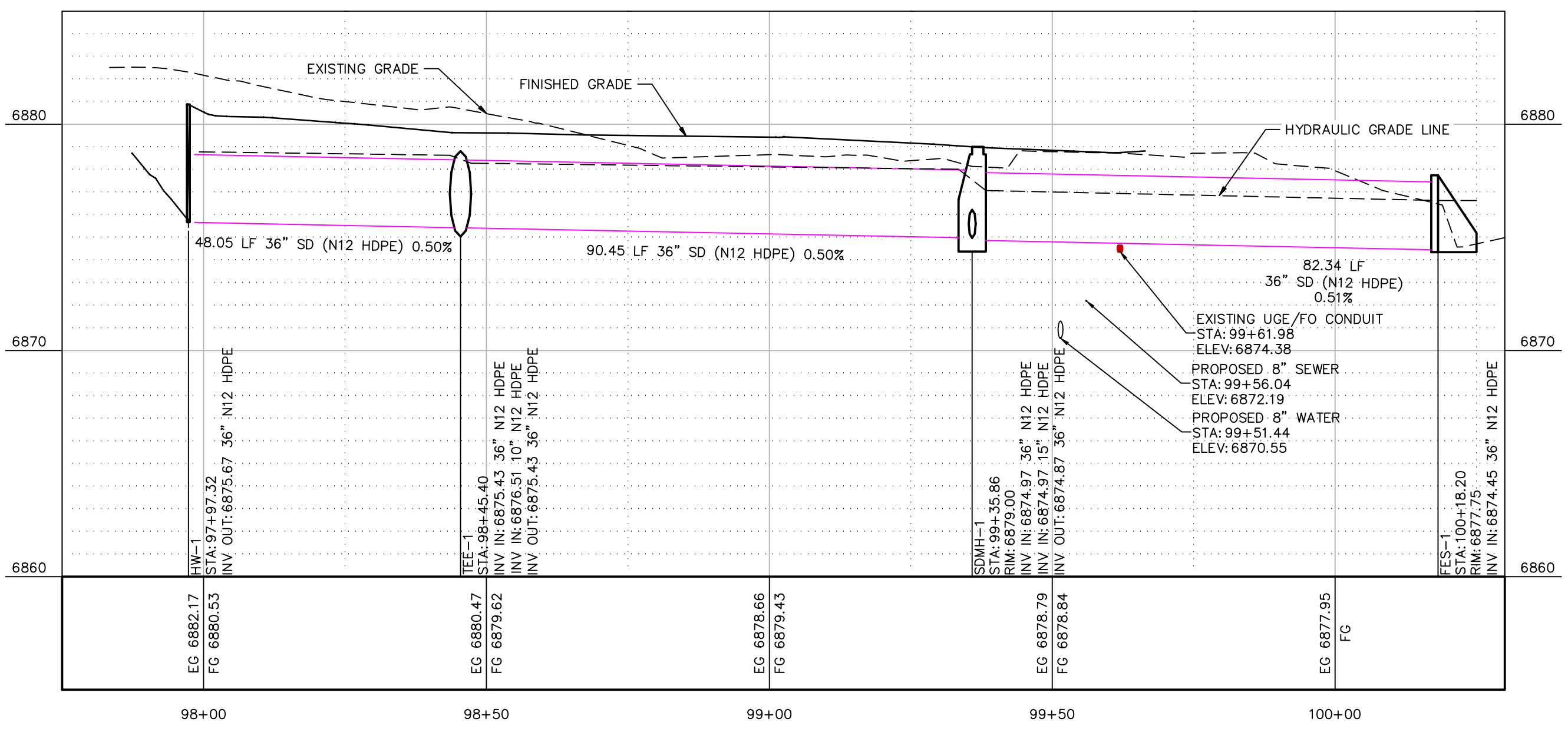




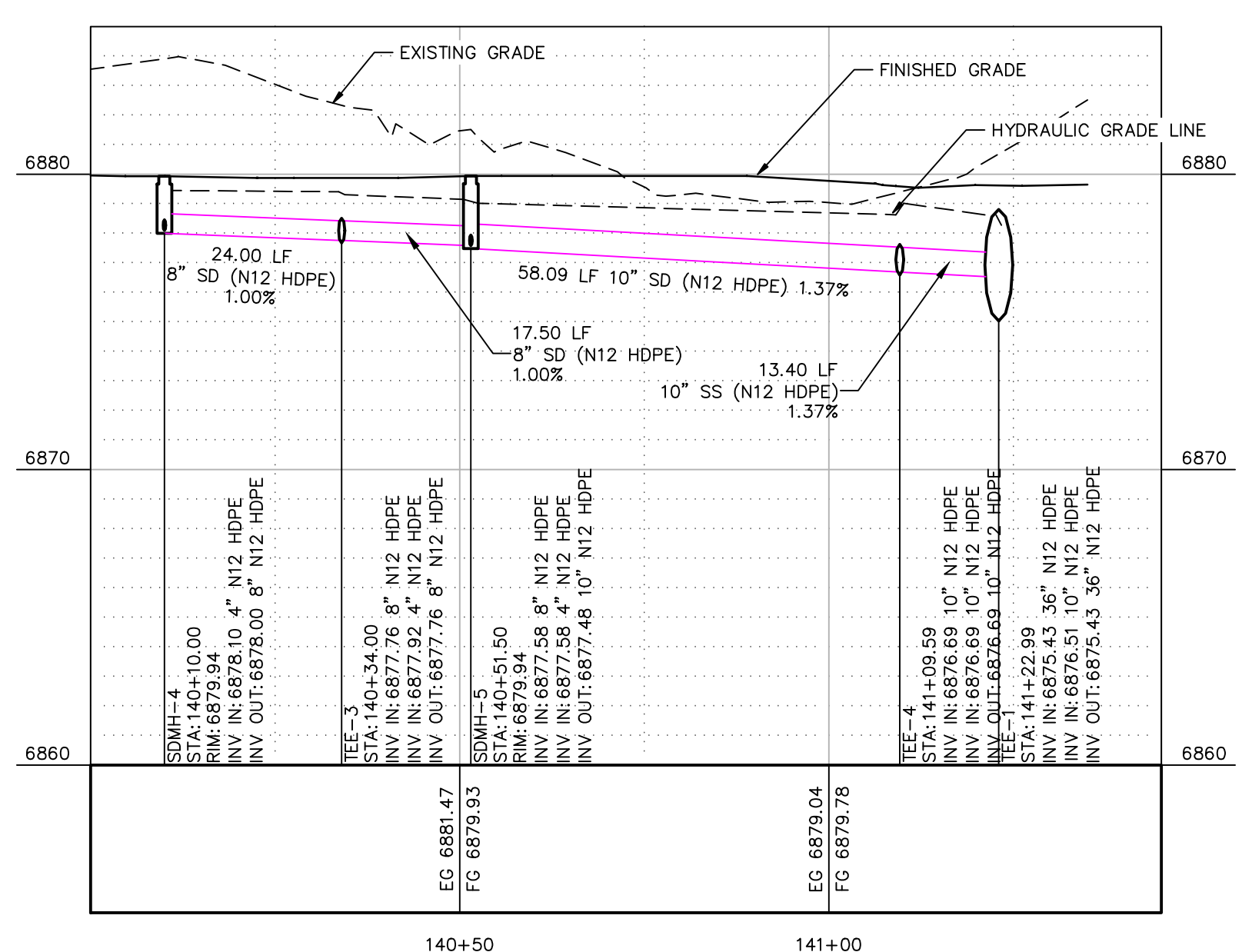
STORM SEWER NOTES

Note Number	Sheet	Unit	Note
206	180	LF	CONSTRUCT 4" TALL RETAINING WALL PER DETAIL 'W' ON SHEET DT01 AND NAU DGTS 32 32 00.
501	26	LF	INSTALL 4" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03. CONTRACTOR TO SLOPE 2% AWAY FROM STORM DRAIN MAIN. COORDINATE WITH PLUMBING PLANS FOR CONNECTION TO DOWNSPOUTS.
503	42	LF	INSTALL 8" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
504	76	LF	INSTALL 10" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
510	223	LF	INSTALL 36" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
511	31	LF	INSTALL 42" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
512	47	LF	INSTALL 24" CMP PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
524	2	EA	INSTALL 18" NYLOPLAST DRAIN BASIN WITH SOLID COVER (OR APPROVED EQUAL) PER DETAIL 'H' ON SHEET DT03.
530	1	EA	INSTALL 60" DIA. STORM DRAIN MANHOLE PER M.A.G. STD. DTL. 521 AND MANHOLE SHAFT PER M.A.G. STD. DTL. 522.
531	2	EA	INSTALL 42" ADS FLARED END SECTION OR APPROVED EQUAL.
532	1	EA	INSTALL 36" ADS FLARED END SECTION OR APPROVED EQUAL.
533	1	EA	INSTALL 24" CMP FLARED END SECTION.
534	1	EA	CONSTRUCT POND OUTLET STRUCTURE PER DETAIL 'H' ON SHEET DT01.
535	1	EA	CONSTRUCT TYPE 'F' CATCH BASIN PER MAG STD DTL 535.
537	1	EA	CONSTRUCT CONCRETE HEADWALL ('U' TYPE) PER M.A.G. STD. DTL. 501.
538	125	SF	INSTALL D50=6" RIPRAP EROSION PROTECTION PLACED MIN. 12" THICK OVER MIRAFI 140N FILTER FABRIC PER RIPRAP INSTALLATION DETAIL 'R' ON SHEET DT01.
540	1	EA	INSTALL 10"X30"X30" INSERTA TEE PER MANUFACTURER'S SPECIFICATIONS.
545	1425	SF	INSTALL EXTENDED DETENTION BASIN SECTION PER DETAIL 'C' ON SHEET DT01.
548	1	EA	INSTALL 10"X10"X10" INSERTA TEE PER MANUFACTURER'S SPECIFICATIONS.
560	79	SF	INSTALL CONCRETE DROP STRUCTURE PER M.A.G. STD. DTL. 501-5.

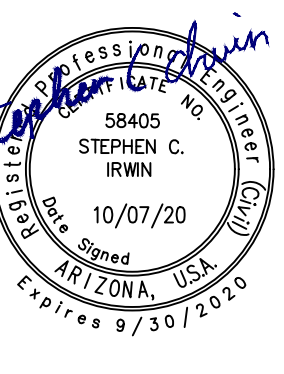
- NOTES:
- 1) EXISTING RECLAIM WATER LINE - REALIGN AS NECESSARY FOR CONSTRUCTION OF STORM DRAIN PER MAG SPECIFICATIONS AND NAU DGTS.
 - 2) CONTRACTOR TO REALIGN EXISTING UGE/FO CONDUIT BELOW PROPOSED STORM DRAIN TO PROVIDE MIN. VERTICAL CLEARANCE.



PROFILE VIEW
H:1"=20' V:1"=5'



PROFILE VIEW
H:1"=20' V:1"=5'

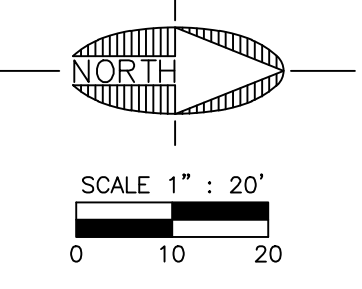


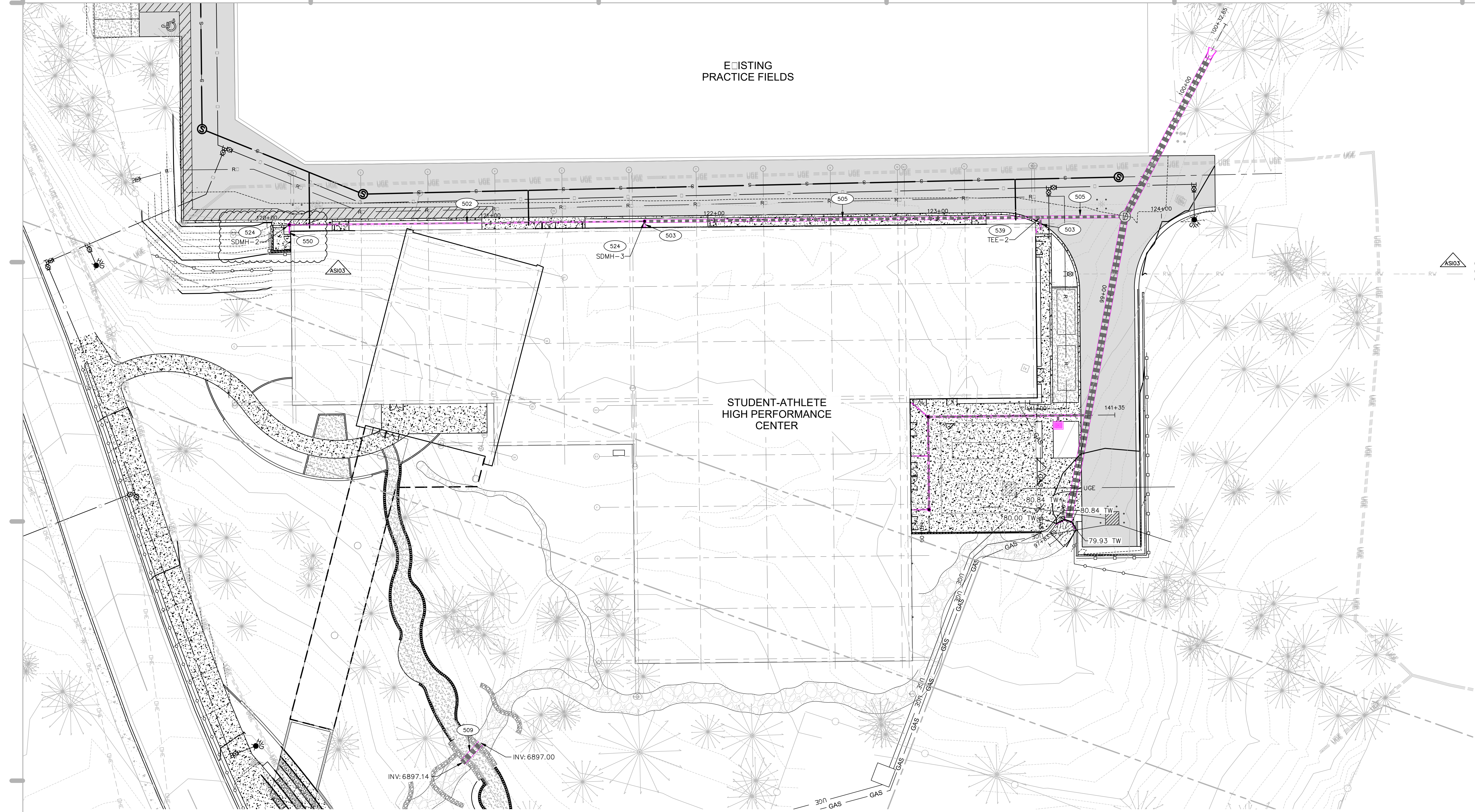
CONSTRUCTION DOCUMENTS
6.22.2020
Revisions

AS03 09.04.20 TRADES, AHJ REVS
AS05 10.07.20 TRADES, AHJ REVS

Attachment C9 to AS105 dated 10/07/20

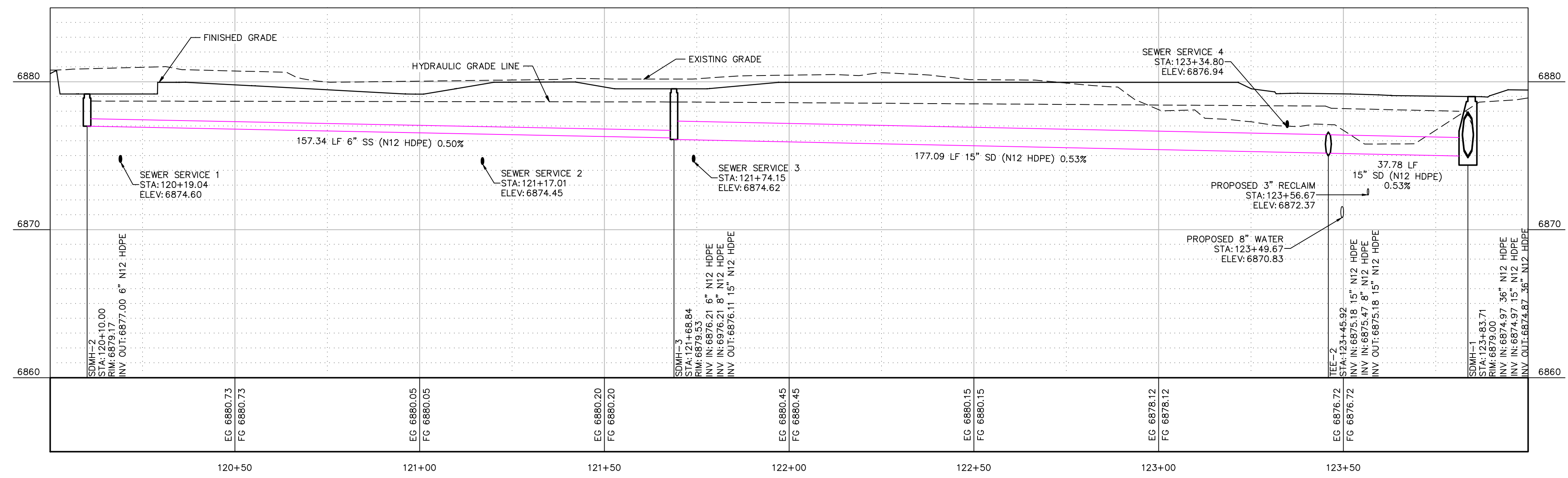
30-19131-00
STORM DRAIN PLAN



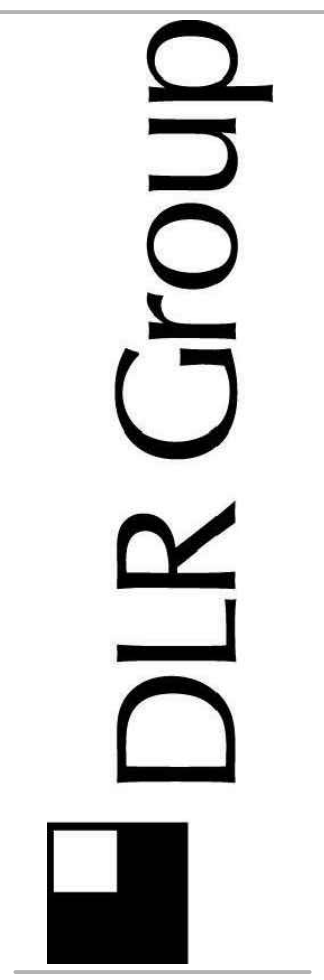


STORM SEWER NOTES

Note Number	Sheet	Unit	Note
502	159	LF	INSTALL 6" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
503	9	LF	INSTALL 8" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
505	215	LF	INSTALL 15" ADS HDPE (N-12) DUAL WALL STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND PER TRENCHING DETAIL ON SHEET DT03.
509	12	LF	INSTALL 30" ADS HP STORM PIPE OR APPROVED EQUAL PER M.A.G. SPEC. SECTION 738. TRENCH, EXCAVATION, BACKFILLING, AND COMPACTION PER M.A.G. SPEC. SECTION 603 AND TRENCHING DETAIL ON SHEET DT03.
524	1	EA	INSTALL 18" NYLOPLAST DRAIN BASIN WITH SOLID COVER (OR APPROVED EQUAL) PER DETAIL 'H' ON SHEET DT03.
539	1	EA	INSTALL 8"X15"X15" INSERTA TEE PER MANUFACTURER'S SPECIFICATIONS.
550	1	EA	CONTRACTOR TO CONNECT 6" STORM DRAIN TO BUILDING WATER PROOFING SYSTEM PER MANUFACTURER'S RECOMMENDATIONS AND COORDINATE CONNECTION WITH ARCHITECTURAL PLANS.



PROFILE VIEW
H: 1" = 20' V: 1" = 5'



Northern Arizona University - Student Athlete High Performance Center, Building 73A
 NAU Project: 09.731.191
 1650 S. San Francisco Street, Flagstaff, Arizona, 86011 (SAHPC-73A)
UNDERGROUND UTILITY PACKAGE

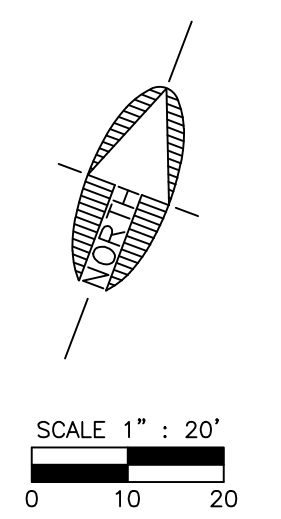
CONSTRUCTION DOCUMENTS
 6.22.2020
 Revisions

AS05 08.04.20 TRADES, AHJ REV'S
 AS05 10.07.20 TRADES, AHJ REV'S

Attachment C10 to AS105 dated 10/07/20

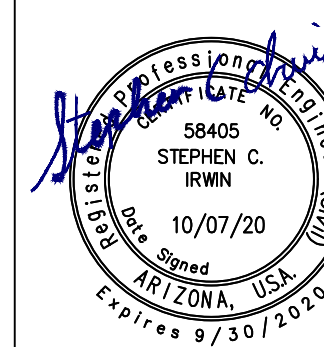
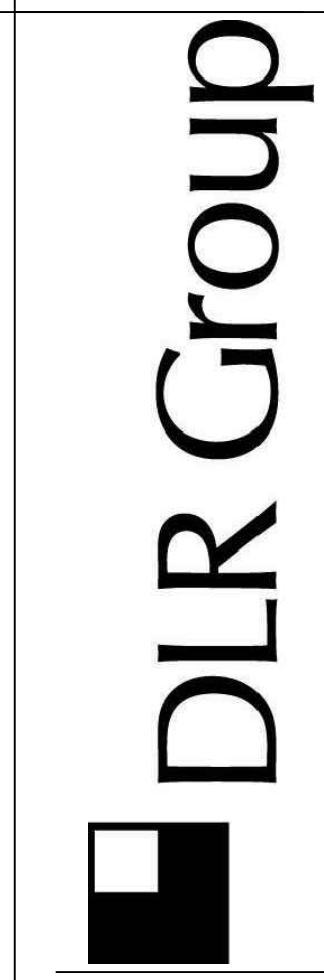
30-19131-00
 STORM DRAIN PLAN

SD02



GRADING & DRAINAGE NOTES

Note Number	Sheet	Unit	Note
270	-	LS	CONSTRUCT EXTENDED DETENTION BASIN AND BERM PER DETAIL 'G' ON SHEET DT01. SEED AND INSTALL GRASS PLUGS 18" O.C. WITH TEMPORARY IRRIGATION. REFER TO LANDSCAPE NOTES FOR SPECIFICATIONS.



