FORTH BY THE CITY OF AURORA, DEPARTMENT OF UTILITES, LATEST REVISION.
2.

ALL FIRE HYDRANTS MUST BE GRADE STAKED IN THE FIELD WHENEVER CURB AND GUTTER HAS NOT BEEN INSTALLED.
3.

ALL UTILITY EASEMENTS MUST REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR MAINTENANCE EQUIPMENT.
4.

WATER MAIN RESTRAINT SHALL BE IN ACCORDANCE WITH THE CITY OF AURORA PUBLIC UTILITY IMPROVEMENTS RULES AND REGULATIONS REGARDING STANDARDS AND SPECIFICATIONS, LATEST EDITION. MEGALUGS OR UNI-FLANGE MAY BE USED IN PLACE OF RODS AND CLAMPS.
5.

WATER LINE VALVES ARE NOT ALLOWED IN CROSS PANS.
6.

ALL WATER METERS, WATER SERVICE LINES AND SANITARY SEWER SERVICE LINES ARE NOT ALLOWED IN OR UNDER DRIVEWAYS.
7.

ALL SANITARY SERVICE LINES SHALL BE TEES OFF OF MAINS.
8.

NO CONNECTIONS ARE ALLOWED TO THE FIRE LINE BETWEEN THE GATE VALVE AT THE WATER LINE MAIN AND THE BACK FLOW PREVENTER (WITHIN THE BUILDING).
9.

FITZSIMONS IS LOCATED IN AURORA PRESSURE ZONE 2A. PRESSURES AT THE CONNECTION POINTS RANGE FROM 85 TO 110 PSI. ZERO (0) PSI AT ELEV 5565 STATIC. PRV IS REQUIRED WHEN THE PRESSURE AT THE UNIT IS GREATER THAN EIGHTY (80) PSI.
10.

ADJUST ALL MANHOLES, FIRE HYDRANTS, AND VALVE BOXES TO GRADE PER CITY OF AURORA STANDARDS AND SPECIFICATIONS, LATEST REVISION , AS NECESSARY.
11.

THE CONTRACTOR SHALL CONTACT THE C.O.A. WASTEWATER CONTROL DIVISION AT (303) 326-8050 FOR INSPECTION OF ANY REQUIRED GREASE TRAPS OR SAND/OIL INTERCEPTORS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
12.

ALL FIRE LINES AND COMMERCIAL WATER SERVICE LINES WILL REQUIRE REDUCED PRESSURE BACK FLOW PREVENTER OR DOUBLE CHECK VALVE AS REQUIRED BY THE CITY OF AURORA UTILITY DEPARTMENT. CONTACT THE BUILDING DIVISION AT (303) 739-7420 TO SCHEDULE FLOW TESTS FOR PRIVATE FIRE LINES PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
13.

THE CONTRACTOR SHALL CONTACT THE C.O.A. WASTEWATER CONTROL DIVISION AT (303) 326-8050 FOR INSPECTION OF ANY REQUIRED GREASE TRAPS OR SAND/OIL INTERCEPTORS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

ROADWAY, PAVING, SIGNING AND STRIPING NOTES:

1.

CORES SHOWING ADEQUACY OF PAVEMENT IN ACCORDANCE WITH AN APPROVED SOILS REPORT AND PAVEMENT DESIGN ARE REQUIRED PRIOR TO ISSUANCE OF STREET PERMITS. IF THE DEVELOPER CANNOT PROVE ADEQUACY HE SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING PAVEMENT AND REPLACEMENT WITH THE PROPERLY DESIGNED PAVEMENT. ANY CONSTRUCTION BEYOND CENTERLINE OF THE STREET IN ORDER TO MATCH EXISTING GRADES AND TO MAKE A SAFE, DRIVEABLE SURFACE WILL ALSO BE THE DEVELOPER'S RESPONSIBILITY.
2.

CONTRACTOR SHALL REMOVE ALL EXISTING SIGNING AND STRIPING, WITHIN THE PROJECT LIMITS, THAT CONFLICTS WITH THIS PLAN SET.
3.

CROSSWALK PLACEMENT PER CITY OF AURORA STANDARD DETAIL TE-14.
4.

ALL REMOVED TRAFFIC SIGNS SHALL BE RETURNED TO THE CITY OF AURORA TRAFFIC OPERATIONS, JEFF DAVIS, (303) 326-8230.
5.

ALL REMOVED DEVELOPMENT, REAL ESTATE, OR BILLBOARD ADVERTISING SIGNS SHALL BE RETURNED TO THE APPROPRIATE OWNER.
6.

CONTRACTOR TO COORDINATE ALL SIGNALIZATION WORK WITH THIS PLAN SET.
7.

ALL STREET NAME SIGNS WILL BE INSTALLED BY THE CITY OF AURORA.
8.

ALL SHADED DIRECTIONAL ARROWS WILL BE INSTALLED AS PAVEMENT MARKINGS.
9.

CONCRETE DECK AND SIDEWALK JOINTING SHOWN IS SCHEMATIC. REFERENCE THE LANDSCAPE PLANS AND ARCHITECTURAL PLANS AND SPECIFICATIONS FOR CONSTRUCTION DETAILS.

MARKING MATERIALS  
CONCRETE PAVEMENT: WHITE SKIP/DASH: USE STAMARK 380I-5 CONTRAST TAPE, YELLOW: USE EPOXY MARKINGS, SOLID WHITE: USE EPOXY MARKINGS.

ASPHALT PAVEMENT: ALL COLORS: USE THERMOPLASTIC MARKINGS.

STORM SEWER NOTES:

1.

ON ALL INLETS, IN A SUMP CONDITION, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 0.5% GRADE AT FLOWLINE INTO THE INLET.
2.

RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS.
3.

STORM MANHOLE STATION, OFFSET AND RIM ELEVATIONS LISTED ARE REFERENCED TO THE CENTER OF THE MANHOLE.
4.

STORM INLET STATION, OFFSET, AND ELEVATIONS LISTED ARE REFERENCED TO THE -C OF THE BOX @ THE FLOWLINE.
5.

ALL REINFORCED CONCRETE PIPE BEDDING SHALL BE CLASS B PER C.O.A. STANDARD DETAIL 101.
6.

ALL STORM SEWER IS PRIVATE UNLESS OTHERWISE NOTED.
7.

SEE C.O.A. STANDARD DETAILS S12.11 OR 400 FOR INLETS GREATER THAN 15' IN LENGTH.
8.

ALL BOX BASE MANHOLES SHALL CONFORM TO CDOT STANDARD PLAN NO. M-604-20.
9.

WHEN IT IS NECESSARY TO LOWER WATERLINES AT STORM DRAINS AND OTHER UTILITY CROSSINGS, A MINIMUM CLEARANCE OF 2.0 FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES OR USE C.O.A. DETAIL 402 AT LOCATIONS SHOWN ON PLANS.

WATER NOTES:

1.

WATER MAIN SHALL BE PVC C900 CLASS 200 IN CONFORMANCE WITH AWWA C-151 AND JOINTS TO BE IN ACCORDANCE WITH THE AWWA C-111, OR APPROVED SUBSTITUTE. ALL FITTINGS SHALL BE MADE FROM DUCTILE IRON AND FURNISHED WITH MECHANICAL JOINTS. ALL FITTINGS SHALL HAVE A PRESSURE RATING OF 250 PSI.
2.

ELECTRONIC MARKER SYSTEM: P.V.C. WATER PIPE SHALL BE INSTALLED WITH ELECTRONIC MARKERS AT A SPACING OF 1 MARKER FOR EVERY 60 LINEAL FEET OF PIPE OR AT EVERY BEND, TEE OR DEFLECTION IN THE PIPE. THESE MARKERS SHALL BE BLUE IN COLOR AND AS MANUFACTURED BY 3M SCOTCHMARK OR APPROVED EQUAL. THE CONTRACTOR SHALL PLACE THE APPROPRIATE BALL MID-RANGE (UP TO 6 FEET) OR FULL-RANGE (UP TO 8 FEET) MARKER AS NECESSARY DEPENDING ON THE ACTUAL DEPTH OF THE MAIN.
3.

PLUMBING CONTRACTOR SHALL CONTACT LOCAL PUBLIC WATER/WATER DEPARTMENT TO DETERMINE AVAILABLE WATER PRESSURE AND WATER HARDNESS
4.

REFER TO CITY OF AURORA STANDARD 24.07 FOR WATER MAIN TAPS.

SANITARY SEWER NOTES:

1.

ALL SEWER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS CONFORMING TO ASTM D-3034, SDR 35 AS MANUFACTURED BY J-M MANUFACTURING CERTAINTED, DIAMOND PLASTICS, VINYL TECH, OF ULTRA-RIB BY E.T.I.
2.

PVC PIPE USED FOR SANITARY SEWER SERVICES WILL MEET OR EXCEED ASTM D3034-SDR35. ALL JOINTS WILL BE WATERTIGHT. FITTINGS, SADDLES, BENDS, ETC. WILL BE PVC TYPE. PRESSURE RATE PVC PIPE CAN BE USED UP TO, BUT NO MORE THAN, 5 FEET OUTSIDE OF THE FOUNDATION WALL FOR CONNECTION TO THE SDR-35 PIPE.
3.

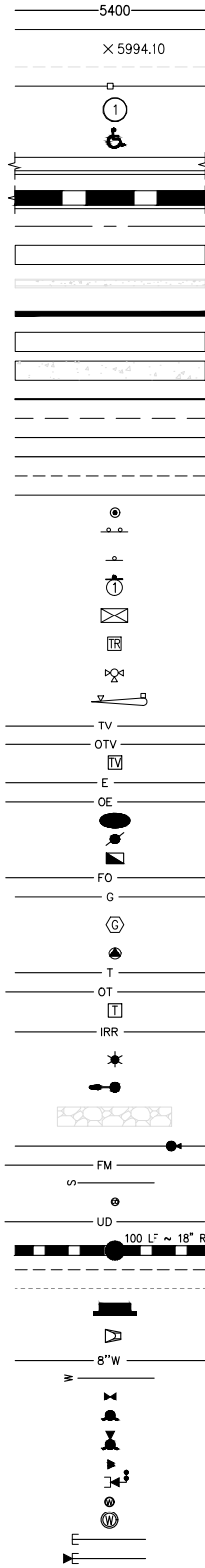
PRIOR TO CONSTRUCTION OR STAKING OF SANITARY SEWER, THE CONTRACTOR AND A SURVEY CREW SHALL VERIFY INVERT ELEVATIONS OF EXISTING SEWER MAINS AND MANHOLES FOR PROPER CONNECTION OF PROPOSED SANITARY SEWER SYSTEM.
4.

THE CITY OF AURORA REQUIRES PRECAST SANITARY SEWER MANHOLES OR APPROVED SUBSTITUTE. BENCHES AND CHANNELS SHALL BE CAST IN PLACE.
5.

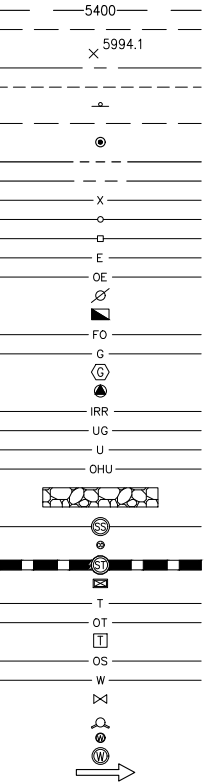
ALL SANITARY SERVICE LINES SHALL BE TEES OFF OF MAINS. WYES SHALL BE USED FOR LOTS AT BACK OF CUL-DE-SACS.
6.

THE CONTRACTOR SHALL CONTACT THE C.O.A. WASTEWATER CONTROL DIVISION AT (303) 326-8050 FOR INSPECTION OF ANY REQUIRED GREASE TRAPS OR SAND/OIL INTERCEPTORS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

LEGEND (PROPOSED)



LEGEND (EXISTING)



MAJOR CONTOUR  
MINOR CONTOUR  
SPOT ELEVATION  
ROADWAY CENTERLINE  
EDGE OF PAVEMENT  
SINGLE POST ROADWAY SIGN  
EASEMENT  
SURVEY MONUMENT  
RIGHT-OF-WAY  
SECTION LINE  
BARB WIRE FENCE  
CHAIN LINK FENCE  
WOOD FENCE  
ELECTRIC UTILITY LINE  
OVERHEAD ELECTRIC UTILITY LINE  
UTILITY POLE  
ELECTRICAL TRANSFORMER  
FIBER OPTIC UTILITY LINE  
GAS UTILITY LINE  
GAS METER  
GAS VALVE  
IRRIGATION LINE  
UNDERGROUND UTILITY  
MISCELLANEOUS UTILITY  
OVERHEAD MISCELLANEOUS UTILITY  
RIPRAP  
SANITARY SEWER LINE  
SANITARY SEWER CLEANOUT  
STORM SEWER LINE  
STORM SEWER INLET  
TELEPHONE UTILITY LINE  
OVERHEAD TELEPHONE UTILITY LINE  
TELEPHONE PEDESTAL  
TRAFFIC LIGHTS - OVERHEAD SIGNAL  
WATER MAIN  
WATER LINE VALVE  
FIRE HYDRANT  
WATER METER  
WELL LOCATION  
DRAINAGE ARROW

ABBREVIATIONS

BLDG	BUILDING	-P	PROPERTY LINE
B.O.C.	BACK OF CURB	PC	POINT OF CURVATURE
BOW	BOTTOM OF WALL	PCC	POINT OF COMPOUND CURVATURE
BW	BOTTOM OF WALL	PCR	POINT OF CURB RETURN
-C	CENTERLINE	PI	POINT OF INTERSECTION
CFS	CUBIC FEET PER SECOND	PRC	POINT OF REVERSE CURVATURE
CMP	CORRUGATED METAL PIPE	PT	POINT OF TANGENCY
CY	CUBIC YARD	PVC	POLYVINYL CHLORIDE PIPE/
DIA	DIAMETER		POINT OF VERTICAL CURVATURE
DIP	DUCTILE IRON PIPE	PVI	POINT OF VERTICAL INTERSECTION
E	EASTING/EAST	PVT	POINT OF VERTICAL TANGENCY
EGL	ENERGY GRADE LINE	R	RADIUS
ELEV	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EOA	EDGE OF ASPHALT	ROW	RIGHT-OF-WAY
EOC	EDGE OF CONCRETE	SAN	SANITARY SEWER
EOP	EDGE OF PAVEMENT	SF	SQUARE FEET
ESMT	EASEMENT	SSMH	SANITARY SEWER MANHOLE
FES	FLARED END SECTION	STA	STATION
FF	FINISHED FLOOR	SDMH	STORM MANHOLE
FG	FINISHED GRADE	SDWK	SIDEWALK
FL	FLOWLINE	SY	SQUARE YARD
FT	FEET	TBC	TOP BACK OF CURB
GV	GATE VALVE	TBR	TO BE REMOVED
GB	GRADE BREAK	TC	TOP OF CURB
HBP	HOT BITUMINOUS PAVEMENT	TG	TOP OF GRATE
HGL	HYDRAULIC GRADE LINE	TOP	TOP OF PIPE
HP	HIGH POINT	TOW	TOP OF WALL
INV	INVERT	TW	TOP OF WALL
IRR	IRRIGATION	TYP	TYPICAL
LF	LINEAR FEET	UE	UTILITY EASEMENT
LP	LOW POINT	UTIL	UTILITY
ME	MATCH EXISTING	VC	VERTICAL CURVE
N	NORTHING/NORTH	WSEL	WATER SURFACE ELEVATION
NTS	NOT TO SCALE		

REFERENCE  
DRAWINGS

X-MDG22x34(Bioscience)

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FITZSIMONS REDEVELOPMENT AUTHORITY