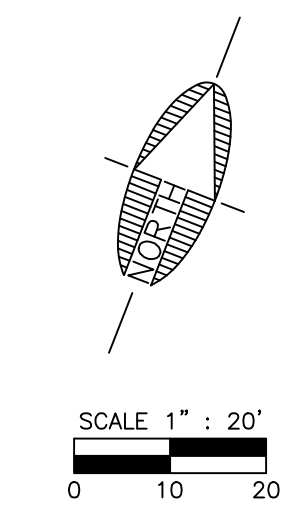
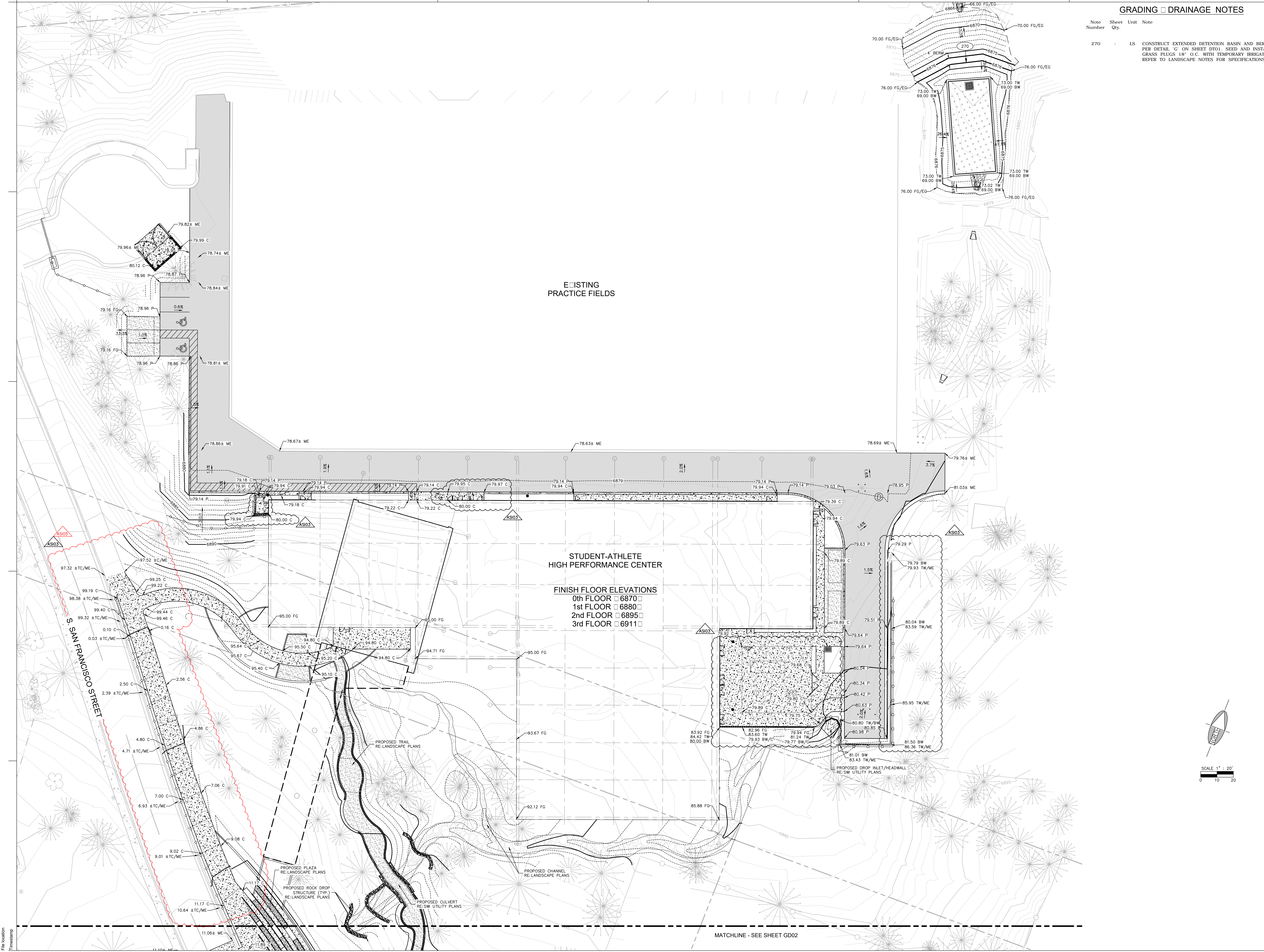
Northern Arizona University - Student Athlete High Performance Center, Building 73A
 NAU Project: 09.731.191
 1650 S. San Francisco Street, Flagstaff, Arizona, 86011 (SAHPC-73A)

CONSTRUCTION DOCUMENTS
 6.22.2020
 Revisions
 AS03 06.04.20 TRADES, AHJ REVS
 AS05 10.07.20 TRADES, AHJ REVS

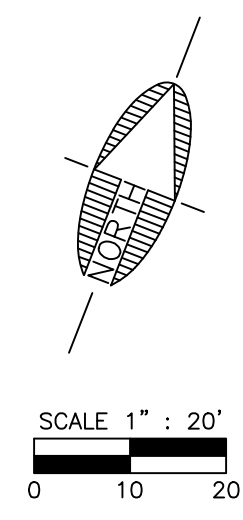
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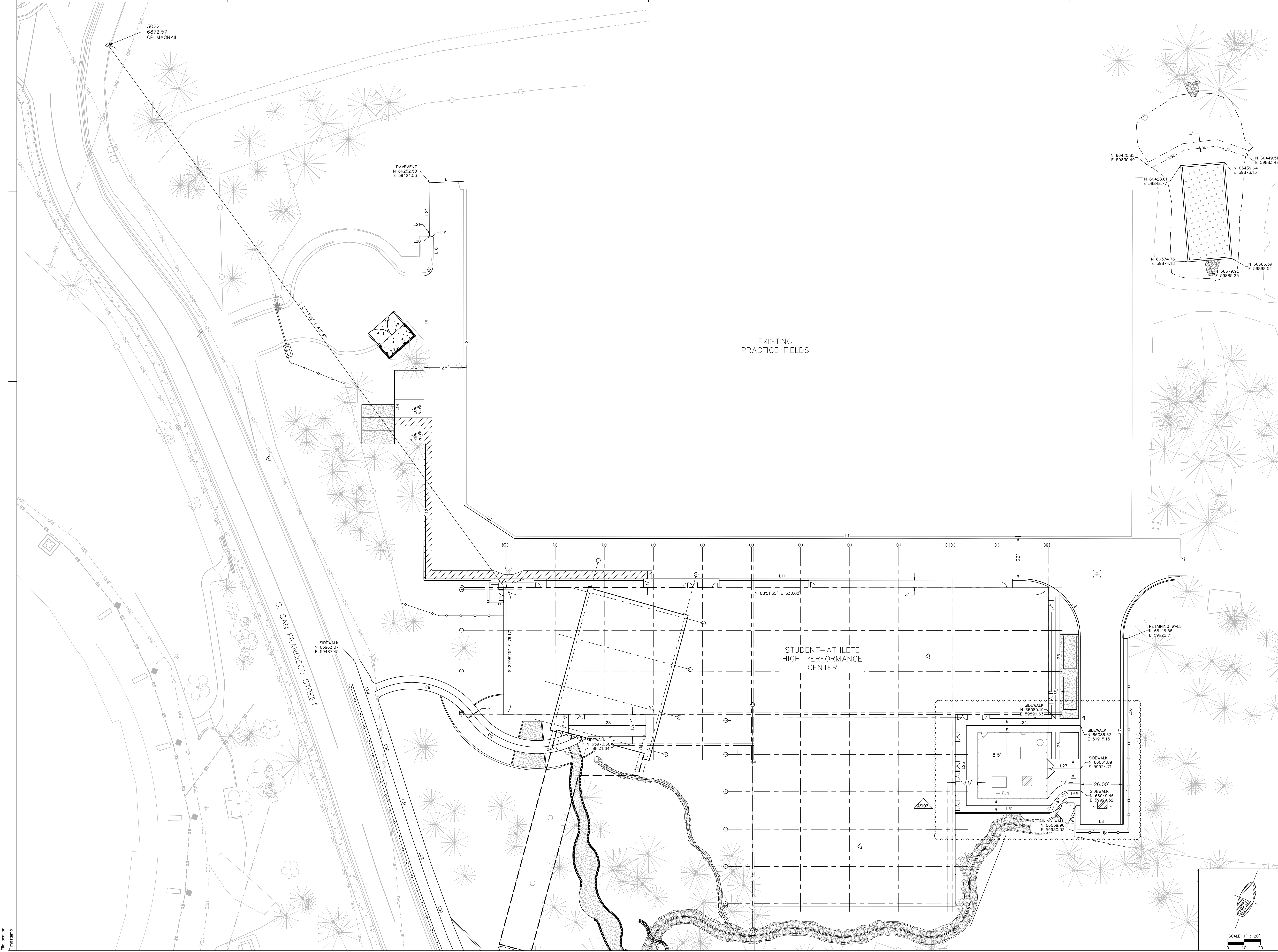
30-19131-00
 GRADING & DRAINAGE PLAN

GD01

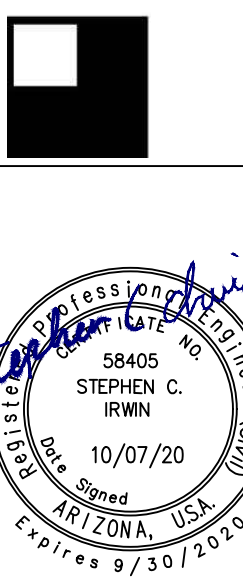


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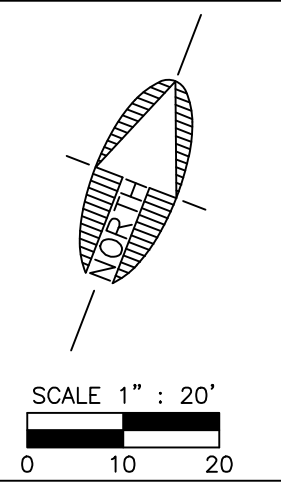


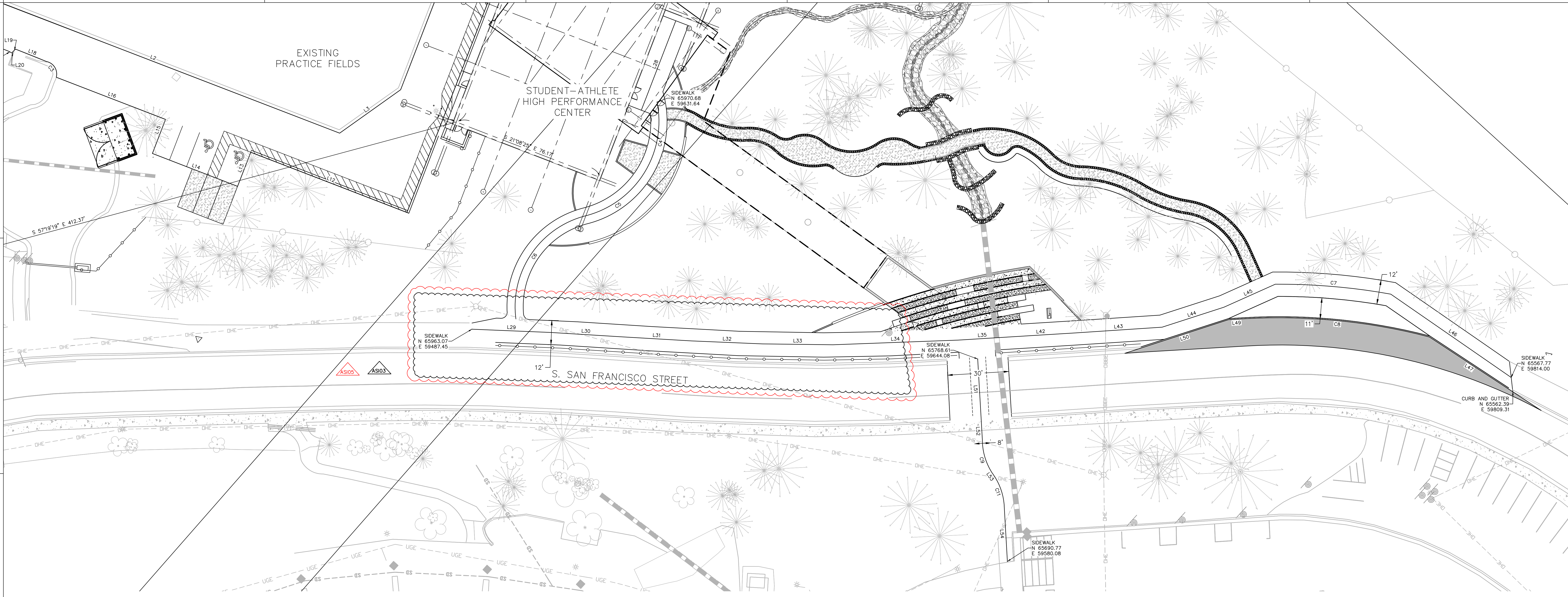
CONSTRUCTION DOCUMENTS
6.22.2020
Revisions
AS03 06.04.20 TRADES, AHJ REVS
AS05 10.07.20 TRADES, AHJ REVS

Attachment C13
to AS105
dated 10/07/20

30-19131-00
HORIZONTAL CONTROL PLAN

HC01



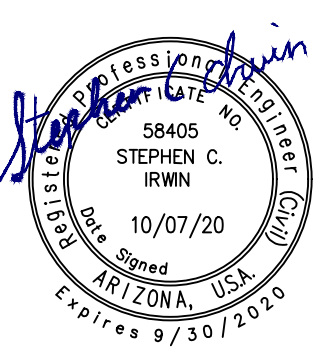


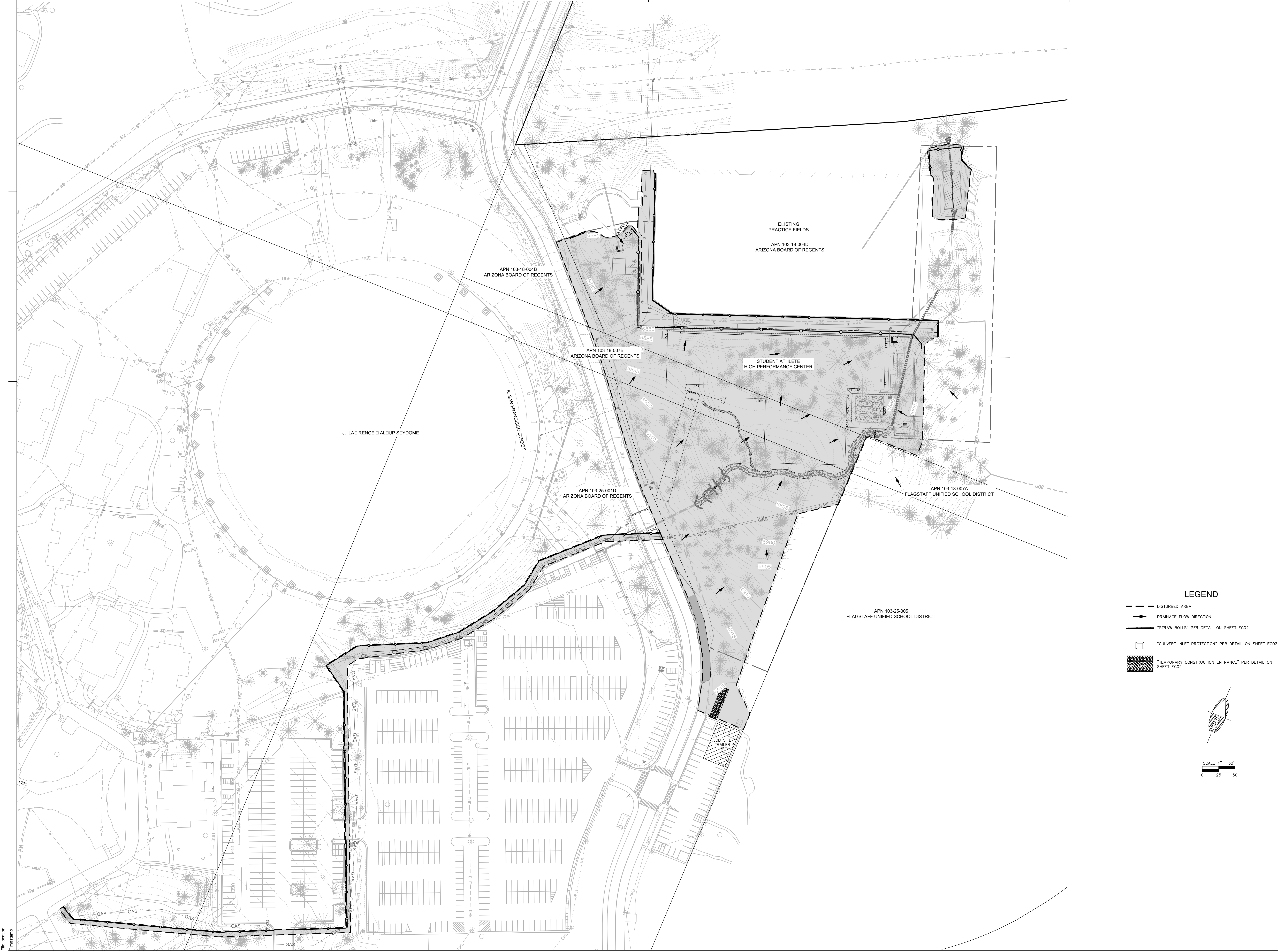
LINE #	LENGTH	DIRECTION
L1	20.86	N 66°29'48" E
L2	198.03	S 21°09'56" E
L3	36.92	S 77°39'31" E
L4	407.05	N 68°51'52" E
L5	24.59	S 21°04'12" E
L7	113.62	S 21°08'25" E
L8	26.00	S 68°51'35" W
L9	113.62	S 21°08'25" E
L11	366.32	S 68°51'30" W
L12	82.49	N 21°08'41" W
L13	18.00	N 68°51'19" E
L14	45.00	N 21°08'41" W
L15	18.00	N 68°51'19" E
L16	57.69	N 21°08'41" W
L18	16.58	N 20°24'29" W
L19	2.01	N 86°29'10" W
L20	0.59	S 62°21'29" W
L21	2.17	N 14°56'05" W
L22	30.35	N 21°01'48" W
L23	74.39	S 21°08'25" E
L24	69.65	N 68°51'34" E
L25	49.05	N 21°08'24" W
L26	16.33	S 21°08'25" E
L27	20.16	N 68°51'35" E
L28	47.21	N 68°51'35" E
L29	38.81	S 39°50'03" E
L30	34.67	S 38°43'13" E
L31	34.94	S 38°51'10" E
L32	34.86	S 39°48'19" E
L33	34.80	S 41°30'47" E
L34	61.80	S 44°20'12" E
L35	23.90	S 45°46'00" E
L42	33.87	N 45°43'53" W
L43	42.92	N 45°58'11" W
L44	31.98	S 60°07'20" E
L45	27.76	S 66°21'02" E
L46	72.14	S 7°33'18" E
L47	49.15	N 8°53'01" W
L49	7.89	N 45°34'02" W
L50	46.51	N 60°13'35" W

LINE #	LENGTH	DIRECTION
L51	29.45	N 44°29'04" E
L52	12.19	N 44°29'04" E
L53	1.77	S 14°33'52" W
L54	27.28	N 44°29'04" E
L55	24.34	S 40°40'04" W
L56	20.31	S 61°42'31" W
L57	19.24	S 88°18'21" W
L58	117.64	S 21°07'56" E
L59	31.32	S 68°49'44" W
L60	15.48	N 21°08'28" W
L61	51.09	S 68°51'35" W
L63	7.13	S 18°07'15" W
L65	6.30	S 68°51'35" W

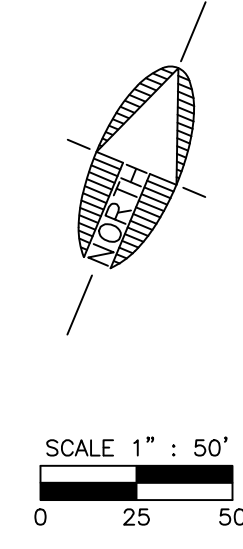
CURVE #	LENGTH	RADIUS	DELTA
C1	56.36	35.04	92°09'08"
C2	56.36	35.04	92°08'55"
C3	10.08	6.25	92°27'30"
C4	39.97	48.00	47°42'47"
C5	32.98	48.00	39°21'56"
C6	67.08	46.17	83°14'28"
C7	57.20	310.00	10°34'18"
C8	92.06	293.50	17°58'17"
C9	15.67	30.00	29°55'12"
C11	15.67	30.00	29°55'12"
C12	0.72	0.81	50°44'20"
C13	8.14	9.19	50°44'20"

File location
Timestamp





- LEGEND**
- DISTURBED AREA
 - DRAINAGE FLOW DIRECTION
 - "STRAW ROLLS" PER DETAIL ON SHEET EC02.
 - "CULVERT INLET PROTECTION" PER DETAIL ON SHEET EC02.
 - "TEMPORARY CONSTRUCTION ENTRANCE" PER DETAIL ON SHEET EC02.