CITY OF AURORA  
SITE PLAN AMENDMENT

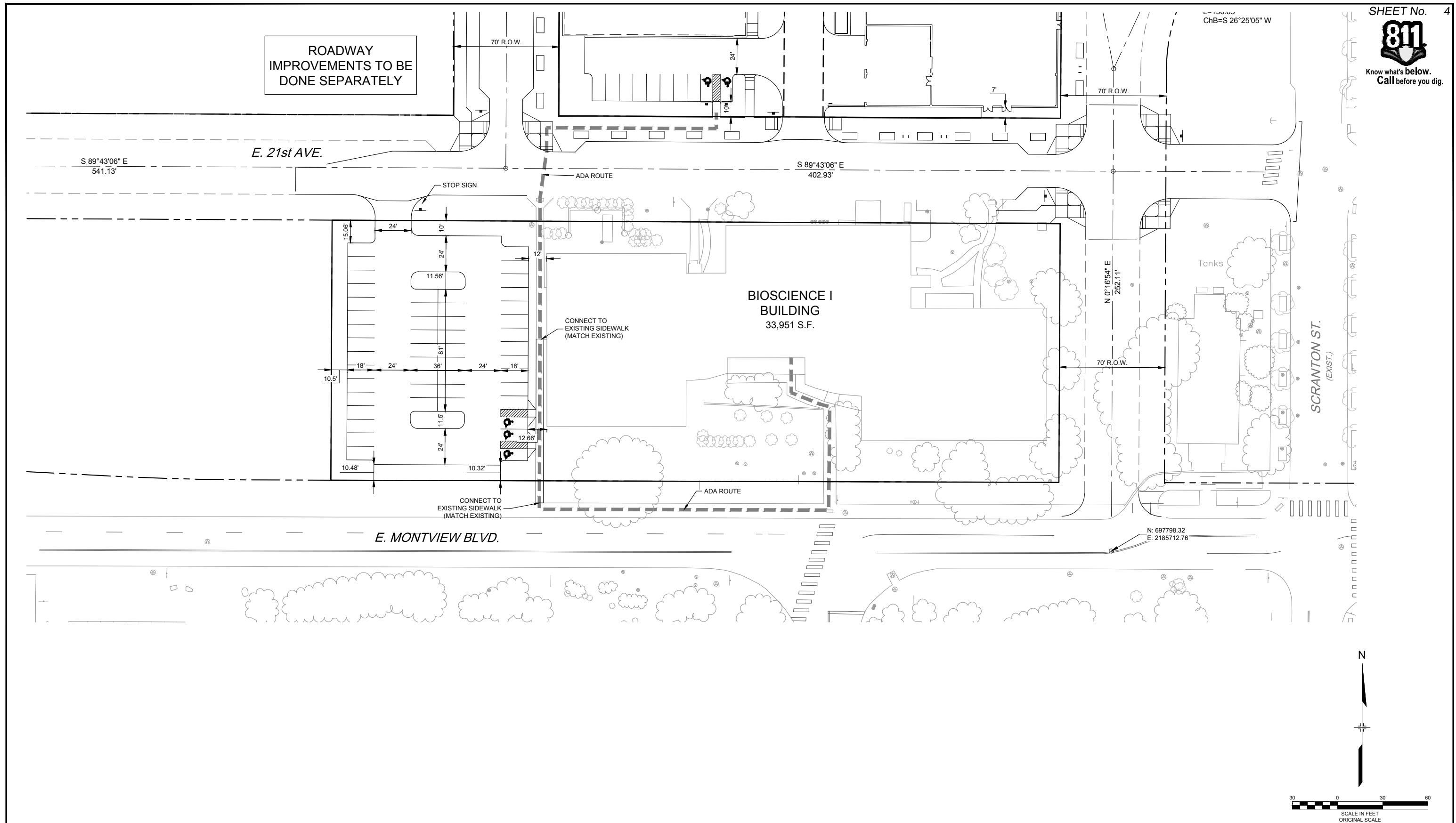
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NOTES, LEGEND & ABBREVIATIONS

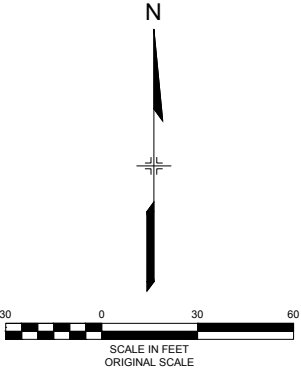
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Know what's below.  
Call before you dig.

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LEGEND

- 5360 PROPOSED CONTOUR
- 5359 EXISTING CONTOUR
- X 73.40 SPOT ELEVATIONS (ADD 5300 FEET)
- SD STORM SEWER

NOTES

1. MAXIMUM CROSS-SLOPE NOT TO EXCEED 2.0%.
2. MAXIMUM SLOPE (ALONG TRAVEL LANE) IS 4.99% IN ADA ACCESSIBLE ROUTES.
3. MATCH EXISTING GRADES TO THE BACK OF CURB.

FITZSIMONS REDEVELOPMENT AUTHORITY

CITY OF AURORA  
SITE PLAN AMENDMENT

BIOSCIENCE I  
OVERALL GRADING & UTILITY PLAN

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LANDSCAPE NOTES

1. ALL LANDSCAPED AREAS ARE TO HAVE SOIL PREPARATION PER SPECIFICATIONS. (MINIMUM RATE OF 4 CU. YDS. OF ORGANIC MATTER PER 1000 S.F.).
2. THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED SITE PLAN OR LANDSCAPE PLAN ON FILE WITH THE PLANNING DEPARTMENT. ALL LANDSCAPING WILL BE INSTALLED AS DELINEATED ON THE PLAN, PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
3. ALL CROSSINGS OR ENCROACHMENTS BY PRIVATE LANDSCAPE IRRIGATION LINES OR SYSTEMS INTO EASEMENTS AND STREET RIGHTS-OF-WAY OWNED BY THE CITY OF AURORA ARE ACKNOWLEDGED BY THE OWNER AS BEING SUBJECT TO CITY OF AURORA'S USE AND OCCUPANCY OF THE SAID EASEMENTS OR RIGHTS-OF-WAY. THE OWNER, THEIR SUCCESSORS AND ASSIGNS, HEREBY AGREE TO INDEMNIFY THE CITY OF AURORA FOR ANY LOSS, DAMAGE OR REPAIR TO CITY FACILITIES THAT MAY RESULT FROM THE INSTALLATION, OPERATION, OR MAINTENANCE OF SAID PRIVATE IRRIGATION LINES OR SYSTEMS.
4. ALL UTILITY EASEMENTS SHALL REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR THE MAINTENANCE EQUIPMENT ENTRY.
5. ALL LANDSCAPED AREAS AND PLANT MATERIAL, EXCEPT FOR NON-IRRIGATED NATIVE, RESTORATIVE, AND DRYLAND GRASS AREAS THAT COMPLY WITH REQUIREMENTS FOUND IN SEC. 146-1429, MUST BE WATERED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. IRRIGATION SYSTEM DESIGN, INSTALLATION, OPERATION, AND MAINTENANCE SHALL CONFORM TO REQUIREMENTS FOUND IN THE CITY OF AURORA IRRIGATION ORDINANCE.
6. LANDSCAPE MATERIAL PLACEMENT SHALL NOT BE PLACED OR KEPT NEAR FIRE HYDRANTS, FIRE DEPARTMENT INLET CONNECTIONS OR FIRE PROTECTION CONTROL VALVES IN A MANNER THAT WOULD PREVENT SUCH EQUIPMENT OR FIRE HYDRANTS FROM BEING IMMEDIATELY DISCERNIBLE. THE FIRE DEPARTMENT SHALL NOT BE DETERRED OR HINDERED FROM GAINING IMMEDIATE ACCESS TO FIRE PROTECTION EQUIPMENT OR HYDRANTS.
7. ALL FIRE HYDRANTS SHALL BE LOCATED NOT LESS THAN THREE FEET-SIX INCHES (3'-6") AND NOT MORE THAN EIGHT (8') FEET FROM THE BACK OF CURB TO THE CENTER OF THE HYDRANT AND SHALL BE UNOBSTRUCTED ON THE STREET SIDE. MINIMUM CLEARANCE ON ALL OTHER SIDES SHALL BE FIVE FEET (5').
8. LANDSCAPING MATERIAL SHOWN WITHIN THE SITE PLAN CANNOT ENCROACH INTO ROADWAYS THAT ARE DEDICATED (OR DESIGNATED) AS FIRE LANE EASEMENTS (OR CORRIDORS).