MANAGEMENT STRATEGIES

- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE, MUD AND DEBRIS SHALL BE WASHED FROM ALL CONSTRUCTION VEHICLES AND EQUIPMENT BEFORE LEAVING THE SITE. A WATER TANK TRUCK WILL BE USED IF PUBLIC WATER IS UNAVAILABLE.
- INSTALL PERIMETER CONTROLS AS SHOWN TO INCLUDE DIVERSION DIKES AND SILT FENCE. SEDIMENT TRAPPING MEASURES SHALL BE INSTALLED AS A FIRST STEP IN GRADING.
- GRADING OPERATIONS MAY COMMENCE ONCE PERIMETER CONTROLS, DIVERSIONS AND TRAPPING MEASURES ARE INSTALLED.
- FILL SLOPE SURFACES SHALL BE LEFT IN ROUGHENED CONDITION TO REDUCE SHEET AND RILL EROSION OF THE SLOPES. THE CONTRACTOR SHALL REDIRECT CONCENTRATED FLOW AWAY FROM THE FILL SLOPES BY INSTALLING EARTH BERMS AND DIRECT THE RUN-OFF TO STABILIZED OUTLET OR SEDIMENT BASIN AND TRAPPING DEVICES.
- TEMPORARY SEEDING, SODDING OR OTHER STABILIZATION METHODS WILL FOLLOW IMMEDIATELY AFTER GRADING.
- ONCE THE UTILITIES, CURB AND GUTTER, AND THE ROADS ARE BROUGHT NEAR FINAL GRADE IN A MANNER SUCH THAT STORM SEWER SYSTEMS ARE FUNCTIONAL, INSTALL THE STANDARD INLET PROTECTION AROUND THE STRUCTURES AND SILT FENCE ALONG THE SITE PERIMETER.
- FOR VEGETATIVE STABILIZATION OF ALL DENUED AREAS SEE EROSION CONTROL MEASURES AND VEGETATIVE PRACTICES.
- THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
- AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY EROSION & SILTATION CONTROLS WILL BE CLEANED UP AND REMOVED FROM THE SITE.

GENERAL LAND CONSERVATION NOTES

- VEGETATED STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRECIPITATION OR IRRIGATION IS AVAILABLE.
- ALL EROSION AND SILTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON IS TO BE MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF TWO TONS PER ACRE AND OVER-SEEDED AS SOON AS PRECIPITATION OR IRRIGATION IS AVAILABLE.
- AT THE COMPLETION OF CONSTRUCTION PROJECTS, AND PRIOR TO THE RELEASE OF THE BOND, ALL TEMPORARY SILTATION AND EROSION CONTROLS SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED.
- TEMPORARY DIVERSIONS, SEEDING AND MULCHED OR SILT FENCE AND OTHER CONTROL MEASURES AS NECESSARY ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR THE FIRST STEP IN EXCAVATION.
- WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMBEDS. NO STOCKPILE IS PERMITTED. WHERE SOIL IS PLACED ON DOWNHILL SIDE OF TRENCHES, IT IS TO BE BACK-SLOPE TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCHES, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA TO AN EXISTING STORM INLET OR DITCH IF NO INLET AVAILABLE.

EROSION & SEDIMENT CONTROL STANDARD NOTES

- THE CONTRACTOR MUST NOTIFY BLUE STAKE AT 1-800-STAKE-IT AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH APPLICABLE COUNTY ORDINANCES AND POLICIES.
- ALL EROSION CONTROL MEASURES SHOWN ON THE APPROVED PLAN MUST BE IN PLACE AND INSPECTED AND APPROVED BY THE PRIOR TO CLEARING, STRIPPING OF TOPSOIL OR GRADING.

- THE CONTRACTOR SHALL POST A SIGN AT THE MAIN ENTRANCE TO THE CONSTRUCTION SITE CONTAINING THE AZPDES AUTHORIZATION NUMBER AND/OR COPY OF NOTICE OF INTENT AUTHORIZATION, CONSTRUCTION SITE OPERATOR CONTACT NAME AND TELEPHONE NUMBER, A BRIEF PROJECT DESCRIPTION, AND THE LOCATION OF THE APPROVED STORM WATER POLLUTION PREVENTION PLAN. THE SIGN SHALL ALSO DISPLAY THE NAME, CONTACT INFORMATION, AND QUALIFICATIONS OF THE PERSONNEL PERFORMING ROUTINE INSPECTIONS.
- THE CONTRACTOR'S REPRESENTATIVE IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL COMPLETE AND ADEQUATE STABILIZATION IS ACHIEVED.
- WATER MUST BE PUMPED INTO AN APPROVED FILTERING DEVICE DURING DEWATERING OPERATIONS.
- THE CONTRACTOR'S REPRESENTATIVE SHALL INSPECT AND DOCUMENT ALL EROSION AND SEDIMENT CONTROL MEASURES DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:
 - GRAVEL OUTLETS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED.
 - SILT FENCE AND SEDIMENT BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
 - SEEDING AND SODDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED OR SODDED AS NEEDED.
 - INSPECTION FORMS SHALL BE COMPLETED BY THE CONTRACTOR'S INSPECTOR WITH THE MINIMUM FOLLOWING INFORMATION: INSPECTION DATE, TITLE AND QUALIFICATIONS OF EACH INSPECTOR, WEATHER INFORMATION FOR PERIOD SINCE LAST INSPECTION, LOCATION OF DISCHARGE OF SEDIMENT OR OTHER POLLUTANTS, LIST OF BMPs THAT NEED TO BE MAINTAINED OR INADEQUATE, LIST ADDITIONAL NEEDED BMPs, CORRECTIVE ACTION REQUIRED, SOURCES OF ALL NON-STORMWATER AND CONTROL MEASURES, DATES WHEN MAJOR GRADING ACTIONS OCCURRED, POLLUTANT DISCHARGE STATUS OF STORAGE AREAS, AND DATES WHEN CONSTRUCTION ACTIVITIES CEASED.
 - CONTRACTOR IS RESPONSIBLE FOR MAINTAINING INSPECTION RECORDS FOR AT LEAST THREE (3) YEARS FOLLOWING THE COMPLETION OF PROJECT.
 - THE SWPPP SHALL BE MODIFIED BY THE CONTRACTOR WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION OF AN INADEQUATE BMP WHEN NEEDED. BMPs SHALL BE MODIFIED OR ADDED AS SOON AS PRACTICABLE AFTER THE BMP HAS BEEN DETERMINED INADEQUATE.
 - PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED AND ALL WORK COMPLETED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN FOURTEEN (14) DAYS. ROADS AND PARKING AREAS SHALL BE STABILIZED AS SOON AS PRECIPITATION OR IRRIGATION IS AVAILABLE.
 - ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED WITHIN 30 DAYS AFTER ADEQUATE SITE STABILIZATION AND AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, AS AUTHORIZED BY THE INSPECTORS. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES WILL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
 - WHEN SEDIMENT IS TRANSPORTED ONTO A PAVED ROAD SURFACE, THE ROAD WILL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT WILL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING WILL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
 - AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
 - FLOOD PLAIN LIMITS SHALL BE CLEARLY MARKED IN THE FIELD BY FLAGS, SIGNS, ETC.

- TREE SAVE AREAS SHALL BE CLEARLY MARKED IN THE FIELD BY ORANGE SAFETY FENCE.
- ORANGE SAFETY FENCE MUST BE INSTALLED AROUND ALL SILT TRAPS AND SEDIMENT BASINS.
- SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH THE STANDARDS.
- THE SWPPP SHALL BE MODIFIED BY THE CONTRACTOR WITHIN 15 BUSINESS DAYS FOLLOWING ANY CHANGE IN DESIGN, CONSTRUCTION OPERATION, OR MAINTENANCE THAT HAS A SIGNIFICANT EFFECT ON DISCHARGE OR NOT PREVIOUSLY ASSESSED IN THE SWPPP.
- THE SWPPP SHALL BE MODIFIED BY THE CONTRACTOR WITHIN 15 BUSINESS DAYS IF IT IS DETERMINED THAT DISCHARGE IS CAUSING OR CONTRIBUTING TO WATER QUALITY EXCEEDENCES OR THE SWPPP IS INEFFECTIVE.

EROSION CONTROL MEASURES

ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS ESTABLISHED HEREIN.

STRUCTURAL PRACTICES

- SILT FENCE BARRIER: SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT LADEN RUNOFF FROM SHEET FLOW AS INDICATED ON THE PLANS.
- A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED WHERE THE ACCESS AREA INTERSECTS WITH EXISTING ROADS DURING MUDDY CONDITIONS. DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE ENTERING THE HIGHWAY.
- STORM DRAIN INLET & SPILLWAY PROTECTION: ALL STORM SEWER INLETS AND SPILLWAYS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS AND CULVERTS.

VEGETATIVE PRACTICES

- TOP SOILING (STOCKPILE) TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION & SEDIMENT PLAN TO THE OWNER COVERING THE STOCKPILE AREA WHICH MAY HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY ACTIVITY COMMENCES.
- TEMPORARY SEEDING ALL DENUED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDING WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
- GRASS AREAS THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH SOG BY THE CONTRACTOR. THE SOG GRASS TYPE SHALL MATCH THE EXISTING AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE SOG IS STABILIZED.

GENERAL NOTES FOR EROSION CONTROL

- A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES, ESPECIALLY WHEN RAIN IS IMMINENT.
- DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT APPROVAL OF THE INSPECTOR.
- ALL PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH DAY.
- AFTER A RAIN STORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING BASINS. ANY GRADED SLOPE SURFACE PROTECTION MEASURE DAMAGED DURING A RAIN STORM SHALL BE IMMEDIATELY REPAIRED.
- FILL SLOPES AT THE CONSTRUCTION SITE PERIMETER MUST DRAIN AWAY FROM THE TOPS OF THE SLOPES AT THE END OF EACH DAY.
- A COPY OF THE PROJECTS STORM WATER POLLUTION PROTECTION PLAN (SWPPP) SHALL BE MAINTAINED AT THE CONSTRUCTION SITE AND ALWAYS AVAILABLE FOR REVIEW.

- PROTECT ALL STORM DRAINAGE STRUCTURES FROM SEDIMENT CLOGGING BY PROVIDING INLET PROTECTION AT ALL OPENINGS.
- AVOID PAVING DURING WET WEATHER.
- STORE MATERIALS AWAY FROM DRAINAGE COURSES TO PREVENT CONTACT WITH STORM WATER.
- PLACE DRIP PANS OR ABSORBENT MATERIALS UNDER CONSTRUCTION EQUIPMENT WHEN NOT IN USE.
- CLEAN UP SPILLS WITH ABSORBENT MATERIALS.
- OLD ASPHALT MUST BE DISPOSED OF PROPERLY.
- KEEP WORK SITE CLEAN AND ORDERLY DAILY.
- PROPERLY STORE PAINTS AND SOLVENTS.
- PERMANENTLY MARK STORM DRAIN STRUCTURES IN A MANNER APPROVED BY THE CONSTRUCTION INSPECTOR TO MINIMIZE INADVERTENT DISPOSAL OF RESIDUAL PAINTS, SOLVENTS, OR ANY OTHER POLLUTANT.
- ALLOW MATERIAL DELIVERY AND STORAGE ONLY IN DESIGNATED AREAS AND AVOID TRANSPORT NEAR DRAINAGE PATHS AND WATERWAYS.
- MINIMIZE THE USE OF HAZARDOUS MATERIALS ON SITE.
- CLEAN UP LEAKS AND SPILLS IMMEDIATELY.
- USE WATERTIGHT DUMPSTERS FOR TRASH AND CONSTRUCTION WASTE.
- COLLECT SITE TRASH AS NEEDED, ESPECIALLY DURING RAINY OR WINDY CONDITIONS.
- ARRANGE FOR REGULAR WASTE COLLECTION BEFORE CONTAINERS OVERFLOW.
- DO NOT ALLOW BRUSHES OR PAINT CONTAINERS TO BE CLEANED OUT IN THE DIRT, STREET, GUTTER, OR STORM DRAINS.
- STORE AND COVER DRY AND WET MATERIALS FROM CONCRETE PLACEMENT AWAY FROM DRAINAGE AREAS.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY. WASHOUT AREAS SHALL BE AWAY FROM STORM DRAINS, OPEN DITCHES, OR STREETS.
- TEMPORARY SANITARY FACILITIES SHALL BE MAINTAINED IN GOOD WORKING ORDER BY A LICENSED SERVICE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING HIS PLAN THROUGHOUT CONSTRUCTION AND INDICATE ANY AND ALL REVISIONS / UPDATES ON THIS PLAN.
- CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER THAT STORM WATER WILL BE CONTAINED WITHIN THE PROJECT OR CHANNELLED INTO THE STORM DRAIN SYSTEM PROVIDED THAT IT IS FREE FROM POLLUTANTS AND DEBRIS.
- CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER FROM CORRECTING ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION CONFORMANCE WITH THE REQUIREMENTS OF THIS PLAN SHALL IN NO WAY RELIEVE THE DEVELOPER FROM HIS RESPONSIBILITIES TO THE SITE AND ADJACENT PROPERTIES. TEMPORARY EROSION CONTROL SHALL CONSIST OF, BUT NOT BE LIMITED TO, CONSTRUCTING SUCH FACILITIES AND TAKING SUCH MEASURES AS ARE NECESSARY TO PREVENT, CONTROL AND ABATE WATER, MUD AND EROSION DAMAGE TO PUBLIC AND PRIVATE PROPERTY AS A RESULT OF THE CONSTRUCTION OF THIS PROPERTY.
- CLEARING AND GRUBBING SHOULD BE LIMITED TO AREAS THAT WILL RECEIVE IMMEDIATE GRADING. EROSION CONTROL MEASURES WILL BE REQUIRED TO PROTECT AREAS WHICH HAVE BEEN CLEARED AND GRUBBED. THESE MEASURES MAY INCLUDE BUT NOT BE LIMITED TO: GRADED DITCHES, SAND OR GRAVEL BAGS, BARRIERS AND SILT FENCING. CARE SHALL BE EXERCISED TO PRESERVE VEGETATION BEYOND LIMITS OF GRADING AND PREVENT SEDIMENT DISCHARGE WHILE CONSTRUCTION IN THIS AREA IS ACTIVE.
- SEDIMENT CONTROL SHALL BE USED AT THE TOE OF ANY ERODIBLE SLOPE.
- CONTRACTOR SHALL IMMEDIATELY RESTORE ANY DAMAGED EROSION CONTROL MEASURE WITHIN THE PROJECT BOUNDARY.

- FACES OF FINISHED CUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION. THESE PERMANENT CONTROL MEASURES MAY CONSIST OF ADEQUATE SEEDING, PLANTING AND JUTE MATTING. THE PROTECTION FOR THE SLOPES SHALL BE INSTALLED AS SOON AS PRACTICABLE AND PRIOR TO CALLING FOR FINAL APPROVAL.
- AFTER A RAIN STORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS AND BASINS.
- CONTRACTOR / SUBCONTRACTOR TRAINING IN SEDIMENT AND EROSION CONTROL IN ACCORDANCE WITH AZPDES.
- THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE, AND TAKE NECESSARY PRECAUTIONS, TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO MAG STANDARDS, AZPDES STANDARDS AND SPECIFICATIONS AND GENERALLY ACCEPTED CONSTRUCTION PRACTICE.
- THESE PLANS REPRESENT A REASONABLE EFFORT TO IMPLEMENT THE MOST CURRENT BEST MANAGEMENT PRACTICES (BMPs) IN MITIGATING STORM WATER POLLUTION DURING CONSTRUCTION. THE EFFECTIVENESS OF THE MITIGATION MEASURES DEPICTED IN THESE PLANS DEPEND IN PART ON PROPER INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND REPAIR OF THE DEVICES SELECTED.

MAINTENANCE:

IN GENERAL, ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. REFER TO THE ATTACHED EROSION & SEDIMENT CONTROL STANDARD NOTES FOR DETAILED MAINTENANCE AND REVEGETATION / STABILIZATION REQUIREMENTS.

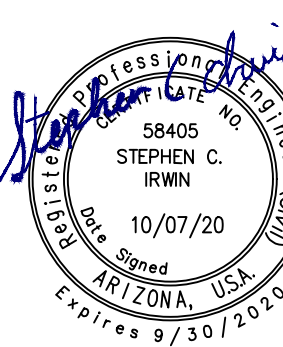
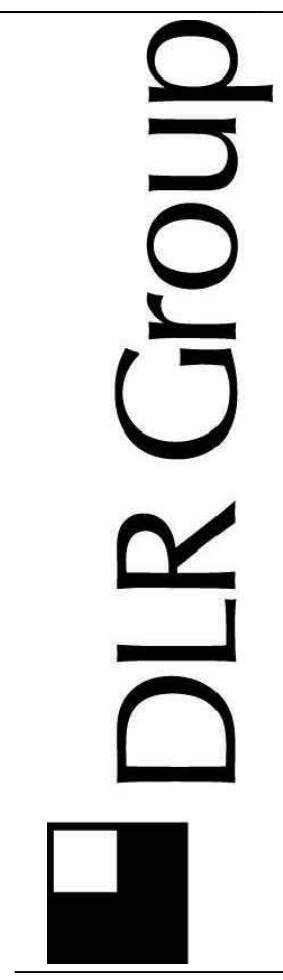
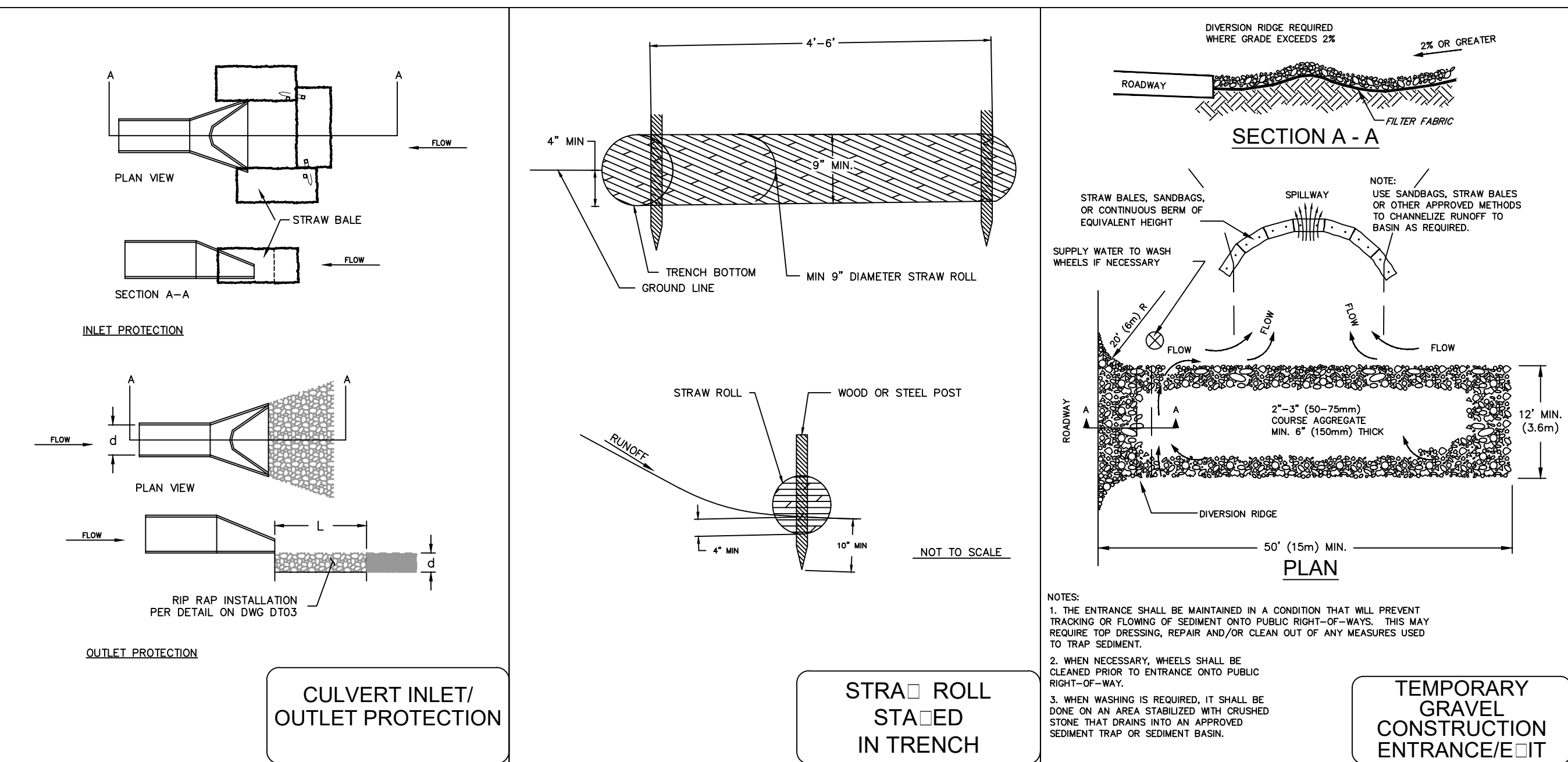
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TEMPORARY CONCRETE WASHOUT FACILITY NOTES