LANDSCAPE REQUIREMENTS

AREA DESCRIPTION	REQUIREMENT	AREA/ LENGTH	# OF TREES REQUIRED	# OF TREES PROVIDED	# OF MITIGATION TREES PROVIDED	MITIGATION INCHES PROVIDED	# OF SHRUBS REQUIRED	# OF SHRUBS PROVIDED
E. 21ST AVENUE FRONTAGE	1 TE PER 35 LF	589 L.F.	17	10	0	0.0	0	92 SHRUBS; 6 GRASSES
MONTVIEW BOULEVARD FRONTAGE	1 TE PER 35 LF	139 L.F.	4	6 + EXISTING	2	8.0	0	4 SHRUBS; 0 GRASSES
PARKING LOT BUFFER	5' MIN. WIDTH	428 L.F.		3+ 1 EXISTING	0	0.0	0	96 SHRUBS; 106 GRASSES
BUILDING PERIMETER (NORTH)	1 TE PER 40 LF	105 L.F.	3	0	0	0.0	0	30 SHRUBS; 28 GRASSES
BUILDING PERIMETER (SOUTH)	1 TE PER 40 LF	121 L.F.	4	0	0	0.0	0	51 SHRUBS; 27 GRASSES
BUILDING PERMITER (EAST)	1 TE PER 40 LF	45 L.F.	2	0	0	0.0	0	11 SHRUBS; 24 GRASSES
BUILDING PERIMETER (WEST)	1 TE PER 40 LF	116 L.F.	3	0	0	0.0	0	25 SHRUBS; 27 GRASSES
DETENTION POND*	1 TREE AND 10 SHRUBS PER 4000 SF	NA	0	0	0	0.0	0	0 SHRUBS;
* REMOVED AS A PART OF BIOSCIENCE 3 DEVELOPMENT						TOTAL:	8.0	

WATER USE TABLE

AREA DESCRIPTION	WATER CONSERVING IRRIGATION (NON-SOD)	NON-WATER CONSERVING IRRIGATION (SOD)
E. 21ST AVENUE FRONTAGE	2,764 S.F.	15,467 S.F.
MONTVIEW BOULEVARD FRONTAGE	0 S.F.	1,004 S.F.
PARKING LOT	6,228 S.F.	0 S.F.
BUILDING PERIMETER	4,900 S.F.	309 S.F.
DETENTION POND	12,755 S.F.	0 S.F.

LANDSCAPE PLANT LIST

(AMENDMENT)	SYM.	COMMON NAME	BOTANICAL NAME	SIZE & COND.	WATER REQMT.
DECIDUOUS TREES					
(UNLESS OTHERWISE NOTED)					
0	10	MAR	MARSHALL'S SEEDLESS ASH	FRAXINUS PENNSYLVANICA 'MARSHALL'S ASH'	3" CAL. B&B L
0	3	RAD	RADIANT CRABAPPLE	MALUS x 'RADIANT'	2.5" CAL. B&B M
4	0	IMP	IMPERIAL HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS 'IMPERIAL'	3" CAL. B&B M
1	0	SWO	SWAMP WHITE OAK	QUERCUS BICOLOR	3" CAL. B&B L
ORNAMENTAL GRASSES					
45	0	AVG	BLUE AVENA GRASS	HELICTOTRICHON SEMPERVIRENS	#1 CONT. L
0	26	DMG	DWARF MAIDEN GRASS	MISCANTHUS SINENSIS 'YAKU JIMA'	#1 CONT. L
0	62	FRV	VARIEGATED FEATHER REED GRASS	CALAMAGROSTIS ARUNDINACEA 'AVALANCHE'	#1 CONT. L
0	42	GHM	HEAVY METAL SWITCH GRASS	PANICUM VIRGATUM 'HEAVY METAL'	#1 CONT. L
0	3	ISG	INDIAN STEEL INDIAN GRASS	SORGHASTRUM NUTANS 'INDIAN STEEL'	#1 CONT. L
0	93	KFG	KOREAN FEATHER REED GRASS	CALAMAGROSTIS BRACHYTRICHA	#1 CONT. L
42	10	MAG	MAIDEN GRASS	MISCANTHUS SINENSIS 'GRACILLIMUS'	#1 CONT. L
0	3	PAH	PAMPAS GRASS	ERIANTHUS RAVENNAE	#1 CONT. L
19	21	RSG	RED SWITCH GRASS	PANICUM VIRGATUM 'SHENANDOAH'	#1 CONT. L
46	0	LBG	LITTLE BLUESTEM GRASS	SCHIZACHYRIUM SCOPARIUM	#1 CONT. L
DECIDUOUS SHRUBS					
16	8	AWS	ANTHONY WATERER SPIREA	SPIRAEA JAPONICA 'ANTHONY WATERER'	#5 CONT. L
0	11	BEA	BEAUTYBUSH	KOLWITZIA AMABILIS	#5 CONT. L
16	122	MKL	MISS KIM LILAC	SYRINGA PATULA 'MISS KIM'	#5 CONT. L
0	61	MLL	LITTLELEAF MOCKORANGE	PHILADELPHUS MICROPHYLLUS	#5 CONT. L
9	32	MSN	SNOWBELLE MOCKORANGE	PHILADELPHUS 'SNOWBELLE'	#5 CONT. L
10	4	NSW	SUMMER WINE NINEBARK	PHYSOCARPUS OPULIFOLIUS 'SEWARD'	#5 CONT. L
0	31	RSE	REGENT SERVICEBERRY	AMELANCHIER ALNIFOLIA 'REGENT'	#5 CONT. L
0	12	TLS	THREE LEAF SUMAC	RHUS TRILOBATA	#5 CONT. L
17	15	VLA	WAYFARING VIBURNUM	VIBURNUM LANTANA	#5 CONT. L
6	36	VMO	MOHICAN VIBURNUM	VIBURNUM LANTANA 'MOHICAN'	#5 CONT. L
0	26	WSC	WESTERN SAND CHERRY	PRUNUS BESSEYI	#5 CONT. L
11	0	QTS	TEXAS SCARLET FLOWERING QUINCE	CHAENOMELES X SUPERBA 'TEXAS SCARLET'	#5 CONT. L
EVERGREEN SHRUBS					
5	76	ARC	ARCADIA JUNIPER	JUNIPERUS SABINA 'ARCADIA'	#5 CONT. L
24	24	CCJ	CALGARY CARPET JUNIPER	JUNIPERUS SABINA 'CALGARY CARPET'	#5 CONT. L
7	11	MBT	BIG TUNA MUGO PINE	PINUS MUGO 'BIG TUNA'	#5 CONT. L
0	22	MCO	COMPACT OREGON GRAPE HOLLY	MAHONIA AQUIFOLIUM 'COMPACTA'	#5 CONT. L
0	4	PBR	BREPO PINE	PINUS NIGRA 'BREPO'	#5 CONT. L
0	6	TAB	TABLE TOP BLUE JUNIPER	JUNIPERUS SCOPULORUM 'TABLE TOP BLUE'	#5 CONT. L
6	0	SPA	SPARTAN JUNIPER	JUNIPERUS CHINENSIS 'SPARTAN'	#5 CONT. L
PERENNIALS					
0	42	BGO	BASKET OF GOLD	AURINIA SAXATILIS	#1 CONT. L
0	20	COZ	ZAGREB COREOPSIS	COREOPSIS VERTICILLATA 'ZAGREB'	#1 CONT. L
0	37	DDY	STELLA D'ORO DAYLILY	HEMEROCALLIS 'STELLA D'ORO'	#1 CONT. L
0	29	PCW	WHITE CREEPING PHLOX	PHLOX SUBULATA	#1 CONT. L

IRRIGATED SEED MIX

COMMON NAME	SCIENTIFIC NAME	VARIETY	PLS LBS PER ACRE	OUNCES PER ACRE
SAND BLUESTEM	ANDROPOGON HALLII	GARDEN	3.5	
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	BUTTE	3	
PRAIRIE SANDREED	CALAMOVILFA LONGIFOLIA	GOSHEN	3	
INDIAN RICEGRASS	ORYZOPSIS HYMENOIDES	PALOMA	3	
SWITCHGRASS	PANICUM VIRGATUM	BLACKWELL	4	
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	ARIBA	3	
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	PATURA	3	
ALKALI SACATON	SPOROBOLUS AIROIDES		3	
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS		3	
*PASTURE SAGE	ARTEMISIA FRIGIDA			2
*BLUE ASTER	ASTER LAEVIS			4
*BLANKET FLOWER	GAILLARDIA ARISTATA			8
*PRAIRIE CONEFLOWER	RATIBIDA COLUMNIFERA			4
*PURPLE PRAIRIECLOVER	DALEA (PETALOSTEMUM) PURPUREA			4
TOTAL			27.5	22

NON-IRRIGATED SEED MIX

COMMON NAME	SCIENTIFIC NAME	% OF TOTAL	PLS PER ACRE
WESTERN WHEATGRASS	AGROPYRON SMITHII	25%	
BLUE GRAMA	BOUTELOUA GRACILIS	25%	
BUFFALOGRASS	BUCHLOE DACTYLOIDES	10%	
GREEN NEEDLEGRASS	BOUTELOUA GRACILIS	20%	
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	20%	
TOTAL		100%	22.0 LBS.

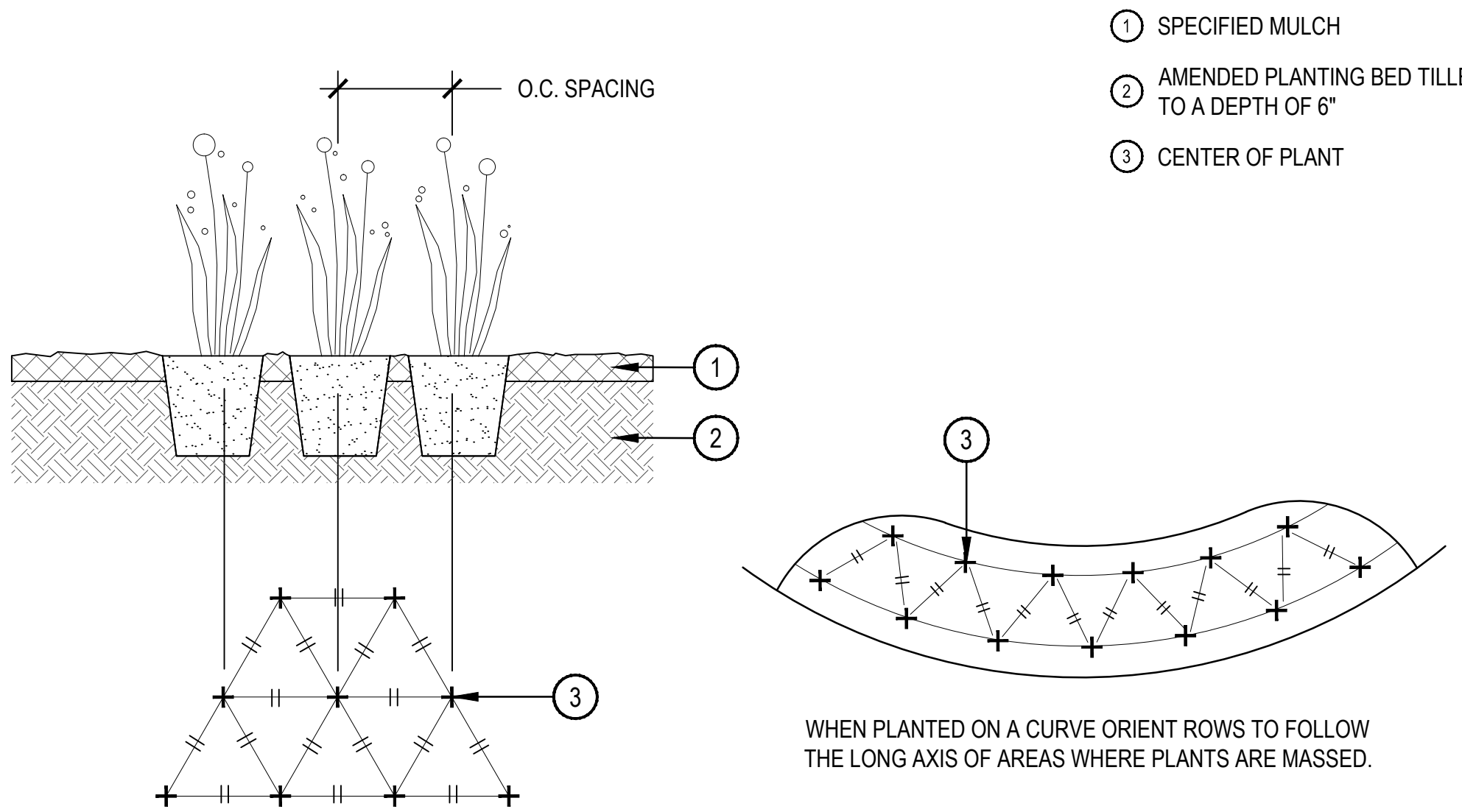
IRRIGATED TURF SEED

COMMON NAME	% OF TOTAL	PLS PER ACRE
ELDORADO FESCUE	20%	6 LBS.
SILVERADO FESCUE	20%	6 LBS.
MONARCH TALL FESCUE	20%	6 LBS.
MONARCH SMOOTH BROME	30%	9 LBS.
BLUEGRASS MIX	10%	3 LBS.
TOTAL	100%	30.0 LBS.