- CONTRACTOR TO DESIGNATE EQUIP./MATERIAL STORAGE SITE AND CONCRETE WASHOUT AS PART OF SWPPP PRIOR TO START OF CONSTRUCTION.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES AND WATERCOURSES, UNLESS DETERMINED UNFEASIBLE BY ENGINEER. EACH FACILITY SHALL BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHALL HAVE A TEMPORARY PIT (BELOW GRADE) OR BERMED AREA (ABOVE GRADE) OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND WASTE CONCRETE MATERIALS GENERATED DURING WASHOUT PROCEDURES. IF LOCATED ABOVE GRADE, THE WASHOUT AREA SHALL BE LINED WITH AN IMPERMEABLE MATERIAL.
- ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHALL BE BROKEN UP, REMOVED AND DISPOSED OF PER BMP SOLID WASTE MANAGEMENT.
- WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, AS DETERMINED BY THE ENGINEER, THE HARDENED CONCRETE SHALL BE REMOVED AND PROPERLY DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE THE PROPERTY OF THE CONTRACTOR, SHALL BE REMOVED THE SITE OF THE WORK AND SHALL BE DISPOSED OF OUTSIDE THE HIGHWAY RIGHT-OF-WAY.
- HOLE, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE FACILITIES SHALL BE BACKFILLED AND REPAIRED.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CONSTRUCTION SEQUENCE

- INSTALL INLET PROTECTION
- PAVEMENT REMOVAL AND INSTALL HAY BALES
- INSTALL CONSTRUCTION ENTRANCES
- DRAINAGE INFRASTRUCTURE/UTILITIES
- SITE CONSTRUCTION
- PERMANENT REVEGETATION/SLOPE STABILIZATION
- SCHEDULED MONITORING AND MAINTENANCE



Northern Arizona University - Student Athlete High Performance Center, Building 73A
 NAU Project: 09-731-191
 1650 S. San Francisco Street, Flagstaff, Arizona, 86011 (SAPHC-73A)

CONSTRUCTION DOCUMENTS
 6.22.2020
 Revisions
 AS03 06.04.20 TRADES, NAU REVS
 AS05 10.07.20 TRADES, NAU REVS

Attachment C16 to AS105 dated 10/07/20

30-19131-00
 EROSION CONTROL NOTES & DETAILS

EC02

GENERAL CONSTRUCTION NOTES

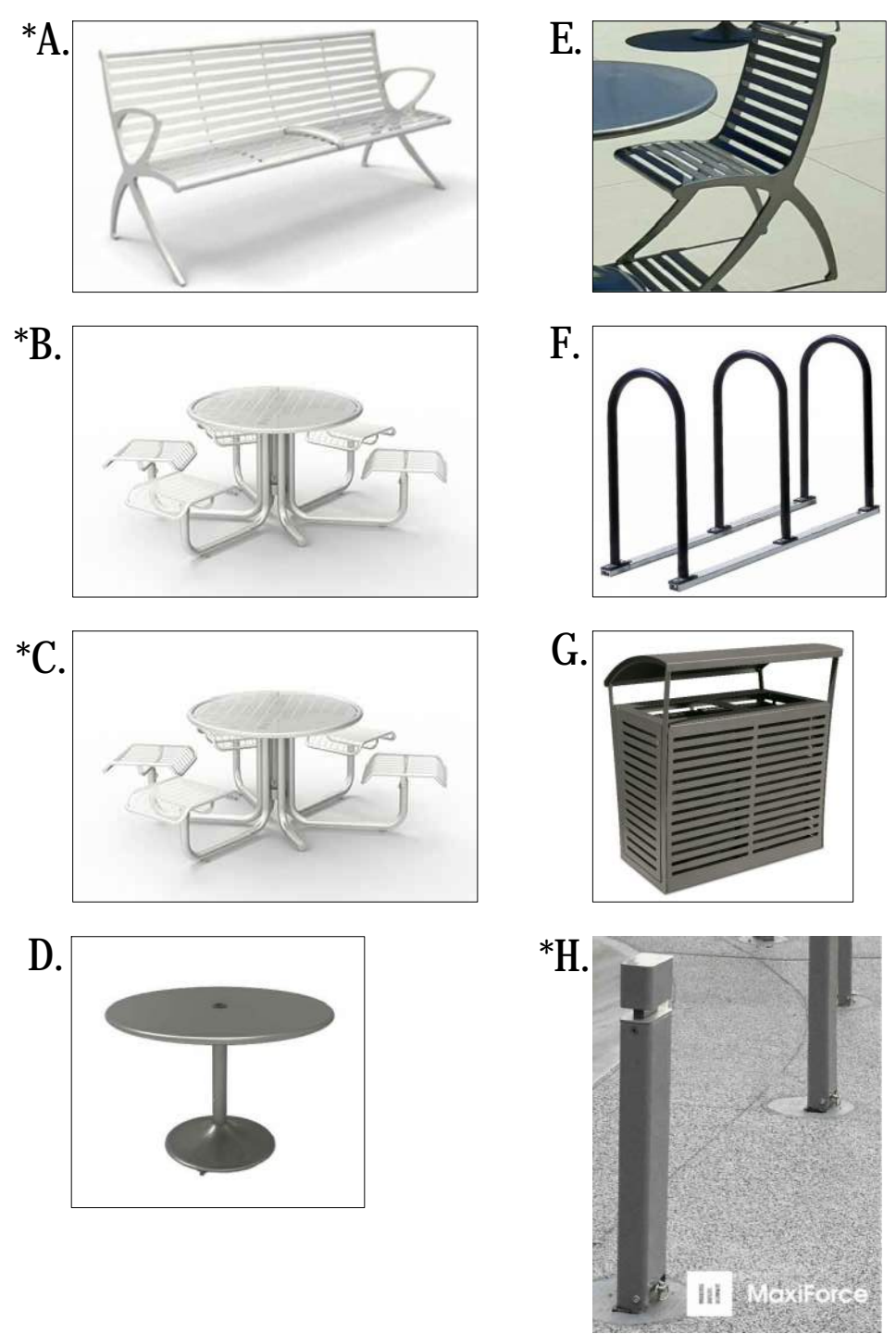
1. NAU LANDSCAPE INSPECTIONS AND PROCESSES MUST BE FOLLOWED PER THE FACILITY SERVICES WEBSITE: INSPECTION PROCEDURE AND FS15 INSPECTION RECORD.
2. THE CONTRACTOR OR OWNER'S REPRESENTATIVE SHALL CONTACT THE LANDSCAPE ARCHITECT FOR A PRE-CONSTRUCTION MEETING PRIOR TO START OF ANY WORK SHOWN ON THESE PLANS.
3. THESE PLANS SHALL NOT BE UTILIZED FOR CONSTRUCTION OR PERMITTING UNLESS STATED FOR SUCH USE IN THE TITLE BLOCK.
4. DRAWINGS ARE INTENDED TO BE PRINTED ON 30" X 42" PAPER. PRINTING THESE DRAWINGS AT A DIFFERENT SIZE WILL IMPACT THE SCALE. VERIFY THE GRAPHIC SCALE BEFORE REFERENCING ANY MEASUREMENTS ON THESE SHEETS. THE RECIPIENT OF THESE DRAWINGS SHALL BE RESPONSIBLE FOR ANY ERRORS RESULTING FROM INCORRECT PRINTING, COPYING, OR ANY OTHER CHANGES THAT ALTER THE SCALE OF THE DRAWINGS.
5. VERIFY ALL PLAN DIMENSIONS PRIOR TO START OF CONSTRUCTION. NOTIFY THE OWNER'S REPRESENTATIVE TO ADDRESS ANY QUESTIONS OR CLARIFY ANY DISCREPANCIES.
6. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
7. SUBMIT A CHANGE ORDER FOR APPROVAL FOR ANY CHANGES TO WORK SCOPE RESULTING FROM FIELD CONDITIONS OR DIRECTION BY OWNER'S REPRESENTATIVE WHICH REQUIRE ADDITIONAL COST TO THE OWNER PRIOR TO PERFORMANCE OF WORK.
8. THE CONTRACTOR SHALL PROVIDE A STAKED LAYOUT OF ALL SITE IMPROVEMENTS FOR INSPECTION BY THE OWNER'S REPRESENTATIVE AND MAKE MODIFICATIONS AS REQUIRED. ALL LAYOUT INFORMATION IS AVAILABLE IN DIGITAL FORMAT FOR USE BY THE CONTRACTOR.
9. CONTRACTOR SHALL CONFIRM THAT SITE CONDITIONS ARE SIMILAR TO THE PLANS, WITHIN TOLERANCES STATED IN THE CONTRACT DOCUMENTS, AND SATISFACTORY TO THE CONTRACTOR PRIOR TO START OF WORK. SHOULD SITE CONDITIONS BE DIFFERENT THAN REPRESENTED ON THE PLANS OR UNSATISFACTORY TO THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND FURTHER DIRECTION.
10. CONTRACTOR IS RESPONSIBLE TO PAY FOR, AND OBTAIN, ANY REQUIRED APPLICATIONS, PERMITTING, LICENSES, INSPECTIONS AND METERS ASSOCIATED WITH WORK.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES OR PENALTIES ASSESSED TO THE OWNER RELATING TO ANY VIOLATIONS OR NON-COMFORMANCE WITH THE PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS, JURISDICTIONAL CODES, AND REGULATORY AGENCIES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL UTILITY LOCATES PRIOR TO ANY EXCAVATION. REFER TO ENGINEERING UTILITY PLANS FOR ALL PROPOSED UTILITY LOCATIONS AND DETAILS. NOTIFY OWNER'S REPRESENTATIVE IF EXISTING OR PROPOSED UTILITIES INTERFERE WITH THE ABILITY TO PERFORM WORK.
13. UNLESS IDENTIFIED ON THE PLANS FOR DEMOLITION OR REMOVAL, THE CONTRACTOR IS RESPONSIBLE FOR THE COST TO REPAIR UTILITIES, ADJACENT OR EXISTING LANDSCAPE, ADJACENT OR EXISTING PAVING, OR ANY PUBLIC AND PRIVATE PROPERTY THAT IS DAMAGED BY THE CONTRACTOR OR THEIR SUBCONTRACTOR'S OPERATIONS DURING INSTALLATION, ESTABLISHMENT OR DURING THE SPECIFIED MAINTENANCE PERIOD. ALL DAMAGES SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS AS DETERMINED BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR LOGGING ANY DAMAGES PRIOR TO START OF CONSTRUCTION AND DURING THE CONTRACT PERIOD.
14. ALL WORK SHALL BE CONFINED TO THE AREA WITHIN THE CONSTRUCTION LIMITS AS SHOWN ON THE PLANS. ANY DAMAGES TO EXISTING OR ADJACENT PROPERTY SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. IN THE EVENT THE CONTRACTOR REQUIRES A MODIFICATION TO THE CONSTRUCTION LIMITS, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER'S REPRESENTATIVE PRIOR TO ANY DISTURBANCE OUTSIDE OF THE LIMITS OF WORK.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY OF THEIR TRENCHES OR EXCAVATIONS THAT SETTLE.
16. THE CONTRACTOR SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO THE APPROPRIATE JURISDICTIONAL AGENCIES AND THE OWNER'S REPRESENTATIVE IF THEIR WORK AND OPERATIONS AFFECT OR IMPACT THE PUBLIC RIGHTS-OF-WAY. OBTAIN APPROVAL PRIOR TO ANY WORK WHICH AFFECTS OR IMPACTS THE PUBLIC RIGHTS-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES OR PENALTIES ASSESSED TO THE OWNER RELATING TO THIS REQUIREMENT DURING THE CONTRACT PERIOD.
17. SIGHT TRIANGLES AND SIGHT LINES SHALL REMAIN UNOBSTRUCTED BY EQUIPMENT, CONSTRUCTION MATERIALS, PLANT MATERIAL OR ANY OTHER VISUAL OBSTACLE DURING THE CONTRACT PERIOD AND AT MATURITY OF PLANTS PER LOCAL JURISDICTIONAL REQUIREMENTS.
18. NO PLANT MATERIAL OTHER THAN GROUND COVER IS ALLOWED TO BE PLANTED ADJACENT TO FIRE HYDRANTS AS STIPULATED BY JURISDICTIONAL REQUIREMENTS.
19. COORDINATE SITE ACCESS, STAGING, STORAGE AND CLEANOUT AREAS WITH OWNER'S REPRESENTATIVE.
20. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY SAFETY FENCING AND BARRIERS AROUND ALL IMPROVEMENTS SUCH AS WALLS, PLAY STRUCTURES, EXCAVATIONS, ETC. ASSOCIATED WITH THEIR WORK UNTIL SUCH FACILITIES ARE COMPLETELY INSTALLED PER THE PLANS, SPECIFICATIONS AND

21. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THEIR MATERIAL STOCK PILES AND WORK FROM VANDALISM, EROSION OR UNINTENDED DISTURBANCE DURING THE CONSTRUCTION PERIOD AND UNTIL FINAL ACCEPTANCE IS ISSUED.
22. THE CONTRACTOR SHALL KNOW, UNDERSTAND AND ABIDE BY ANY STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ASSOCIATED WITH THE SITE. IF A STORM WATER POLLUTION PREVENTION PLAN IS NOT PROVIDED BY THE OWNER'S REPRESENTATIVE, REQUEST A COPY BEFORE PERFORMANCE OF ANY SITE WORK.
23. MAINTAIN ANY STORM WATER MANAGEMENT FACILITIES THAT EXIST ON SITE FOR FULL FUNCTIONALITY. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ANY NEW STORM WATER MANAGEMENT FACILITIES THAT ARE IDENTIFIED IN THE SCOPE OF WORK TO FULL FUNCTIONALITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES OR PENALTIES ASSESSED TO THE OWNER FOR FAILURE TO MAINTAIN STORM WATER MANAGEMENT FACILITIES DURING THE CONTRACT PERIOD.
24. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM EXITING THE SITE OR ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION OR CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES OR PENALTIES ASSESSED TO THE OWNER RELATING TO THESE REQUIREMENTS DURING THEIR CONTRACTED COURSE OF WORK.
25. THE CONTRACTOR SHALL BE RESPONSIBLE TO PREVENT ANY IMPACTS TO ADJACENT WATERWAYS, WETLANDS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS RESULTING FROM WORK DONE AS PART OF THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES OR PENALTIES ASSESSED TO THE OWNER RELATING TO THESE STANDARDS DURING THEIR CONTRACTED COURSE OF WORK.
26. THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CONSTRUCTION MATERIAL IMPORTED TO OR EXPORTED FROM THE PROJECT SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF MATERIAL DURING TRANSPORT. TRANSPORTATION METHODS ON PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES OR PENALTIES ASSESSED TO THE OWNER RELATING TO THESE REQUIREMENTS.
27. THE CLEANING OF EQUIPMENT IS PROHIBITED AT THE JOB SITE UNLESS AUTHORIZED BY THE OWNER'S REPRESENTATIVE IN A DESIGNATED AREA. THE DISCHARGE OF WATER, WASTE CONCRETE, POLLUTANTS, OR OTHER MATERIALS SHALL ONLY OCCUR IN AREAS DESIGNED FOR SUCH USE AND APPROVED BY THE OWNER'S REPRESENTATIVE.
28. THE CLEANING OF CONCRETE EQUIPMENT IS PROHIBITED AT THE JOB SITE EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE IN THE STORM SEWER IS PROHIBITED.
29. THE USE OF REBAR, STEEL STAKES, OR STEEL FENCE POSTS TO STAKE DOWN STRAW OR HAY BALES OR TO SUPPORT SILT FENCING USED AS AN EROSION CONTROL MEASURE IS PROHIBITED.
30. OPEN SPACE SWALES: IF SWALES ARE EXISTING ON SITE AND ARE NOT INTENDED TO BE MODIFIED AS PART OF THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE CONVEYANCE OF WATER WITHIN THE SWALES DURING THE CONTRACT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DIVERSION OR PUMPING OF WATER IF REQUIRED TO COMPLETE WORK. ANY SWALES DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED/RESTORED TO THEIR ORIGINAL CONDITION. IF THE SWALE NEEDS TO BE DISTURBED FOR ANY REASON, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO DISTURBANCE.
31. DETENTION AND WATER QUALITY PONDS: IF DETENTION PONDS AND WATER QUALITY PONDS ARE EXISTING ON SITE AND ARE NOT INTENDED TO BE MODIFIED AS PART OF THE PLANS, THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE PONDS, DRAINAGE STRUCTURES AND SPILLWAYS DURING CONSTRUCTION. ALL PONDS, DRAINAGE STRUCTURES AND SPILLWAYS SHALL BE MAINTAINED IN OPERABLE CONDITIONS AT ALL TIMES. ANY POND OR SPILLWAY AREAS DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED/RESTORED TO THEIR ORIGINAL CONDITION. IF THE POND NEEDS TO BE DISTURBED OR MODIFIED FOR ANY REASON, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO DISTURBANCE.
32. MAINTENANCE ACCESS BENCHES: IF MAINTENANCE BENCHES OR ACCESS DRIVES EXIST ON SITE AND ARE NOT INTENDED TO BE MODIFIED AS PART OF THE PLANS, THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE BENCHES OR ACCESS DRIVES DURING CONSTRUCTION. ANY BENCHES OR ACCESS DRIVES DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED/RESTORED TO THEIR ORIGINAL CONDITION. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING BENCHES AND ACCESS DRIVES DURING THE CONSTRUCTION PERIOD. IF ACCESS NEEDS TO BE BLOCKED FOR ANY REASON, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INTERRUPTION OF ACCESS.
33. NAU TECHNICAL STANDARDS SHALL SUPERSEDE THE PLANS, NOTES AND SPECIFICATIONS UNLESS OTHERWISE APPROVED BY NAU LANDSCAPE ARCHITECT AND LANDSCAPE & OUTDOOR SERVICES DEPARTMENT.