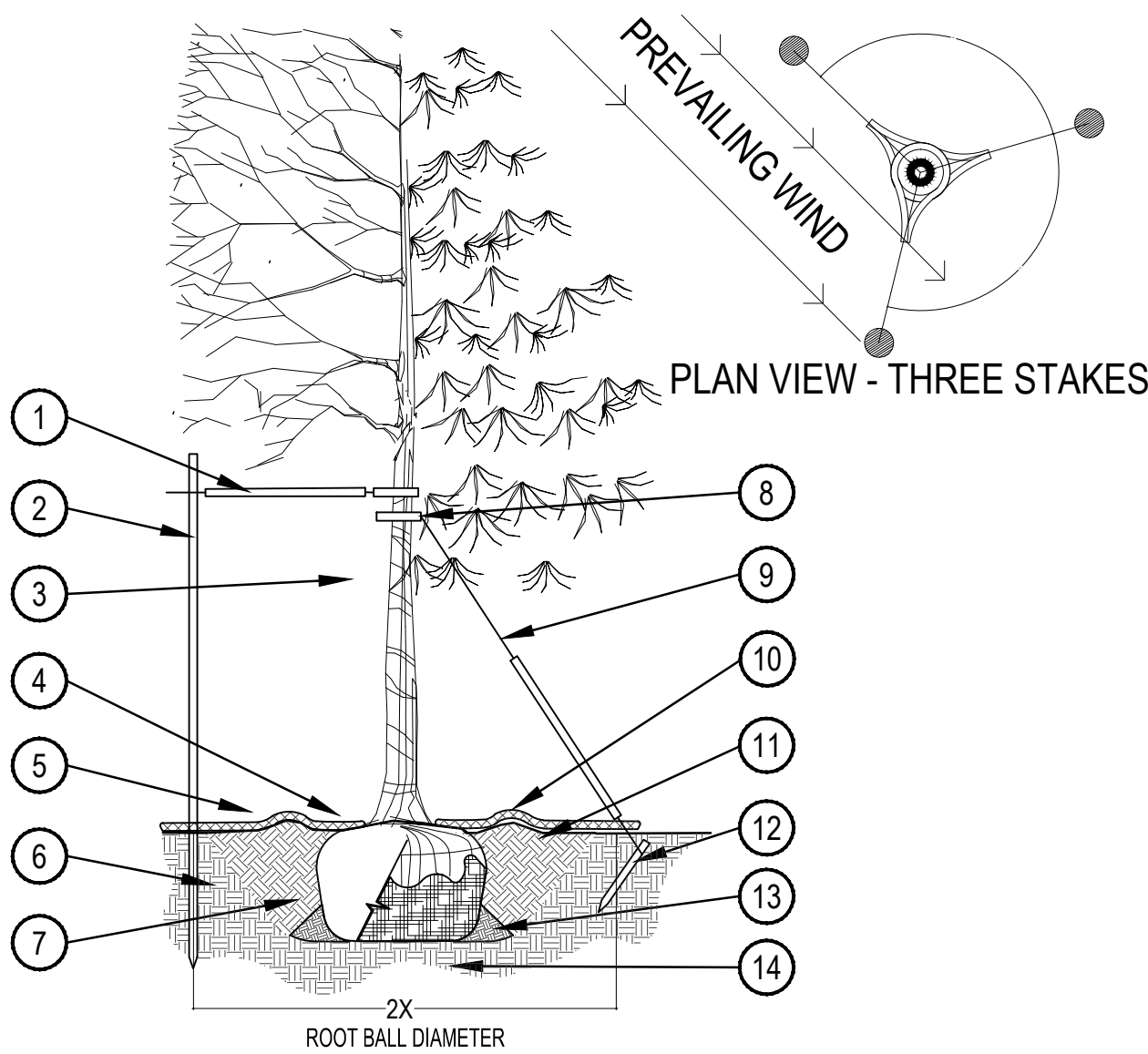
TURF GRASS BLEND: SOD

TEXAS BLUEGRASS BLEND BY BITTERSWEET TURF FARMS, INC., OR APPROVED EQUAL

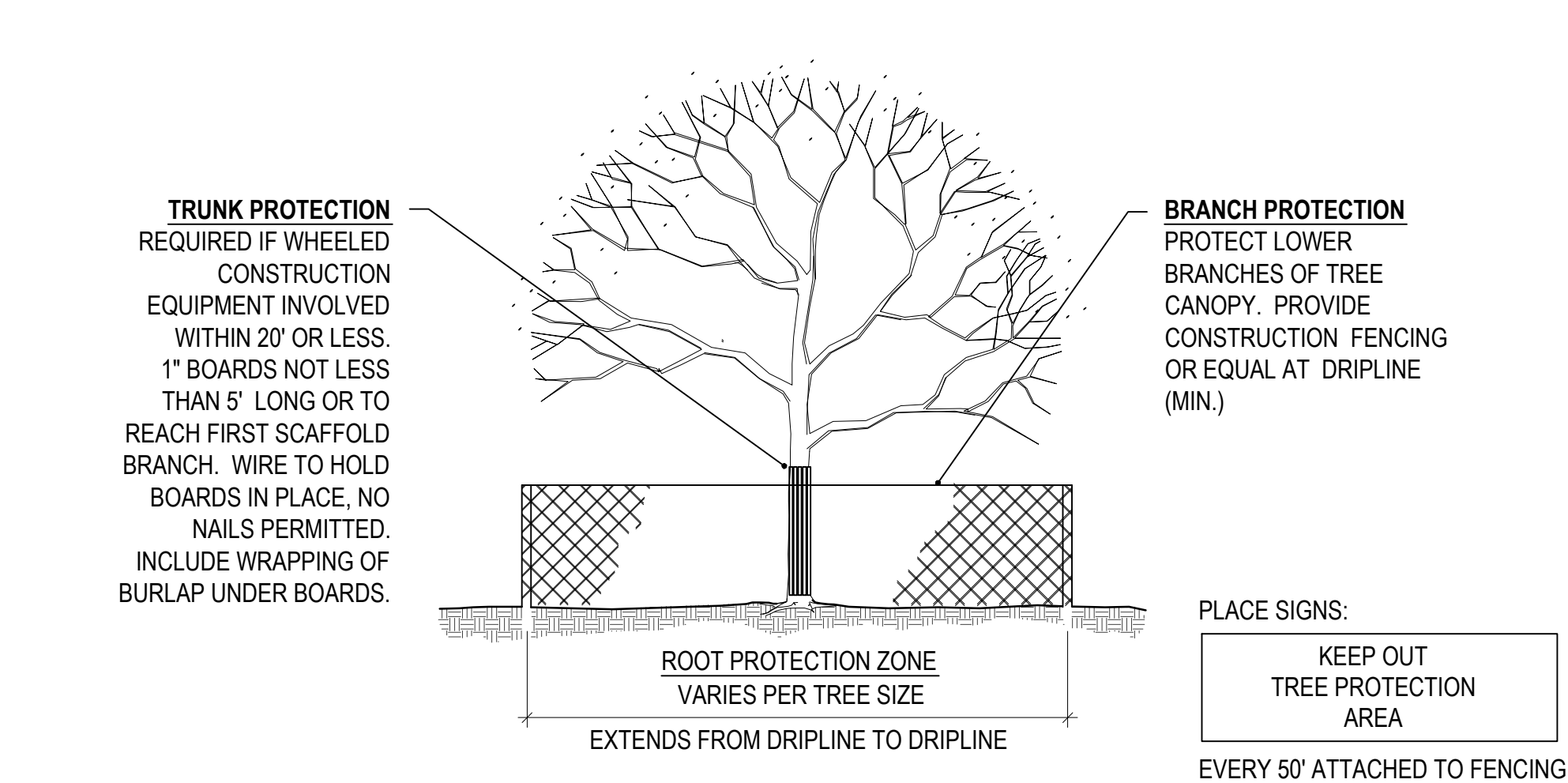




1 PERENNIAL PLANT LAYOUT  
SCALE: 1" = 1'-0"



2 SHRUB PLANTING  
SCALE: 1-1/2" = 1'-0"



3 BENCH - LANDSCAPE FORMS GRETCHEN  
SCALE: 1/2" = 1'-0"

4 TREE PLANTING DETAIL  
SCALE: 3/16" = 1'-0"

CHECKED BY: XX  
DRAWN BY: XX

- PRUNING NOTES:**
- ALL PRUNING SHALL COMPLY WITH ANSI A300 STANDARDS. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- STAKING NOTES:**
- STAKE TREES PER FOLLOWING SCHEDULE, THEN REMOVE AT END OF FIRST GROWING SEASON.
    - 1-1/2" CALIPER SIZE - MIN. 1 STAKE ON SIDE OF PREVAILING WIND (GENERALLY N.W. SIDE)
    - 1-1/2" - 3" CALIPER SIZE - MIN. 2 STAKES - ONE ON N.W. SIDE, ONE ON S.W. SIDE (OR PREVAILING WIND SIDE AND 180° FROM THAT SIDE)
    - 3" CALIPER SIZE AND LARGER - 3 STAKES PER DIAGRAM
  - WIRE OR CABLE SHALL BE MIN. 12 GAUGE, TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. NYLON STRAPS SHALL BE LONG ENOUGH TO ACCOMMODATE 1-1/2" OF GROWTH AND BUFFER ALL BRANCHES FROM WIRE.