AMENITIES SCHEDULE

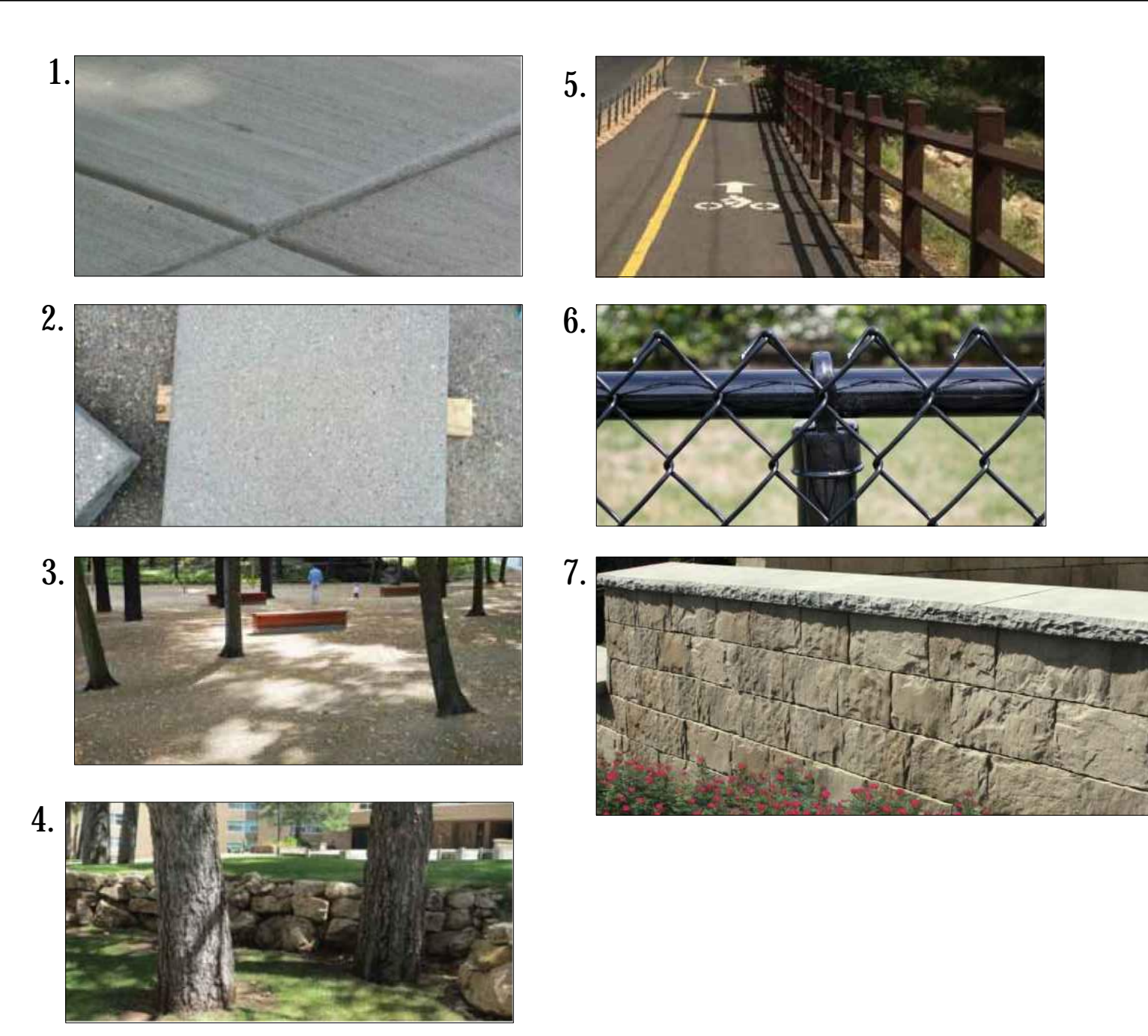
QTY.	MATERIAL	DESCRIPTION
A. 10	BENCH	- MANUFACTURER: LANDSCAPE FORMS - MODEL: 'PARC VUE' BENCH - COLOR: 'TITANIUM' POWDERCOATED METAL - 72" SURFACE MOUNTED BACKED BENCH WITH ARMS AND CUSTOM SKATEBOARD DETERRENT (PROVIDED BY MANUFACTURER)
B. 1	ATTACHED TABLE AND CHAIRS (ADA)	- MANUFACTURER: LANDSCAPE FORMS - MODEL: 42" CAROUSEL TABLE, PERFORATED, DINING HEIGHT WITHOUT UMBRELLA HOLE - 3 SEATS, BACKLESS
C. 2	ATTACHED TABLE AND CHAIRS	- MANUFACTURER: LANDSCAPE FORMS - MODEL: 42" CAROUSEL TABLE, PERFORATED, DINING HEIGHT WITHOUT UMBRELLA HOLE - 4 SEATS, BACKLESS
D. 3	MOVABLE TABLE	- MANUFACTURER: LANDSCAPE FORMS - MODEL: 'CATENA', 42" DIA. STEELHEAD, PERFORATED TABLETOP WITHOUT UMBRELLA HOLE
E. 11	MOVABLE CHAIRS	- MANUFACTURER: LANDSCAPE FORMS - MODEL: 'PARC VUE 24" SINGLE BACKED BENCH SEAT
F. 4	BIKE RACKS	- MANUFACTURER: MADRAX - MODEL: UT160 - 4 LOOP, 8 BIKE CAPACITY - PAINT PER NAU STANDARD: MODERN MASTERS ME209 PEWTER. CONTRACTOR SHALL SUBMIT A PAINT SAMPLE FOR APPROVAL.
G. 3	METAL TRASH & RECYCLING RECEPTACLES	- MANUFACTURER: ANOVA - MODEL: 'EXPOSITION' 70 GAL RECEPTACLE/RECYCLER - LABELS: MIXED RECYCLING 'LANDFILL' - COLOR: ADVANTAGE FINISH, SLEX TEXTURED CHARCOAL. LABELS IN WHITE LETTERING WITH NO BACKGROUND COLOR - SIDE DOORS, LOW PROFILE FUSION
H. 2	COLLAPSIBLE BOLLARD	- MANUFACTURER: BLUE EMBER TECHNOLOGIES https://maxiforcebollards.com/ - MODEL: MAXIFORCE - MCSW-SS3-S w/ STANDARD DUTY ALUMINUM RELEASE INSERT (BREAKAWAY INSERT) - COLOR: BENGAL SILVER DRYLAC 049-99999 - POWDER COAT - SEE DETAIL 5/L-502

*ACTUAL PRODUCT DIFFERS SLIGHTLY FROM IMAGE SHOWN



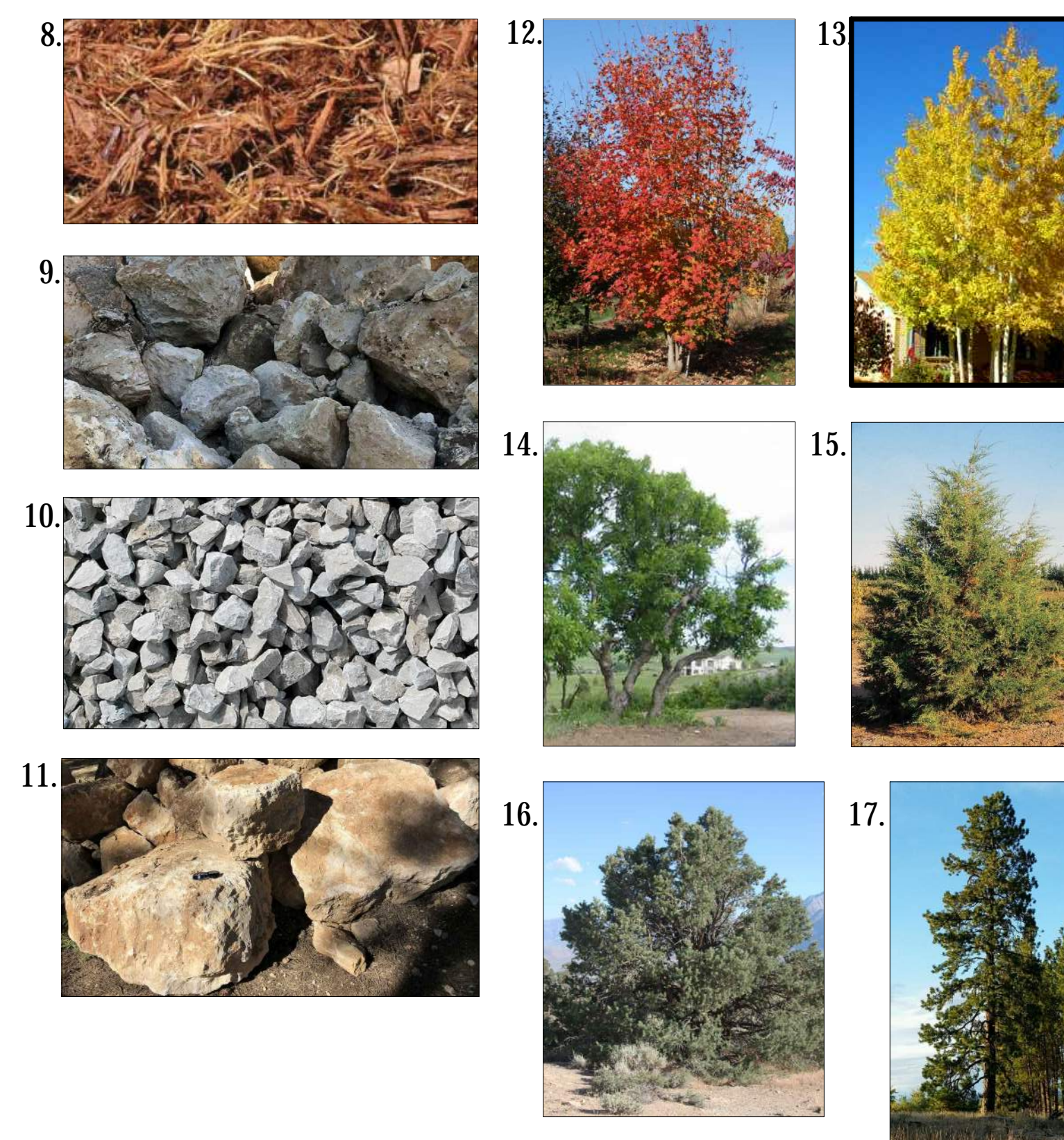
MATERIALS SCHEDULE - HARDSCAPE

MATERIAL	DESCRIPTION
1. STANDARD BROOM FINISH CONCRETE PAVING	- BROOM FINISH - STANDARD GRAY CONCRETE (NO PIGMENT) - CONCRETE TO MEET NAU STANDARDS - SAW CUT AND BEVELED ON BRIDGE AND IN PLAZA SPACES - TOOLED JOINTS FOR ALL OTHER AREAS - JOINTS 1/2" WIDE - JOINTS MUST EXTEND TO A DEPTH OF 1/4 OF SLAB THICKNESS
2. SAND FINISH CONCRETE	- PRODUCT: TOP CAST WITH SURFACE RETARDER BY GRACE CONSTRUCTION PRODUCTS OR LANDSCAPE ARCHITECT APPROVED EQUAL - COVERAGE: 250 SF PER GALLON - CONCRETE TO MEET NAU STANDARDS - RETARDANT REMOVAL PER MANUFACTURER STANDARDS, TYP. WITHIN 6-24 HRS OF APPLICATION - TIMING OF REMOVAL DEPENDENT UPON TEMP TO CREATE DESIRED FINISH - STANDARD GRAY CONCRETE (NO PIGMENT) - LIGHT SANDBLAST FINISH
3. CRUSHER FINES PAVING	- 1/2" MINUS MADISON GOLD DECOMPOSED GRANITE WITH FINES W/ TACKIFIER - TO BE PLACED 4" THICK TO DETER WEED GROWTH (NO WEED FABRIC) - SLOPE AT 1% MIN. TO DRAIN - SURFACE SHALL MEET ADAS 302 REQUIREMENTS
4. RETAINING BOULDERS	- DRYSTACK LARGE BOULDERS, 18"+ IN LENGTH AND 8"+ IN HEIGHT - CAP: NONE - STONE TO BE FROM ON-SITE STOCKPILE OR FOR PURCHASE FROM NAU FS LOS - SEE DETAILS FOR MORE INFORMATION
5. BARRIER FENCE	- MATCH FUTS RAILING - RAILING MUST BE OFFSET FROM CONCRETE TO BE TREATED WITH MURIATIC ACID AND PEROXIDE TO INDUCE RUSTING AESTHETIC AND THEN SEALED TO PREVENT STAINING OF THE CONCRETE - SEE DETAIL 1/L-502
6. VINYL COATED CHAIN LINK FENCE	- 8" TALL, BLACK, VINYL COATED FENCE TO MATCH EXISTING FENCE AROUND PRACTICE FIELD - SEE DETAIL 2/L-502
7. MODULAR BLOCK RETAINING WALL	- BELGARD TANDEM WALL AND CAP, COLOR: 'DANVILLE BEIGE'. ALL THREE SOLID UNIT SIZES MAY BE USED - STRUCTURAL DRAWINGS FOR STRUCTURAL INFORMATION. REFER TO MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. https://www.belgard.com/products/walls/tandem-modular-block



MATERIALS SCHEDULE - LANDSCAPE

MATERIAL	DESCRIPTION
8. SHREDDED WESTERN CEDAR MULCH	- DOUBLE SHREDDED (GORILLA HAIR) - TO BE PLACED 4" THICK OR 2" THICK PER PLANS TO DETER WEED GROWTH (NO WEED FABRIC)
9. CHANNEL ROCK	- CRUSHED LIMESTONE FROM ON-SITE STOCKPILE - 12" DEPTH MIN. - SEE DETAILS FOR MORE INFORMATION
10. LIMESTONE LANDSCAPE BED (OR 1" ROCK SPRINGS CHOCOLATE ROCK IF MORE ECONOMICAL)	- CRUSHED LIMESTONE FROM ON-SITE STOCKPILE OR FOR PURCHASE FROM NAU FS LOS - 1.5" DIAMETER - 4" DEPTH - TO BE USED AROUND BUILDING - SEE PLANS - MUST BE EITHER ALL LIMESTONE OR ALL ROCK SPRINGS CHOCOLATE ROCK
11. LIMESTONE BOULDERS	- BOULDERS TO BE FROM ON-SITE STOCKPILE - ROCK MUST RESIST FREEZE/THAW CONDITIONS (ASTM D531E, C568) - SEE DETAILS FOR MORE INFORMATION
12. ACER GIBBULA FLAME	- PLANT PER NAU STANDARDS - PLANT AT 6'-8" HT MIN - EST. MATURE SIZE 20'H X 20'W
13. POPULUS TREMULOIDES QUAKING ASPEN	- PLANT PER NAU STANDARDS - PLANT AT 15 GALLON, SINGLE STEM - EST. MATURE SIZE 35'H X 15'W
14. QUERCUS GAMBELII GAMBEL OAK	- PLANT PER NAU STANDARDS - PLANT AT 6'-8" HT MIN - EST. MATURE SIZE 25'H X 10'W
15. JUNIPERUS SCOPULARUM ROCKY MOUNTAIN JUNIPER	- PLANT PER NAU STANDARDS - PLANT AT 8'-10" HT MIN - EST. MATURE SIZE 30'H X 15'W
16. PINUS EDULIS PINYON PINE	- PLANT PER NAU STANDARDS - PLANT AT 6'-8" HT MIN - EST. MATURE SIZE 25'H X 15'W
17. PINUS PONDEROSA PONDEROSA PINE	- PRESERVE EXISTING PONDEROSA PINES WHENEVER POSSIBLE AND IMPROVE FOREST HEALTH - PLANT PER NAU STANDARDS - ADDITIONAL PONDEROSA PINES TO BE PLANTED AT MIN. 6' HEIGHT - EST. MATURE SIZE 70'H X 35'W



DLIR Group
 Northern Arizona University - Student Athlete High Performance Center, Building 73A
 CONSTRUCTION DOCUMENTS
 6.22.2020
 Revisions
 ASI03 01/04/20 TRADES, AHJ REVS
 ASI05 10/07/20 TRADES, AHJ REVS.
 Attachment L1 to ASI05 dated 10/07/20
 30-19131-00
 NOTES
 MATERIALS
 L-001

LANDSCAPE NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH 2015 NAU LANDSCAPE MASTER PLAN AS WELL AS THE DIVISION 32 NAU TECHNICAL STANDARDS, AND WITH GENERALLY ACCEPTED ENGINEERING DESIGN AND CONSTRUCTION PRACTICE. ALL WORK AND MATERIALS WHICH DO NOT CONFORM TO THESE STANDARDS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THESE STANDARDS.
- THE CONTRACTOR SHALL FOLLOW THE LANDSCAPE PLANS AND SPECIFICATIONS AS CLOSELY AS POSSIBLE. ANY SUBSTITUTION OR ALTERATION SHALL NOT BE ALLOWED WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE. OVERALL PLANT QUANTITY AND QUALITY SHALL BE CONSISTENT WITH THE PLANS. CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO WORK.
- LANDSCAPE CONTRACTOR TO BE RESPONSIBLE FOR VERIFICATION OF PLANT QUANTITIES. PLANS TAKE PRECEDENCE OVER QTY'S ON LEGEND.
- STOCKPILED CLEAN TOP SOIL FROM ON-SITE SHALL BE PLACED FOR ALL LANDSCAPE AREAS DISTURBED BY CONSTRUCTION. A MINIMUM OF 4" DEPTH IS REQUIRED. IF STOCKPILED TOPSOIL IS UNAVAILABLE CONTRACTOR SHALL SUBMIT SOILS TESTING DEMONSTRATING THAT THE IMPORTED TOPSOIL IS A VIABLE GROWING MEDIUM FOR APPROVAL. SUBMIT SOILS TESTING TO NAU LANDSCAPE ARCHITECT AND LANDSCAPE & OUTDOOR SERVICES DEPARTMENT.
- PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE THOROUGHLY LOOSEMED TO A DEPTH OF 6" - 8".
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE EXISTS IN ALL LANDSCAPE AREAS. SURFACE DRAINAGE ON LANDSCAPE AREAS SHALL NOT FLOW TOWARDS STRUCTURES AND FOUNDATIONS. MAINTAIN SLOPE AWAY FROM FOUNDATIONS PER THE GEOTECHNICAL REPORT RECOMMENDATIONS. ALL LANDSCAPE AREAS BETWEEN WALKS AND CURBS SHALL DRAIN FREELY TO THE CURB UNLESS OTHERWISE IDENTIFIED ON THE GRADING PLAN. IN NO CASE SHALL THE GRADE, TURF, THATCH, OR OTHER LANDSCAPE MATERIALS DAM WATER AGAINST WALKS, MINIMUM SLOPES ON LANDSCAPE AREAS SHALL BE 2%. MAXIMUM SLOPE SHALL BE 33% UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE.
- TREES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DRAINAGE AREAS, OR UTILITY EASEMENTS. CONTACT LANDSCAPE ARCHITECT FOR RELOCATION OF PLANTS IN QUESTIONABLE AREAS PRIOR TO INSTALLATION.
- PER NAU TECH STANDARDS, LANDSCAPE CONTRACTOR TO GUARANTEE ALL TREES AND IRRIGATION FOR TWO (2) YEARS. ALL OTHER LANDSCAPE ELEMENTS TO BE GUARANTEED FOR ONE (1) YEAR.
- PRIOR TO PROJECT COMPLETION, LANDSCAPE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS FROM SITE AND PERFORM FINAL RAKING AND WEEDING.
- PLANT LAYOUT TO BE APPROVED IN FIELD BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- REPORT PLANT PLACEMENT CONFLICTS TO LANDSCAPE ARCHITECT. PLANTS TO BE LOCATED TO COORDINATE WITH SITE ELEMENTS.
- ALL SUBSTITUTIONS IN PLANT TYPE, LOCATION, OR SIZE SHALL BE APPROVED BY NAU LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. PROVIDE PLANT DELIVERY TICKET TO NAU LANDSCAPE ARCHITECT.
- NOTIFY OWNER AND NAU LANDSCAPE ARCHITECT SHOULD SOIL CONDITIONS EXIST WHICH WOULD PREVENT PROPER SOIL DRAINAGE OR SUBSURFACE ROCK PREVENTS PLANTING IN ANY IMPROVEMENT AREAS.
- FACE TREES AND SHRUBS TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT PLANTS OR BUILDINGS. AVOID BRANCHES INTERFERING WITH SIDEWALKS AND LIMB UP ANY REMAINING BRANCHES OVERHANGING WALKS.
- CAREFULLY REVIEW UTILITY LINES SHOWN ON THE CIVIL ENGINEERING SITE PLANS WHICH REPRESENT THE OWNER'S MOST AVAILABLE (NOT NECESSARILY ACCURATE) DOCUMENTATION. CALL 1-800-STAKE-IT AT LEAST 3 BUSINESS DAYS AHEAD OF SCHEDULED EXCAVATION. WHEN EXCAVATION APPROACHES GAS LINES, EXPOSE LINES BY CAREFULLY PROBING AND HAND DIGGING.
- ADJACENT SITE IMPROVEMENTS, PAVEMENT CONSTRUCTION, IRRIGATION INSTALLATION AND FINISH GRADING SHALL BE COMPLETED PRIOR TO PLANTING WORK. DO NOT PLANT WHEN CONDITIONS ARE NOT SUITABLE FOR DIGGING, MIXING, RAKING AND/OR GRADING. PLANTING NEEDS TO OCCUR DURING THE MONTHS THAT IRRIGATION SYSTEMS ARE IN OPERATION, BETWEEN APRIL 1 AND SEPTEMBER 30, UNLESS CONTRACT INCLUDES HAND WATERING.
- ALL PLANTING BED AREAS TO RECEIVE MULCH PER MATERIALS SCHEDULE AND LANDSCAPE PLAN
- ALL EVERGREEN TREES SHALL BE FULLY BRANCHED TO THE GROUND AND SHALL NOT EXHIBIT SIGNS OF ACCELERATED GROWTH AS DETERMINED BY THE LANDSCAPE ARCHITECT.
- STAKE AND GUY TREES 3" CALIPER AND 6' HEIGHT OR LARGER FOR A PERIOD OF ONE YEAR. NAU SHALL REMOVE STAKES.
- ALL TREES IN SEEDING AREAS SHALL RECEIVE SHREDDED CEDAR MULCH OR PINE NEEDLE RINGS.
- PROVIDE 50% ORGANIC MATTER/IMPORTED TOPSOIL AND NATIVE SOIL IN ALL PLANTING PITS TO IMPROVE SOIL STRUCTURE AND NUTRIENT CONTENT. PROVIDE AMENDMENT PRODUCT DATA TO LANDSCAPE ARCHITECT FOR APPROVAL.
- A ROUTINE NUTRIENT & TEXTURE SOILS ANALYSIS, WITH RECOMMENDATIONS FOR AMENDMENTS FROM A SOILS LAB, IS REQUIRED TO DETERMINE ADDITIONAL ADDITIVES THAT MAY BE REQUIRED FOR SEED, NATIVE GRASS & PLANT ESTABLISHMENT. SUBMIT TO LANDSCAPE ARCHITECT FOR REVIEW.
- TREE AND SHRUB AND ORNAMENTAL GRASS INSTALLATION:
 - SOIL EXCAVATED FROM THE PLANTING PIT SHALL BE TYPICALLY CONSIDERED ACCEPTABLE AS BACKFILL MATERIAL FOR PLANTING.
 - ALL CONTAINERS SHALL BE REMOVED PRIOR TO PLANT INSTALLATION IN A MANNER THAT DOES NOT DISTURB THE POTTED SOIL OR ROOT BALL.
 - SET THE ROOT BALL ON SR (6) INCHES OF FIRM PLANTING SOIL, PLUMB AND IN THE CENTER OF THE PIT WITH THE ROOT BALL CROWN SLIGHTLY ABOVE THE SAME ELEVATION AS ADJACENT FINISHED LANDSCAPE GRADIES.
 - ONCE PLANT IS SET, PLACE BACKFILL MATERIAL AROUND BASE AND SIDES OF ROOT BALL AND WORK EACH LAYER TO SETTLE BACK BACKFILL AND ELIMINATE VOIDS.
- PERENNIAL BED INSTALLATION:
 - PRIOR TO PLANTING ACTIVITIES, COMPLETELY REMOVE EXISTING WEEDS, INCLUDING ROOTS. IMMEDIATELY PRIOR TO INSTALLATION, CULTIVATE BEDS TO A DEPTH OF 12" AND GRADE SMOOTHLY AND UNIFORMLY. PLANT PERENNIALS SO THE ROOT CROWN IS AT OR SLIGHTLY ABOVE THE BED'S FINISH GRADE. INSTALL THE SPECIFIED MULCH 2" DEPTH AT THE ROOTBALL AND 4" DEPTH OVER THE ENTIRE BED.
- AT LANDSCAPE COMPLETION, PRUNE DEAD OR DAMAGED BRANCHES, MAKING ALL CUTS AT BRANCH COLLAR, MAINTAIN THE NATURAL HABIT, SHAPE AND SPECIFIED SIZE. REMOVE ALL TAGS, LABELS, AND OTHER MATERIAL.
- DURING THE 2 YEAR GUARANTEE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAND WATERING EVERGREEN PLANT MATERIAL AFTER IRRIGATION SYSTEM IS WINTERIZED. EVERGREENS SHALL BE CHECKED BIWEEKLY TO DETERMINE WATER NEEDS, UNLESS THERE IS SNOW ACCUMULATION OR GROUND IS FROZEN. NATIVE SEEDING WORK SHALL BE DONE PER THE FOLLOWING SPECIFICATIONS.
 - SEE PLANS FOR SEED AND PLUG SPECIES AND SPACING REQUIREMENTS.
 - CONTRACTOR TO BE RESPONSIBLE FOR ESTABLISHMENT AND MAINTENANCE OF NATIVE GRASSES. FOR 2 YEARS AFTER DATE OF COMPLETION AND ACCEPTANCE BY OWNER. GRASS AREAS SHALL BE FULL STANDS, 98% WEED FREE. BARE AREAS TO BE OVERSEEDDED PRIOR TO PROJECT ACCEPTANCE. HAND REMOVE TO CONTROL INVASIONS UNTIL END OF 1 YEAR WARRANTY PERIOD. (BROADLEAF HERBICIDE MAY BE USED ONLY WITH NAU APPROVAL IF WEED SEED INFESTATION IS PRESENT, FOLLOWING 1ST APPLICATION OF SEEDING.)
 - HAND RAKE NATIVE SEED AREAS TO DISTURB SOIL PRIOR TO SEEDING OPERATIONS. HYDROSEED MIX TO INCLUDE NATIVE SEED MIX AS SPECIFIED, WOOD FIBER MULCH, PLANT CELLULOSE-BASED TACKIFIER (PLANTAGO OR EQUAL), AND 3-2-1 ORGANIC FERTILIZER AT A RATE OF 1.5 LB NITROGEN/1000 S.F. IN SMALL AREAS WHERE HYDROSEEDING IS NOT PRACTICAL, TREAT WITH 1" LAYER OF ORGANIC MATTER RAKED INTO TOP 2" OF DISTURBED SOIL. COVER WITH 1" LAYER OF ORGANIC MULCH AFTER SEEDING. APPLY 3-2-1 FERTILIZER WATERED IN.
 - SUBMIT SEEDING OPERATIONS AND GRASS PLUG PLANTING SCHEDULE TO LANDSCAPE ARCHITECT FOR APPROVAL. IF SEEDING/PLANTING OPERATIONS DO NOT OCCUR DURING JULY AND AUGUST 2017, WHEN NATURAL MONSOON MOISTURE AND WARM TEMPERATURES ARE PRESENT, HAND WATERING AND/OR A TURF-TYPE ANNUAL RYE NURSE CROP MAY BE REQUIRED. HAND WATERING FREQUENCY REQUIRED WOULD BE 3 TIMES PER WEEK FOR MONTH TO ROOT IN PLUGS AND GERMINATE SEED IF MONSOONS ARE NOT ACTIVE WITH SUFFICIENT MOISTURE.

PLANT SCHEDULE

SYM	GENUS & SPECIES COMMON NAME	QTY	PLANTING SIZE	ESTIMATED MATURE SIZE	NATIVE	WATER USE	SPACING	SEASONAL INTEREST
DECIDUOUS TREES								
AS103	Acer ginnala 'Flame' Amur Maple	7	1.5" CALIPER, 8' HEIGHT B&B SINGLE STEM	18' H X 18' W	X	L	N/A	S,F
	Populus tremuloides Quaking Aspen	23	1.5" CALIPER 8' HEIGHT, B&B SINGLE-STEM	50' H X 15' W	X	M	N/A	S,F,W
	Quercus gambellii Gambel Oak	4	6' HEIGHT, B&B MULTY-STEM	25' H X 10' W	X	L	N/A	S,F,W
EVERGREEN TREES								
	Juniperus scopulorum Rocky Mountain Juniper	4	6'-8' HT MIN. PER PLAN, B&B	30' H X 15' W	X	L	N/A	E
	Pinus edulis Pinyon Pine	4	6'-8' HT MIN. PER PLAN, B&B	25' H X 15' W	X	L	N/A	E
	Pinus ponderosa Ponderosa Pine	4	8'-10' HT MIN. PER PLAN, B&B	80' H X 30' W	X	L	N/A	E
DECIDUOUS SHRUBS								
	Amelanchier alnifolia Saskatoon Serviceberry	22	15-GALLON 4' HEIGHT	15' H X 8' W		L	8'	SP,S,F
	Cornus sericea 'Arctic Fire' Arctic Fire Dogwood	18	5-GALLON	3' H X 3' W		M	3'	S,F,W
	Holidiscus dumosus Mountain Spray	7	5-GALLON	6' H X 6' W	X	L	5'	S,F
	Lonicera involucrata Twinkery Honeysuckle	28	5-GALLON	4' H X 5' W	X	M	5'	S,F
	Philadelphus microphyllus Littleleaf Mockorange	22	5-GALLON	4' H X 4' W	X	L	4'	S,F
	Potentilla fruticosa Shrubby Cinqufoil (yellow)	49	5-GALLON	3' H X 3' W	X	M	3'	S
AS103	Potentilla fruticosa 'McKays White' McKays White Shrubby Cinqufoil	13	5-GALLON	3' H X 3' W	X	M	3'	S
	Pinus banksianus 'Pawnee' Bates' Creeping Sand Cherry	10	5-GALLON	2' H X 4' W		L	4'	SP,S,F
	Rhus trilobata Three-leaf Sumac	34	5-GALLON	5' H X 5' W	X	L	5'	S,F
	Ribes aureum Golden Currant	5	5-GALLON	5' H X 5' W		L	5'	SP,S,F
	Ribes cereum Wax Currant	16	5-GALLON	3' H X 3' W	X	L	3'	S,F
	Rosa woodsii Woods Rose	43	5-GALLON	4' H X 4' W	X	L	4'	S
	Symphoricarpos oreophilus Mountain Snowberry	52	5-GALLON	3' H X 3' W	X	L	3'	S,W
	Syringa x bloomerang Bloomerang Purple Lilac	12	5-GALLON	4' H X 4' W		M	4'	SP,S
EVERGREEN SHRUBS								
	Chamaebatiaria millefolium Fernbush	24	5-GALLON	5' H X 6' W	X	L	5'	E
	Juniperus communis Common Juniper	35	5-GALLON	3' H X 5' W	X	L	6'	E
AS103	Juniperus horizontalis 'Blue Chip' Blue Chip Juniper	25	5-GALLON	1' H X 6' W		L	5'	E
	Mahonia aquifolium 'Compacta' Compact Oregon Grape Holly	23	5-GALLON	3' H X 4' W		L	3'	E
	Pinus mitis 'Slowmound' Slowmound Mugo Pine	22	5-GALLON	3' H X 3' W		L	3'	E
ORNAMENTAL GRASS								
	Muhlenbergia rigens Deer Grass	9	1-GALLON	4' H X 3' W	X	L	3'	S,F,W
	Sorghastrum nutans Indian Grass	59	1-GALLON	4' H X 3' W	X	L	2'	S,F,W
	Sporobolus airoides Alkali Sacaton	54	1-GALLON	3' H X 2' W	X	L	2'	S,F
PERENNIALS & GROUNDCOVERS								
AS103	+WY Achillea millefolium 'Lanulosa' Western Yarrow	25	1-GALLON	12" H X 24" W	X	L	18"	S,F
	+SH Agastache rupestris Sunset Hyssop	15	1-GALLON	24" H X 24" W	X	L	24"	S,F
	+LP Antennaria parvifolia Littleleaf Pussytoes	17	1-GALLON	3" H X 12" W		L	12"	E
	+GC Aquilegia chrysantha Golden Columbine	20	1-GALLON	24" H X 18" W	X	M	18"	SP,S
	+KN Arctostaphylos uva-ursi Kinnikinnick	13	1-GALLON	6" H X 36" W	X	L	18"	E
	+AF Erigeron sp. Aspen Fleabane	22	1-GALLON	12" H X 24" W	X	L	18"	S
	+WS Fragaria ovals Wild Strawberry	19	1-GALLON	LOW SPREADING	X	M	18"	SP,S,F
	+BF Gallardia aristata Native Blanket Flower	25	1-GALLON	18" H X 18" W	X	L	18"	S,F
	+PS Geum triflorum Prairie Smoke	15	1-GALLON	4" H X 12" W		L	12"	E
	+CB Heuchera sanguineum 'Splendens' Red Coral Bells	17	1-GALLON	12" H X 12" W	X	M	15"	ALL
	+EC Iberis sempervirens Evergreen Candytuft	21	1-GALLON	12" H X 18" W		L	18"	E
	+ST Lithospermum multiflorum Pretty Stoneseed	17	1-GALLON	12" H X 24" W	X	L	18"	S
	+MA Mahonia repens Creeping Mahonia	11	1-GALLON	12" H X 24" W	X	L	18"	E
	+CM Monardella odoratissima Coyote Mint	25	1-GALLON	12" H X 12" W	X	L	12"	S,F
	+PP Penstemon pinifolius Pineleaf Penstemon	16	1-GALLON	12" H X 24" W	X	L	18"	ALL

Total Perennials: 278

Seasonal Interest
SP = Spring
S = Summer
F = Fall
W = Winter
E = Evergreen

TALLGRASS MEADOW SEED & PLUG MIX

SYM	COMMON NAME	GENUS & SPECIES	PERCENT OF COMPOSITION	HEIGHT	DROUGHT TOLERANT	WARM/COOL SEASON	SPACING
TALLGRASS MEADOW - SEED MIX							
	Blue Grama	Bouteloua gracilis	40%	12"-16"	X	WARM	N/A
	Pine Dropseed	Blepharoneuron trichloepis	10%	36"		WARM	N/A
	Side Oats Grama	Bouteloua curtipendula	15%	16"-40"	X	WARM	N/A
	Arizona Fescue	Festuca arizonica	10%	30"-50"		COOL	N/A
	Prairie Junegrass	Koeleria macrantha	10%	8"-28"	X	COOL	N/A
	Deergrass	Muhlenbergia rigens	10%	12"-24"		WARM	N/A
	Switchgrass	Panicum virgatum	5%	24"-60"	X	WARM	N/A
TALLGRASS MEADOW - PLUGS							
	Arizona Fescue**	Festuca arizonica	50% (1,405 total)	12"x12"	L	Spr./Sum./Fall	18"
	Western Yarrow	Achillea millefolium 'Lanulosa'	5% (140 total)	12"x24"	L	Sum./Fall	18"
	Native Blanket Flower	Gallardia aristata	5% (141 total)	18"x18"	L	Sum./Fall	18"
	Scarlet Gilia	Ipomopsis aggregata	5% (140 total)	35"x12"	L	Sum./Fall	18"
	Blue Flax	Linum perenne	5% (141 total)	24"x24"	L,M	Spr./Sum.	18"
	Purple Aster	Machaeranthera canescens	5% (140 total)	24"x24"	L	Sum./Fall	18"
	Bee-Balm	Monarda fistulosa menthaefolia	5% (141 total)	24"x24"	L,M	Sum.	18"
	Scarlet Bugler	Penstemon barbatus	5% (140 total)	24"x18"	L	Sum./Fall	18"
	Firecracker Penstemon	Penstemon eatonii	5% (141 total)	24"x24"	L	Sum.	18"
	Rocky Mountain Penstemon	Penstemon strictus	5% (140 total)	24"x24"	L	Sum.	18"
	Few-Flowered Goldenrod	Solidago sparsiflora	5% (141 total)	24"x24"	L	Sum./Fall	18"

1. Tallgrass meadow seed mix to be seeded at 10 lbs/acre; obtain seeding rates from seed supplier based on percentage of mix listed. 2.810 Total Plugs

2. All plugged areas shall be hydroseeded with the Tallgrass Meadow Seed Mix prior to plugging.

3. See detail 2/L-503 for plug plant spacing details.

5. Arizona Fescue plugs may be purchased through NAU, contact NAU Landscape Architect to coordinate growing time. Contractor is responsible for pickup and delivery to the site.

4. Tallgrass meadow seed area: 17,800sf (14ac)

5. Tallgrass meadow plug area: 5,475sf (13ac)

SHORT MEADOW SEED & PLUG MIX

SYM	COMMON NAME	GENUS & SPECIES	PERCENT OF COMPOSITION	HEIGHT	DROUGHT TOLERANT	WARM/COOL SEASON	SPACING
SHORT MEADOW - SEED MIX							
	Blue Grama	Bouteloua gracilis	40%	12"-16"	X	WARM	N/A
	Idaho Blue Fescue	Festuca idahoensis	10%	15"-16"	X	COOL	N/A
	Sheep's Fescue	Festuca ovina	10%	6"-12"	X	COOL	N/A
	Mountain Muhly	Muhlenbergia montana	10%	9"-18"	X	WARM	N/A
	Mutton Grass	Poa fendleriana	10%	12"-24"	X	COOL	N/A
	Sand Dropseed	Sporobolus cryptandrus	10%	11"-40"	X	WARM	N/A
SHORT MEADOW - PLUGS							
	Blue Grama	Bouteloua gracilis	50% (572 total)	12"x16"	L	Spr./Sum./Fall	12"
	Western Yarrow	Achillea millefolium 'Lanulosa'	8% (91 total)	12"x24"	L	Sum./Fall	12"
	Patchwork	Castilleja integra	7% (80 total)	12"x12"	L,M	Spr./Sum./Fall	12"
	Native Blanket Flower	Gallardia aristata	7% (80 total)	18"x18"	L	Sum./Fall	12"
	Blue Flax	Linum perenne	7% (80 total)	24"x24"	L,M	Spr./Sum.	12"
	Purple Aster	Machaeranthera canescens	7% (80 total)	24"x24"	L	Sum./Fall	12"
	Coyote Mint	Monardella odoratissima	7% (80 total)	12"x12"	L	Sum./Fall	12"
	Mexican Hat Coneflower	Ratibida columnifera	7% (80 total)	24"x24"	L	Sum./Fall	12"

1. Short meadow seed mix to be seeded at 10 lbs/acre; obtain seeding rates from seed supplier based on percentage of mix listed. 1,143 Total Plugs

2. All Short Meadow areas shall be hydroseeded with the Short Meadow Seed Mix prior to plugging.

3. See detail 2/L-503 for plug plant spacing details.

5. Blue Grama plugs may be purchased through NAU, contact NAU Landscape Architect to coordinate growing time. Contractor is responsible for pickup and delivery to the site.

4. Short meadow area: 990sf (9.2ac)

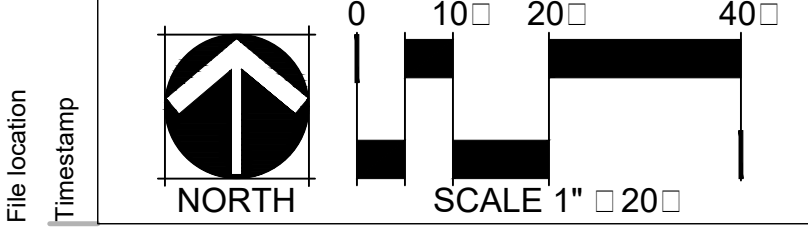
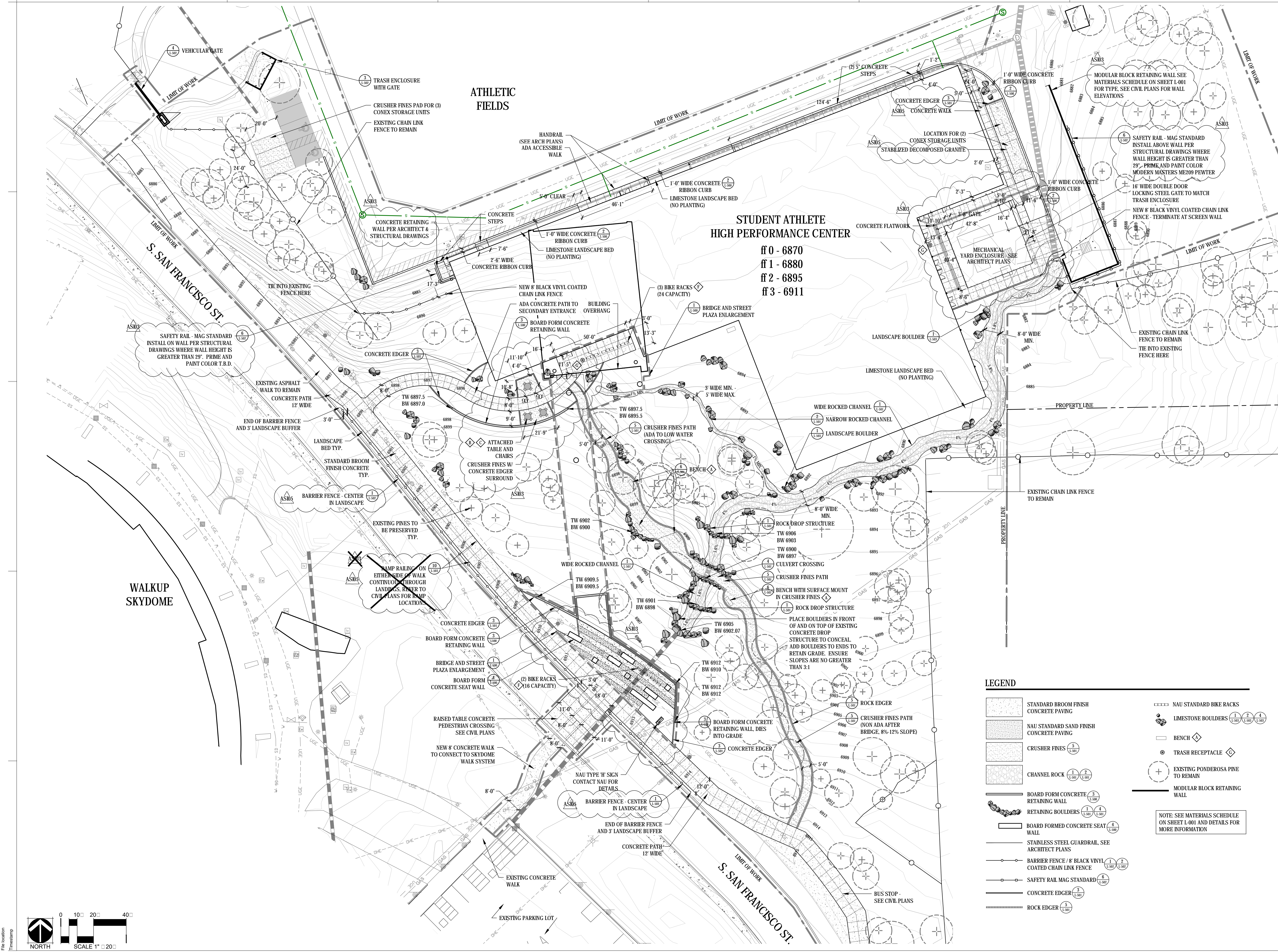
RIPARIAN GRASS BLEND FOR PLD BASIN (SEASONAL MOISTURE)