- PLACE MIN. 1/2" PVC PIPE AROUND EACH WIRE. EXPOSED WIRE SHALL BE MAX. 2" EACH SIDE
- 6 FT. UNTREATED WOOD POST (MIN. 1.5" DIAMETER). ALL SHALL BE DRIVEN OUTSIDE ROOTBALL AND IN UNDISTURBED SOIL.
- TREE WRAP TO BE INSTALLED ONLY FROM OCTOBER 1 THROUGH APRIL 30. (DECIDUOUS ONLY)
- PLANT TREE SO THAT FIRST ORDER MAJOR ROOT IS 1"-2" ABOVE FINAL GRADE.
- 3" DEEP MULCH RING PLACED A MINIMUM OF 4 FT. IN DIAMETER. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK (FINISHED GRADE REFERENCES TOP OF MULCH).
- 1:1 SLOPE ON SIDES OF PLANTING HOLE.
- REMOVE ALL TWINE, ROPE, BURLAP AND WIRE FROM ENTIRE ROOT BALL AND TRUNK
- GROMMETED NYLON STRAPS
- GALVANIZED WIRE, MIN. 12 GAUGE CABLE - TWIST WIRE ONLY TO KEEP FROM SLIPPING.
- 4-6" HIGH WATER SAUCER IN NON-TURF AREAS.
- BACKFILL WITH BLEND OF EXISTING SOIL AND A MAXIMUM 20% (BY VOLUME) ORGANIC MATERIAL. WATER THOROUGHLY WHEN BACKFILLING
- 2 FT. STEEL T-POST. ALL SHALL BE DRIVEN BELOW GRADE AND OUTSIDE ROOTBALL IN UNDISTURBED SOIL.
- PLACE SOIL AROUND ROOT BALL FIRMLY, DO NOT COMPACT OR TAMP. SETTLE SOIL WITH WATER TO FILL ALL AIR POCKETS.
- PLACE ROOT BALL ON UNDISTURBED SOIL TO PREVENT SETTLEMENT.

- TREE PROTECTION NOTES**
- ALL TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE PER DETAIL. GROUPING OF MORE THAN ONE TREE MAY OCCUR.
  - TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE IDENTIFIED ON THE TRUNK WITH WHITE SURVEY TAPE.
  - TO PREVENT ROOT SMOTHERING, SOIL STOCKPILES, SUPPLIES, EQUIPMENT OR ANY OTHER MATERIAL SHALL NOT BE PLACED OR STORED WITHIN THE DRIP LINE OR WITHIN 15 FEET OF A TREE OR SHRUB TRUNK, WHICHEVER IS GREATER.
  - TREE AND SHRUB ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE. A MAXIMUM OF TWO 3-INCH DIAMETER ROOTS PER TREE ARE PERMITTED FOR REMOVAL. THE REMOVAL OF ADDITIONAL ROOTS 3-INCHES OR GREATER IN DIAMETER REQUIRES APPROVAL OF CITY FORESTER DESIGNEE.
  - TRENCHES SHALL BE HAND DUG WITHIN THE DRIP LINE IN AREAS WHERE ROOTS TWO INCHES IN DIAMETER AND GREATER ARE PRESENT, OR WHEN IN CLOSE PROXIMITY TO LOW BRANCHING TREES. WHENEVER POSSIBLE, ROOTS TWO INCHES OR GREATER IN DIAMETER SHALL BE TUNNELED OR BORED UNDER AND SHALL BE COVERED TO PREVENT DEHYDRATION.
  - WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. WHENEVER POSSIBLE, ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING, WHEN ROOT ENERGY SUPPLIES ARE HIGH AND CONDITIONS ARE LEAST FAVORABLE FOR DISEASE CAUSING AGENTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST.
  - WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR.
  - AUGER TUNNELING RATHER THAN TRENCHING SHOULD BE USED FOR UTILITY PLACEMENT WITHIN DRIP LINE.
  - FENCING MATERIAL SHALL ENCIRCLE ANY TREE OR SHRUB WHOSE OUTER DRIP LINE EDGE IS WITHIN 20 FEET OF ANY CONSTRUCTION ACTIVITIES.
  - FENCING MATERIAL SHALL BE BRIGHT, CONTRASTING COLOR, DURABLE, AND A MINIMUM OF FOUR FEET IN HEIGHT.
  - FENCING MATERIAL SHALL BE SET AT THE DRIP LINE OR 15 FEET FROM TREE TRUNK, WHICHEVER IS GREATER, AND MAINTAINED IN AN UPRIGHT POSITION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
  - ANY GRADE CHANGES (SUCH AS THE REMOVAL OF TOPSOIL OR ADDITION OF FILL MATERIAL) WITHIN THE DRIP LINE SHOULD BE AVOIDED FOR EXISTING TREES TO REMAIN. RETAINING WALLS AND TREE WELLS ARE ACCEPTABLE ONLY WHEN CONSTRUCTED PRIOR TO GRADE CHANGE.
  - LIMB REMOVAL SHALL BE ACCOMPLISHED BEFORE CONSTRUCTION BEGINS. A PROFESSIONAL COMPANY THAT IS LICENSED BY THE CITY OF AURORA FORESTRY DIVISION SHALL COMPLETE ALL PRUNING.

**TRUNK PROTECTION**  
REQUIRED IF WHEELED  
CONSTRUCTION  
EQUIPMENT INVOLVED  
WITHIN 20' OR LESS.  
1" BOARDS NOT LESS  
THAN 5' LONG OR TO  
REACH FIRST SCAFFOLD  
BRANCH. WIRE TO HOLD  
BOARDS IN PLACE, NO  
NAILS PERMITTED.  
INCLUDE WRAPPING OF  
BURLAP UNDER BOARDS.

**BRANCH PROTECTION**  
PROTECT LOWER  
BRANCHES OF TREE  
CANOPY. PROVIDE  
CONSTRUCTION FENCING  
OR EQUAL AT DRIPLINE  
(MIN.)

PLACE SIGNS:  
KEEP OUT  
TREE PROTECTION  
AREA  
EVERY 50' ATTACHED TO FENCING

ROOT PROTECTION ZONE  
VARIES PER TREE SIZE  
EXTENDS FROM DRIPLINE TO DRIPLINE

COLORADO SCIENCE AND TECHNOLOGY  
PARK AT FITZSIMONS  
BIOSCIENCE PARK CENTER EXPANSION  
AURORA, COLORADO

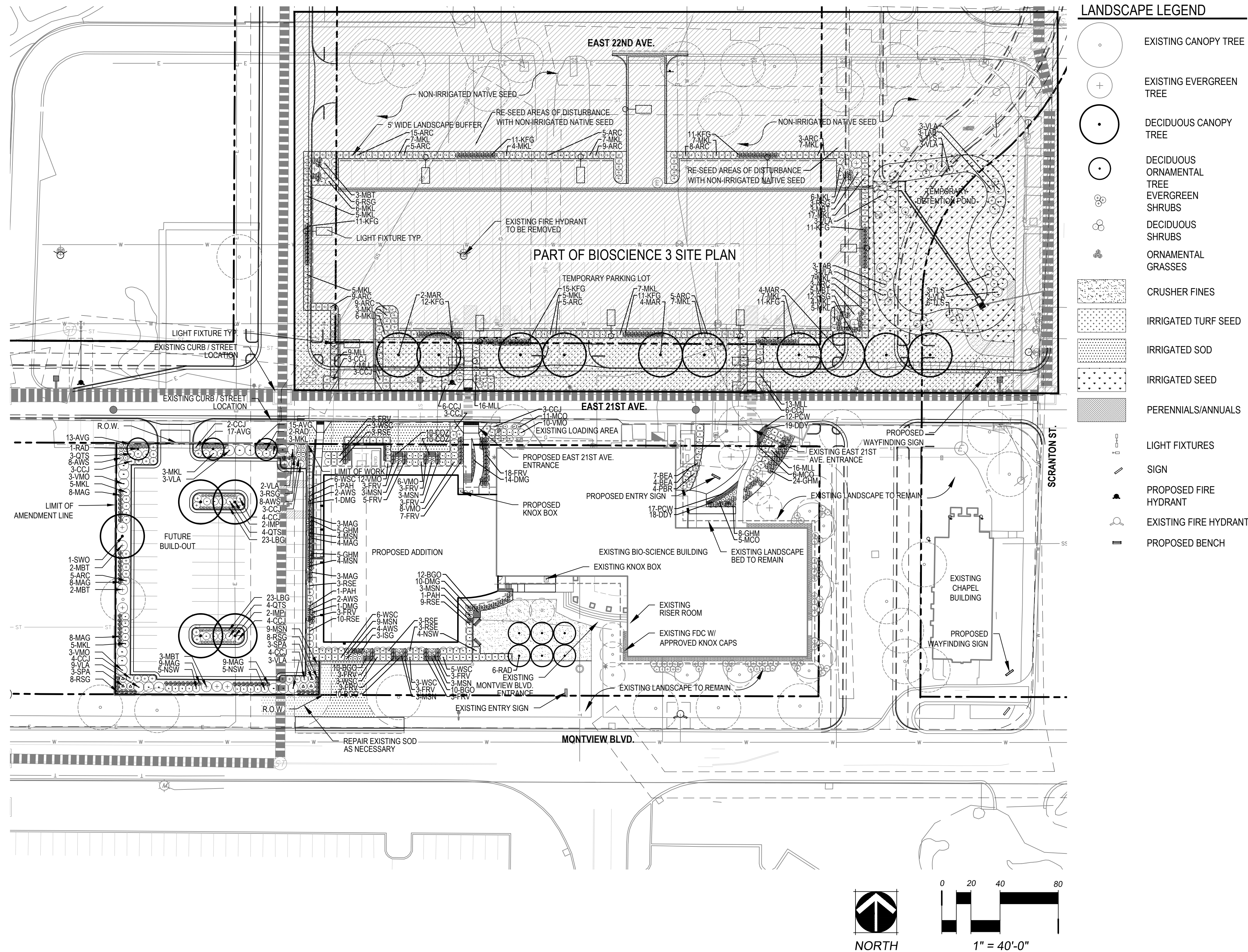
OWNER:  
FITZSIMONS  
REDEVELOPMENT AUTHORITY  
12635 E MONTVIEW BLVD.  
AURORA, CO 80045  
720.589.4100