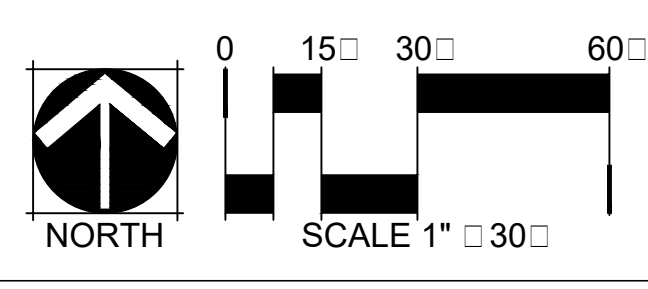
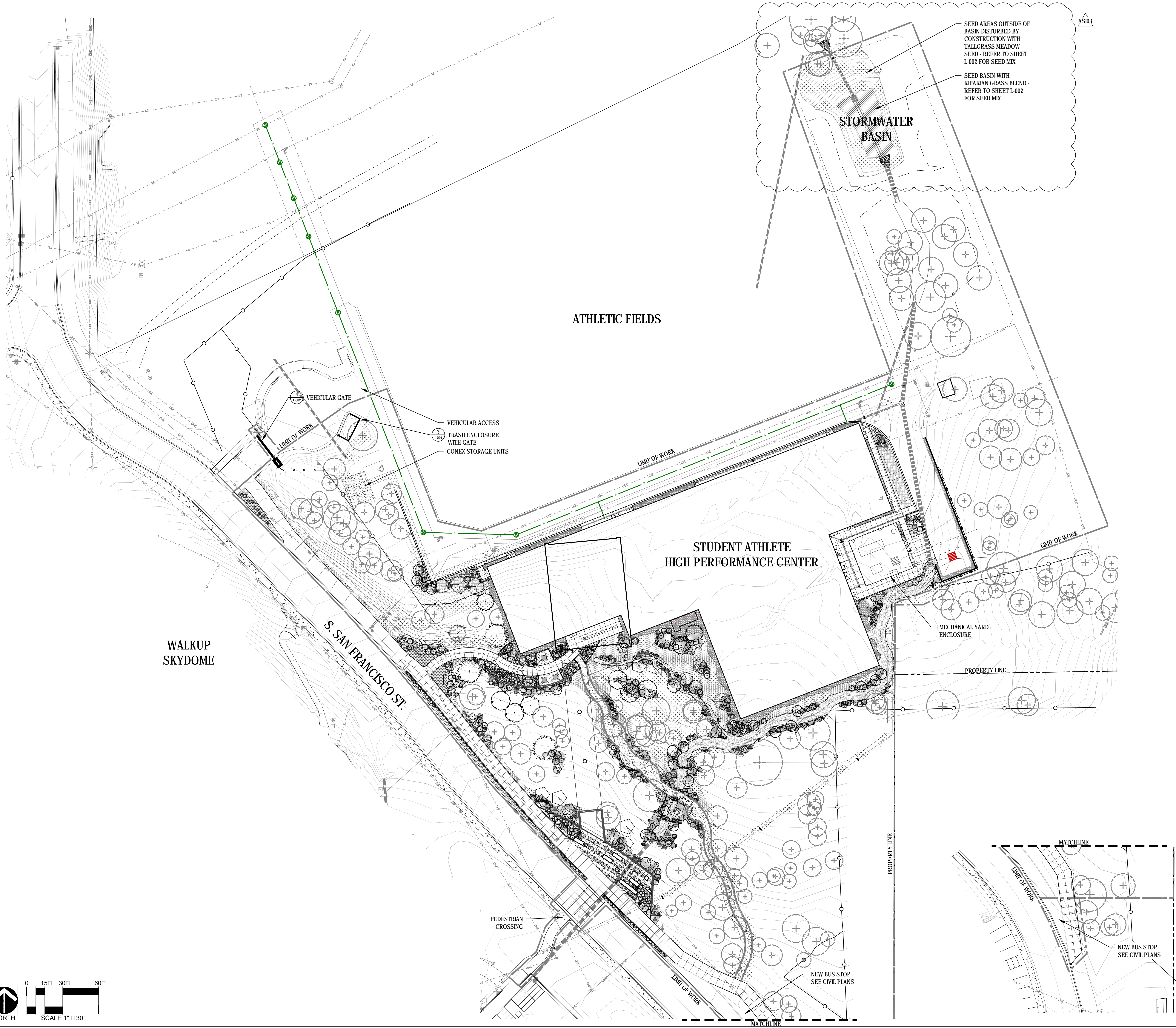
SYM	COMMON NAME	GENUS & SPECIES	PERCENT OF COMPOSITION	HEIGHT	DROUGHT TOLERANT	WARM/COOL SEASON	SPACING
RIPARIAN GRASS BLEND - SEED MIX							
	Blue Grama	Bouteloua gracilis	40%	12"-16"	X	WARM	N/A
	Arizona Fescue	Festuca arizonica	20%	30"-50"		COOL	N/A
	Deergrass	Muhlenbergia rigens	20%	12"-24"		WARM	N/A
	Spiked Muhly	Muhlenbergia wrightii	20%	24"		WARM	N/A

PLANT SELECTION: DECIDUOUS VS EVERGREEN

PLANT TYPE	QTY	% OF TREES	% OF SHRUBS	% OF PER.
Deciduous Trees	34	74%	-	-
Evergreen Trees	12	26%	-	-
Deciduous Shrubs	331	-	72%	-
Evergreen Shrubs	129	-	28%	-
Deciduous Perennials	168	-	-	35%
Evergreen Perennials	110	-	-	65%

PLANT TYPE	QTY	% OF TOTAL
Deciduous Plants (Total)	533	68%
Evergreen Plants (Total)	251	32%



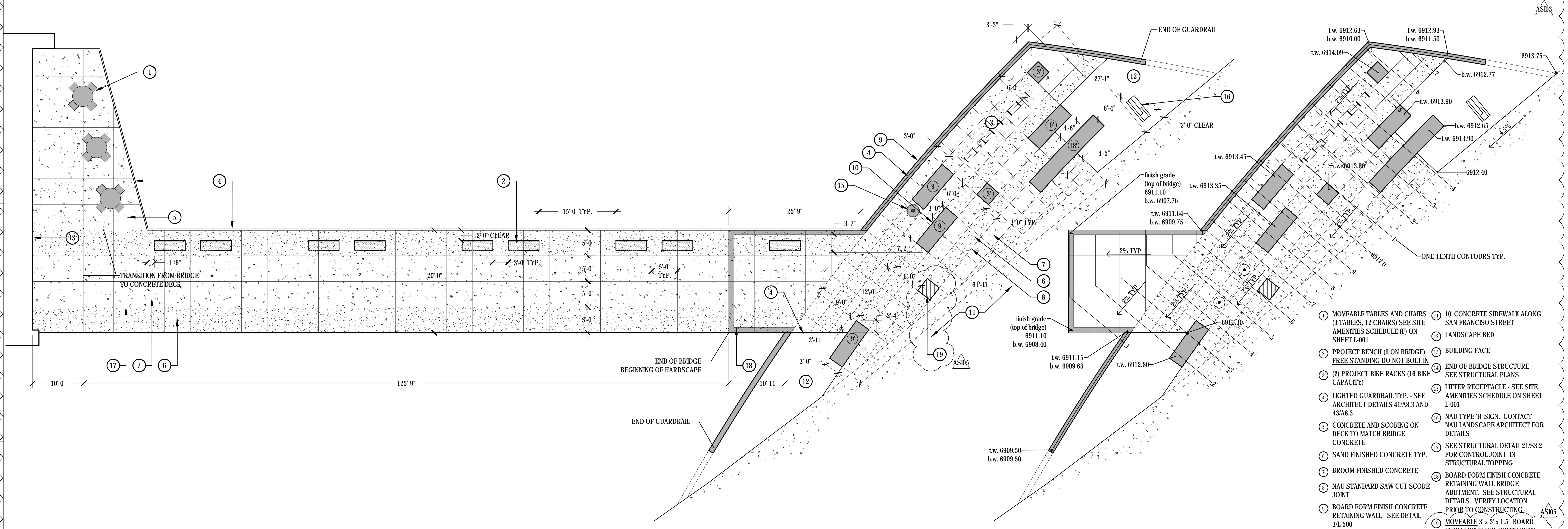


Northern Arizona University - Student Athlete High Performance Center, Building 73A
 NAU Project: 09731191
 1650 S. San Francisco Street, Flagstaff, Arizona, 86011 (SAHPC-73A)

CONSTRUCTION DOCUMENTS
 6.22.2020
 Revisions
 ASI03 9/04/20 TRADES, AHJ REVS

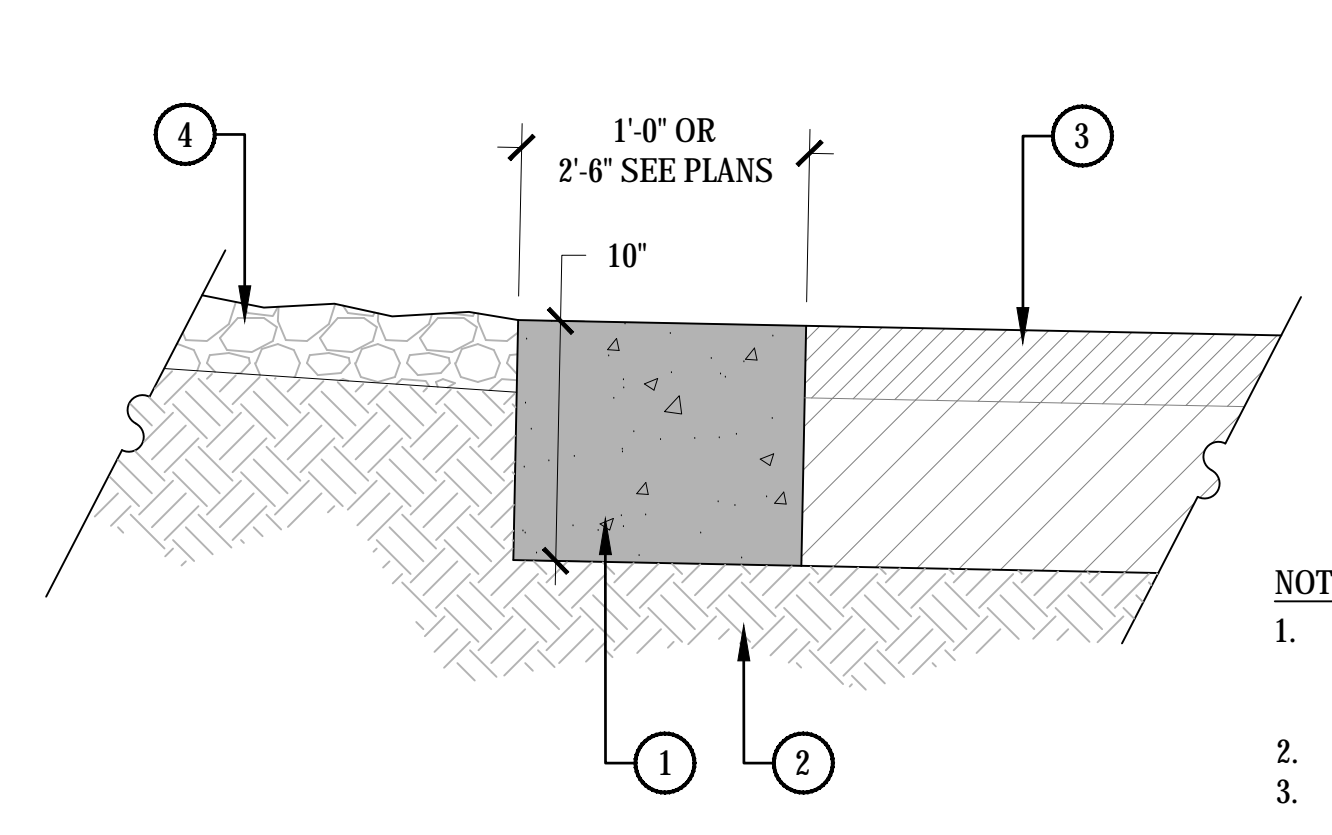
30-19131-00
 OVERALL PLAN

L-102



1 BRIDGE AND STREET PLAZA - PLAN ENLARGEMENT

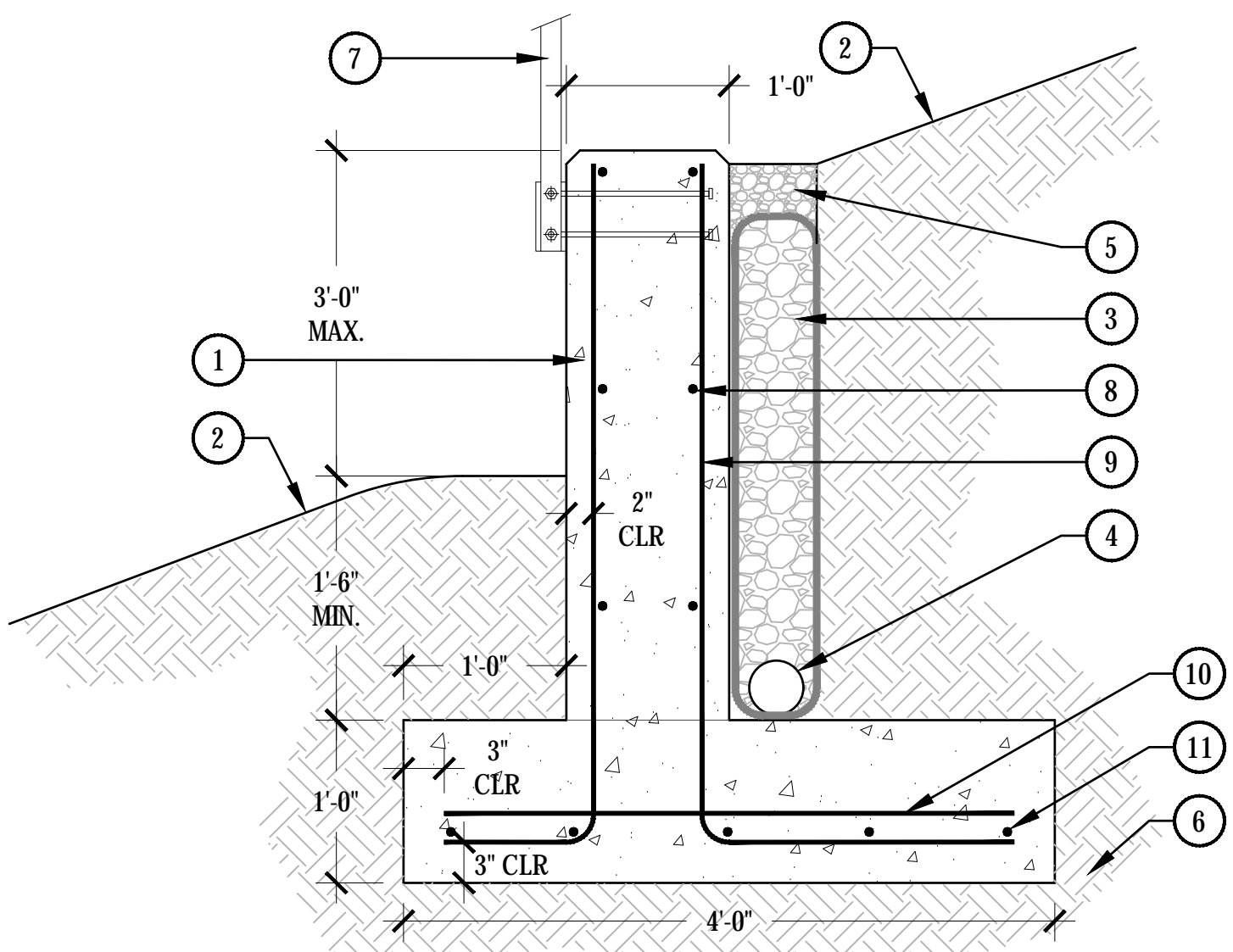
- 1 MOVEABLE TABLES AND CHAIRS (3 TABLES, 12 CHAIRS) SEE SITE AMENITIES SCHEDULE (F) ON SHEET L-001
- 2 PROJECT BENCH (9 ON BRIDGE) FREE STANDING DO NOT BOLT IN
- 3 (2) PROJECT BIKE RACKS (16 BIKE CAPACITY)
- 4 LIGHTED GUARDRAIL TYP. - SEE ARCHITECT DETAILS 41/A8.3 AND 43/A8.3
- 5 CONCRETE AND SCORING ON DECK TO MATCH BRIDGE CONCRETE
- 6 SAND FINISHED CONCRETE TYP.
- 7 BROOM FINISHED CONCRETE
- 8 NAU STANDARD SAW CUT SCORE JOINT
- 9 BOARD FORM FINISH CONCRETE RETAINING WALL - SEE DETAIL 3/L-500
- 10 BOARD FORM FINISH CONCRETE SEAT WALLS - SEE DETAIL 4/L-500
- 11 10' CONCRETE SIDEWALK ALONG SAN FRANCISCO STREET
- 12 LANDSCAPE BED
- 13 BUILDING FACE
- 14 END OF BRIDGE STRUCTURE - SEE STRUCTURAL PLANS
- 15 LITTER RECEPTACLE - SEE SITE AMENITIES SCHEDULE ON SHEET L-001
- 16 NAU TYPE 'H' SIGN. CONTACT NAU LANDSCAPE ARCHITECT FOR DETAILS
- 17 SEE STRUCTURAL DETAIL 21/S3.2 FOR CONTROL JOINT IN STRUCTURAL TOPPING
- 18 BOARD FORM FINISH CONCRETE RETAINING WALL BRIDGE ABUTMENT. SEE STRUCTURAL DETAILS. VERIFY LOCATION PRIOR TO CONSTRUCTING
- 19 MOVEABLE 3' x 3' x 1.5' BOARD FORM FINISH CONCRETE SEAT. NO FOUNDATION. SET ON FLATWORK



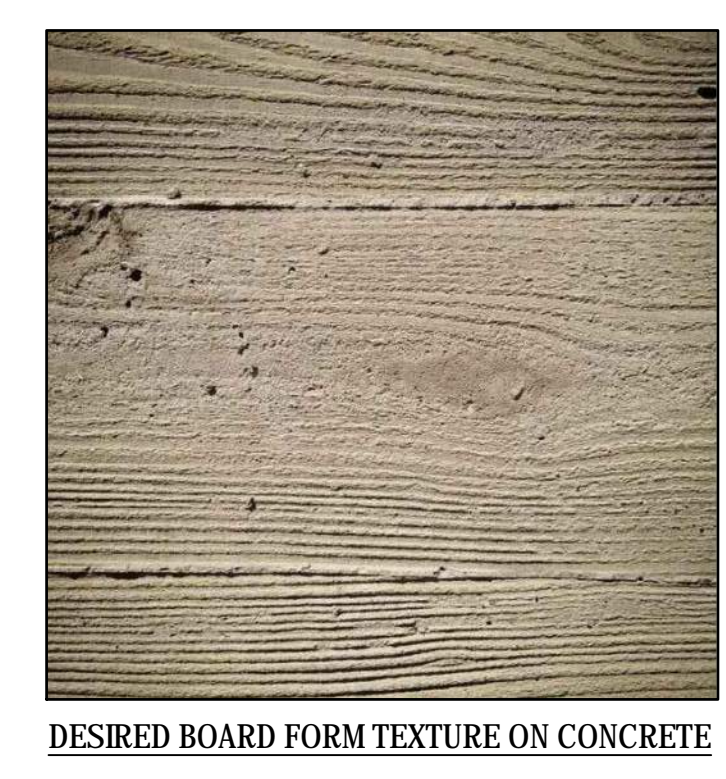
2 RIBBON CURB

- 1 CONCRETE RIBBON CURB
 - 2 8" SCARIFIED NATIVE SOIL COMPACTED TO 95% MAX DRY DENSITY PER ASTM D698
 - 3 HEAVY DUTY ASPHALT PAVEMENT PER CIVIL DETAILS
 - 4 SPECIFIED MULCH PER LANDSCAPE PLANS
- NOTES:
 1. CONSTRUCT CURB AND INSTALL 1/2" MASTIC EXPANSION JOINTS, A.S.T.M. MAG D-1751, SECT. 340.
 2. BROOM FINISH ALL SURFACES
 3. SLOPE RIBBON CURB TOWARDS PAVEMENT AS INDICATED ON THE CIVIL PLANS.
 4. CONTRACTION JOINT SPACING 10' MAXIMUM.
 5. CONCRETE SHALL BE CLASS 'B' PER MAG. SECT. 725 AND INSTALLED PER MAG SECT. 505.
 6. SEE GEOTECHNICAL REPORT (WESTERN TECHNOLOGIES INC. DATED 12-06-2019) FOR COMPACTION AND EARTHWORK RECOMMENDATIONS.