NOT FOR  
CONSTRUCTION

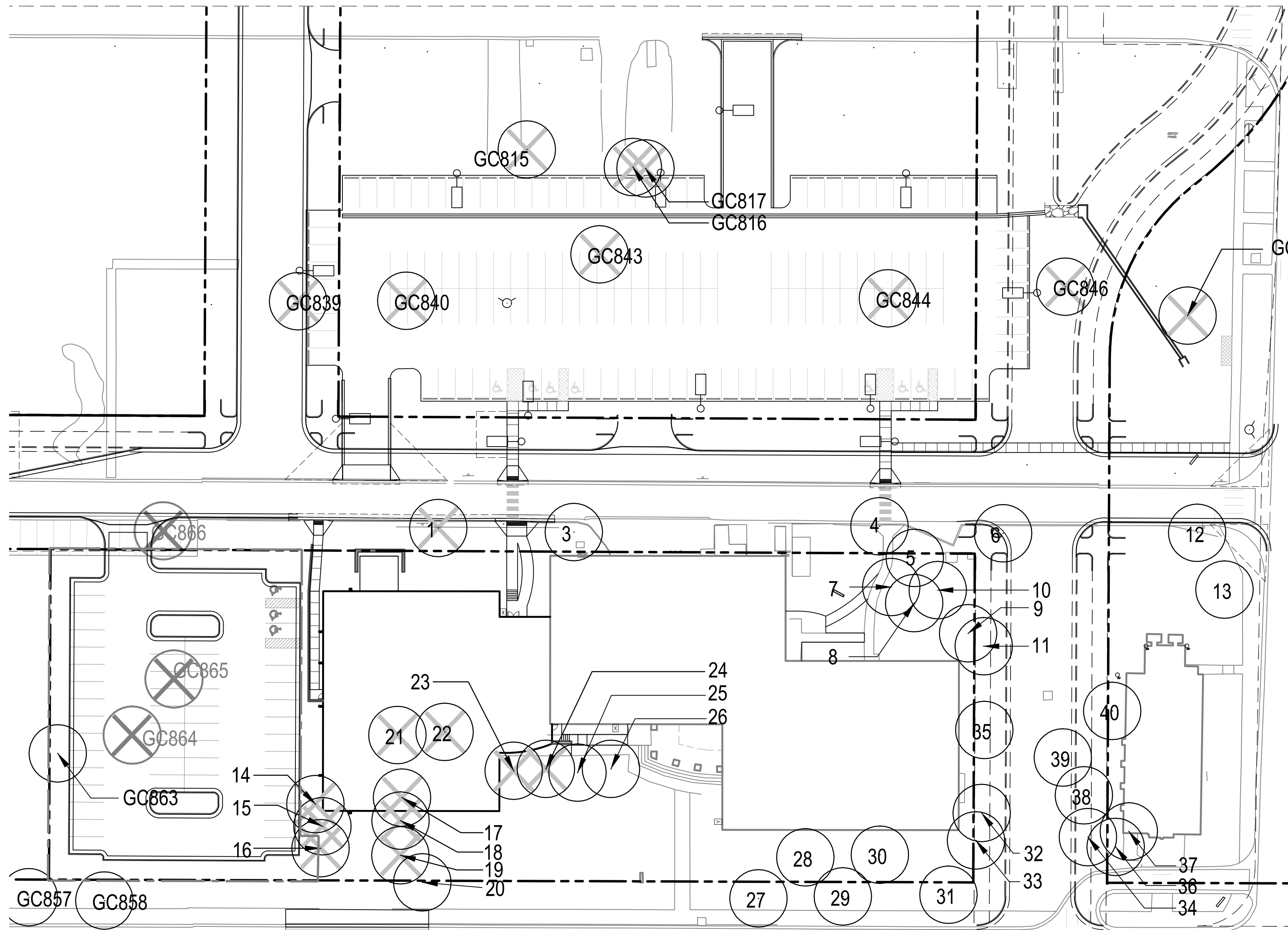
DATE:  
8.31.2017 - MINOR  
AMENDMENT  
10.11.2017 - RESPONSE  
TO CITY COMMENTS  
10.26.2017 - RESPONSE  
TO CITY COMMENTS

SHEET TITLE:  
LANDSCAPE  
PLAN

L1.03







TREE MITIGATION

SITE PLAN NO.					FRA EXP
INCHES NOT MITIGATED ON PREVIOUS SITE PLANS:					602.5
(CSTP SITE PLANS 1, 2, 3, 4, TCH ECC)					
TREES REMOVED WITH THIS SITE PLAN					
TREE NO.	DBH	CONDITION VALUE	COMMENTS	MITIGATION INCHES	
1	13	0.35		5	
14	10	0.6		6	
15	4	0.85		3	
16	4	0.85		3	
17	13	0.35		5	
18	3	0.85		0	
19	3	0.85		0	
21	6	0.85		5	
22	17	0.6		10	
23	4	0.85		3	
24	4	0.85		3	
GC815	5	0.6		3	
GC816	18	0.35		6	
GC817	24	0.35		8	
GC839	12	0.35		4	
GC840	12	0.35		4	
GC843	28	0.35		10	
GC844	12	0.35		4	
GC846	12	0.35		4	
GC848	14	0.85		12	
TOTAL				98	
EXISTING INCHES REMOVED FROM SITE BY THIS SITE PLAN:					98
INCHES TO BE MITIGATED:					700.5
MITIGATION INCHES PROVIDED BY TREES IN SITE PLAN FRA EXP:					8
MITIGATION INCHES CARRIED OVER TO FUTURE SITE PLANS:					692.5

SITE PLAN NO.					FRA EXP - AMEND 1
MITIGATION INCHES CARRIED OVER ON ORIGINAL SITE PLAN:					692.5
TREES REMOVED WITH THIS SITE PLAN					
TREE NO.	DBH	CONDITION VALUE	COMMENTS	MITIGATION INCHES	
GC864	10	0.6		6	
GC865	7	0.6		4	
GC866	16	0.6		10	
TOTAL				20	
MITIGATION INCHES PROVIDED BY TREES:					0
MITIGATION INCHES CARRIED OVER TO FUTURE SITE PLANS:					712.5

TREE MITIGATION NOTES

FOR TREES REQUIRING PROTECTION, CITY OF AURORA PARK AND OPEN SPACE DEPARTMENT TREE PROTECTION NOTES AND DETAILS SHALL BE APPLIED.