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



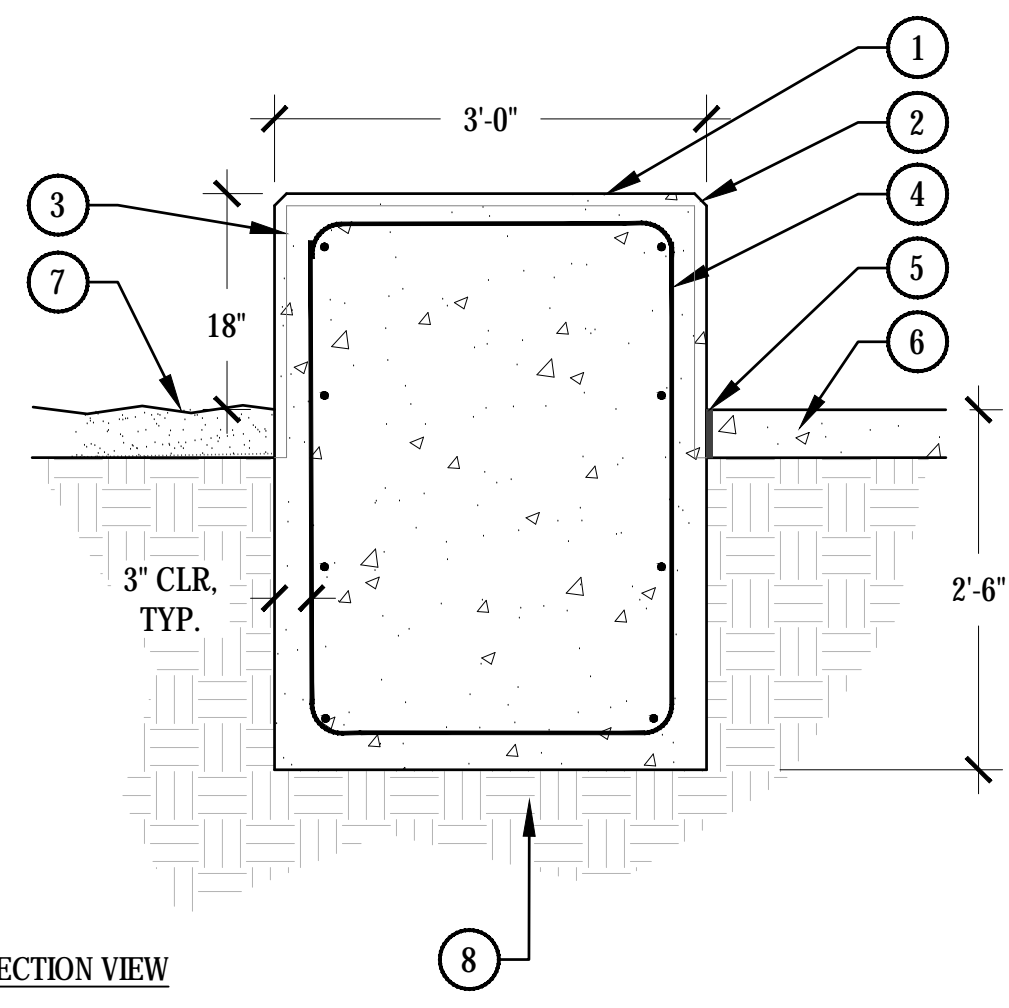
3 BOARD FORM CONCRETE RETAINING WALL



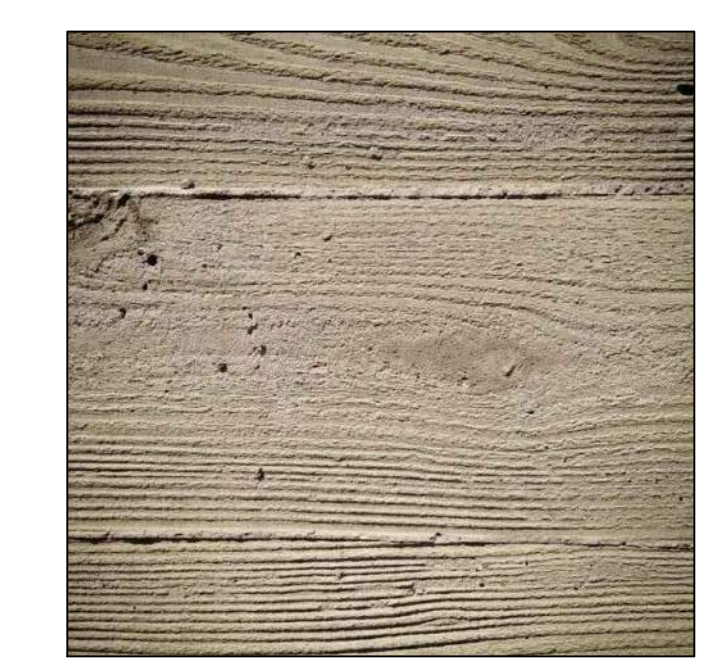
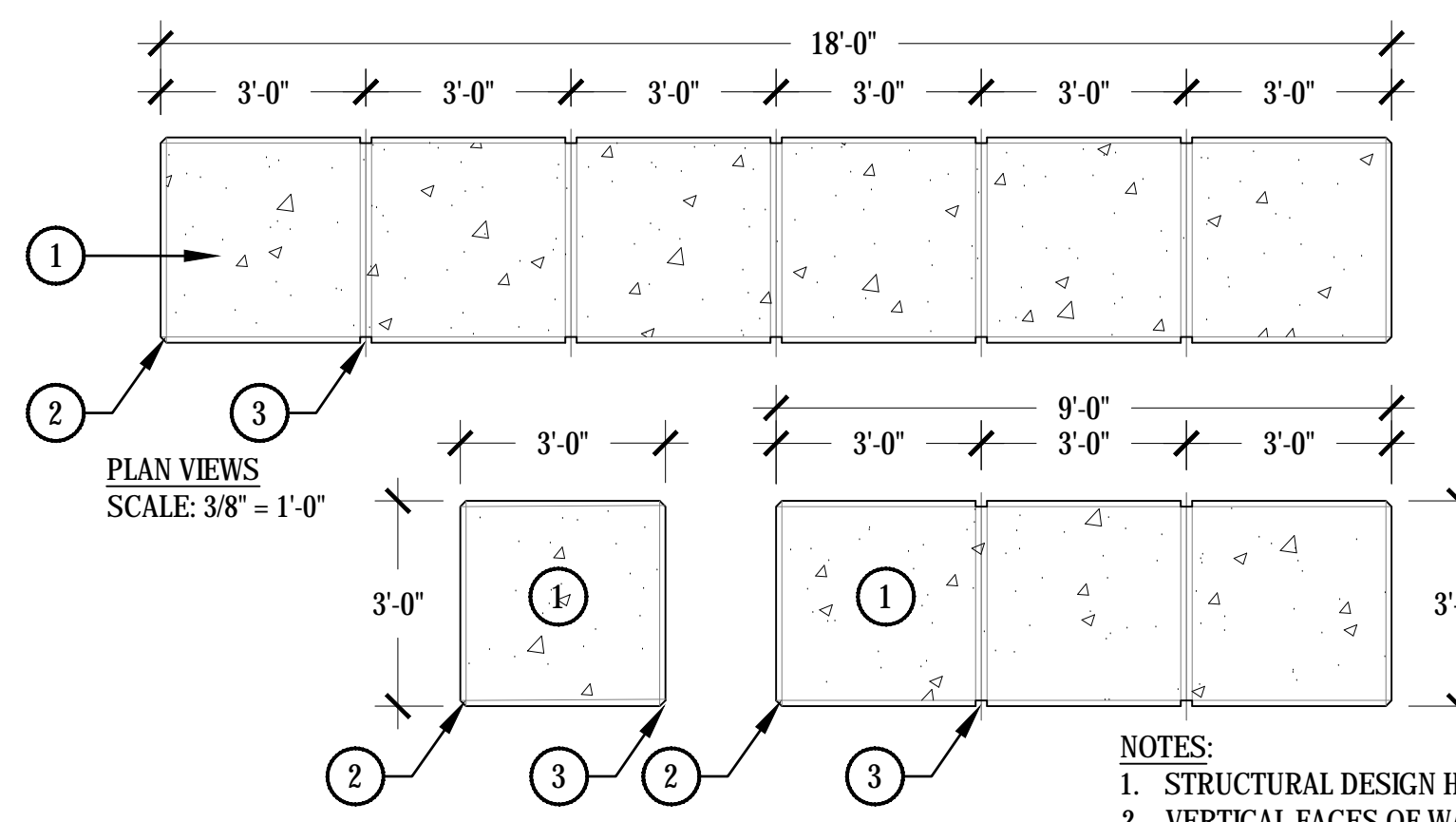
DESIRED BOARD FORM TEXTURE ON CONCRETE

- NOTES:
 1. STRUCTURAL DESIGN HAS BEEN PROVIDED BY DLR.
 2. VERTICAL FACES OF WALL SHALL BE PLUMB, WITH NO INCONSISTENCIES GREATER THAN 1/4" IN 10'-0" MEASURED IN ANY DIRECTION ALONG THE FACE OF THE WALL.
 3. TOP OF WALL SHALL BE SMOOTH (NO BOARD FORM TEXTURE) SLOPE 1/4" PER FOOT, WITH NO INCONSISTENCIES GREATER THAN 1/4" IN 10'-0" MEASURED IN ANY DIRECTION ALONG THE FACE OF THE WALL.
 4. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS.
 5. BOARD FORM TEXTURE TO BE ON ALL EXPOSED SIDES OF WALL. USE 2X4 PINE OR FIR FORMS LIGHTLY SAND BLASTED TO BRING OUT THE GRAIN IN THE WOOD. PATTERN SHALL BE HORIZONTAL. CONTRACTOR SHALL PROVIDE A MOCKUP FOR REVIEW BY NAU AND THE LANDSCAPE ARCHITECT.
 6. CONCRETE FINISH SHALL BE CONSISTENT. VIBRATE CONCRETE SUFFICIENTLY DURING POUR TO AVOID HONEYCOMBING. HOLES GREATER THAN 1/4" WILL RESULT IN A RE-POUR.

SCALE: 1" = 1'-0"



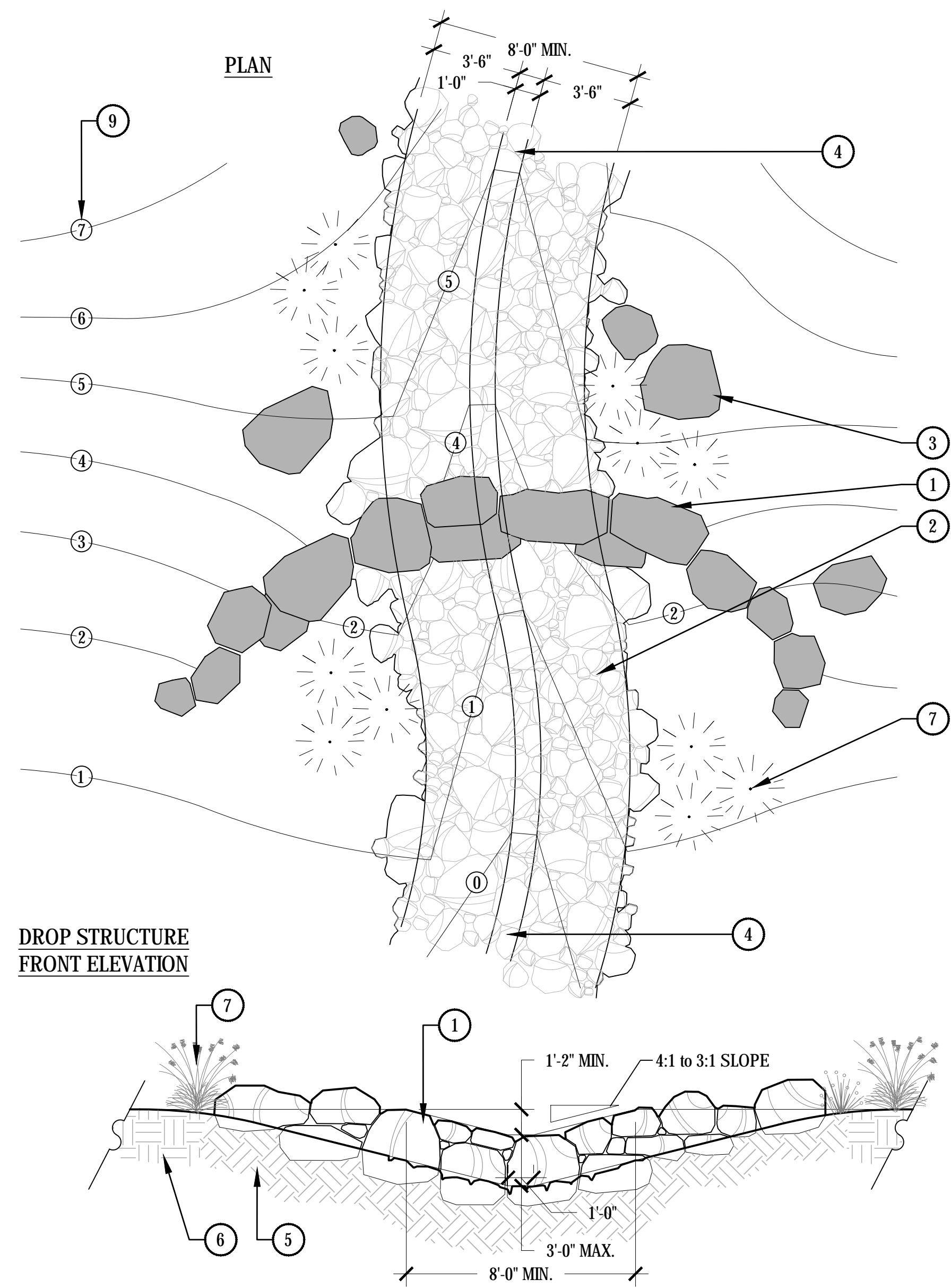
4 BOARD FORM CONCRETE SEAT WALL



DESIRED BOARD FORM TEXTURE ON CONCRETE

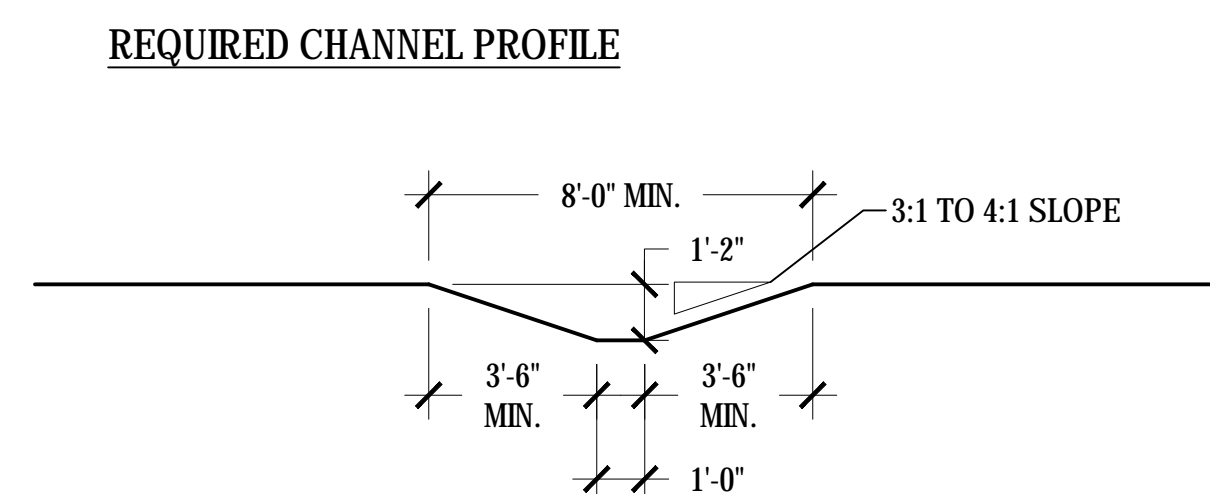
- NOTES:
 1. STRUCTURAL DESIGN HAS BEEN PROVIDED BY DLR.
 2. VERTICAL FACES OF WALL SHALL BE PLUMB, WITH NO INCONSISTENCIES GREATER THAN 1/4" IN 10'-0" MEASURED IN ANY DIRECTION ALONG THE FACE OF THE WALL.
 3. HORIZONTAL FACE SHALL BE SMOOTH (NO BOARD FORM TEXTURE) SLOPE 1/4" PER FOOT, WITH NO INCONSISTENCIES GREATER THAN 1/4" IN 10'-0" MEASURED IN ANY DIRECTION ALONG THE FACE OF THE WALL.
 4. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS.
 5. BOARD FORM TEXTURE TO BE ON ALL SIDES OF WALL. USE 2X4 PINE OR FIR FORMS LIGHTLY SAND BLASTED TO BRING OUT THE GRAIN IN THE WOOD. PATTERN SHALL BE HORIZONTAL. CONTRACTOR SHALL PROVIDE A MOCKUP FOR REVIEW BY NAU AND THE LANDSCAPE ARCHITECT.
 6. CONCRETE FINISH SHALL BE CONSISTENT. VIBRATE CONCRETE SUFFICIENTLY DURING POUR TO AVOID HONEYCOMBING. HOLES GREATER THAN 1/4" WILL RESULT IN A RE-POUR.

SCALE: 3/4" = 1'-0"

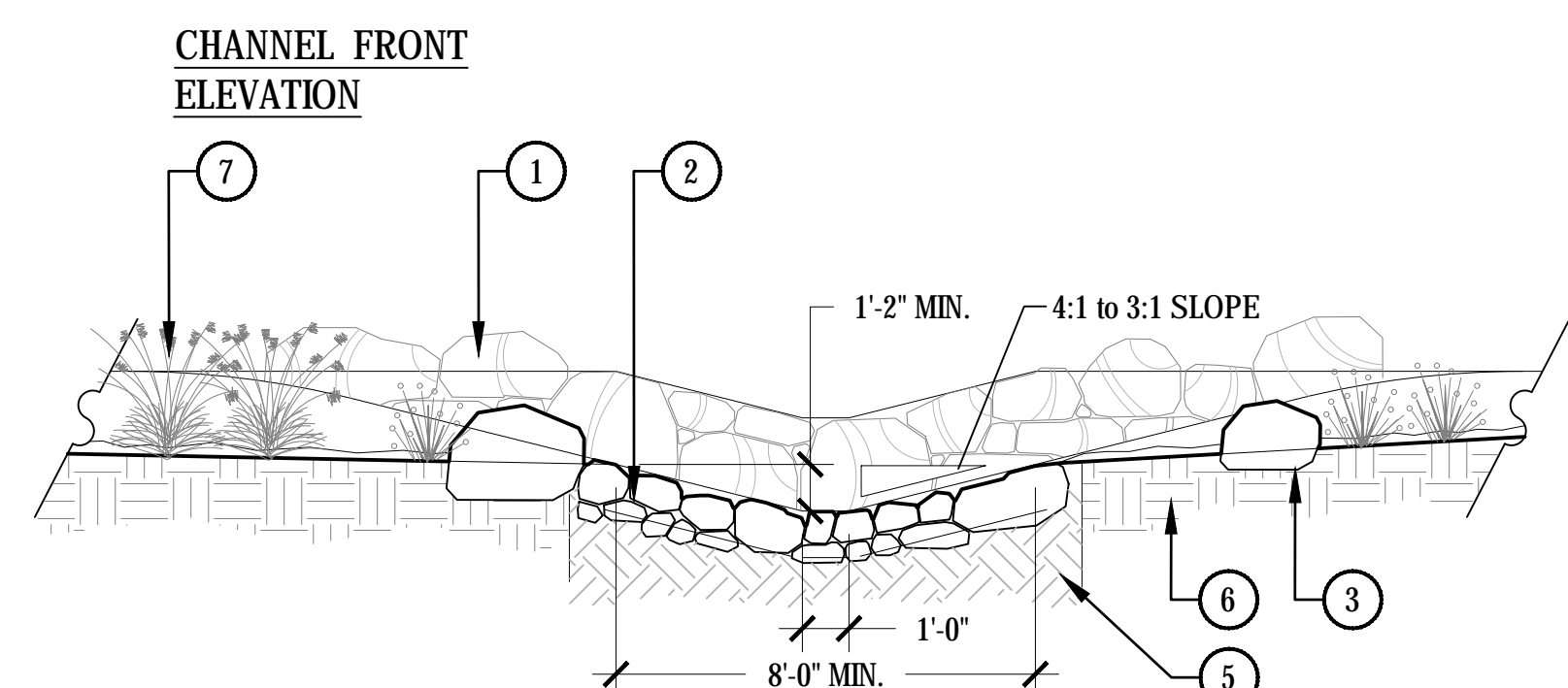
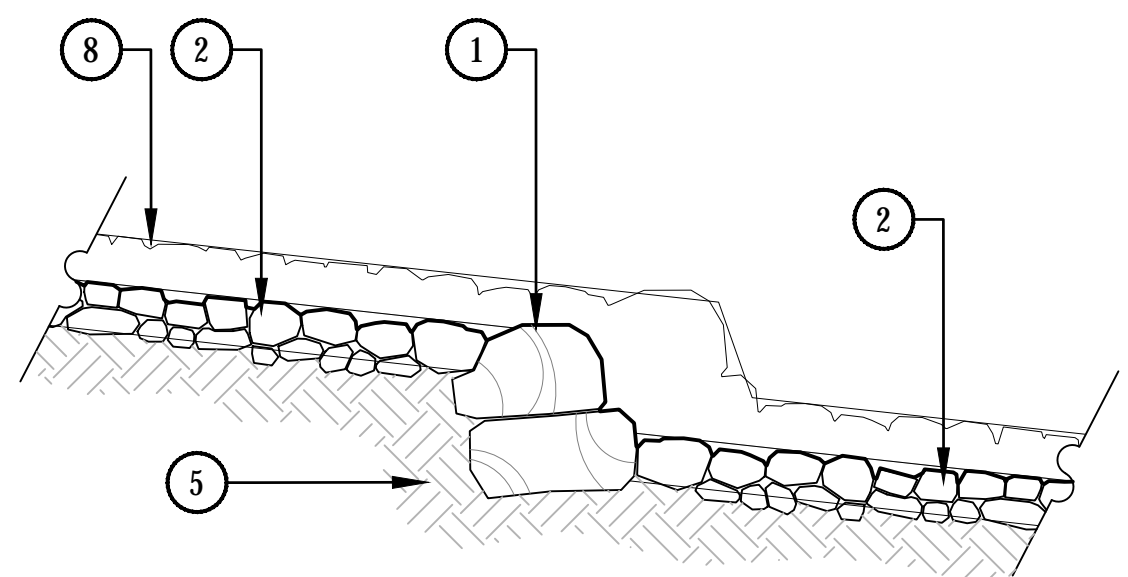


1 WIDE ROCKED CHANNEL & ROCK DROP STRUCTURE

SCALE: 1/4" = 1'-0"



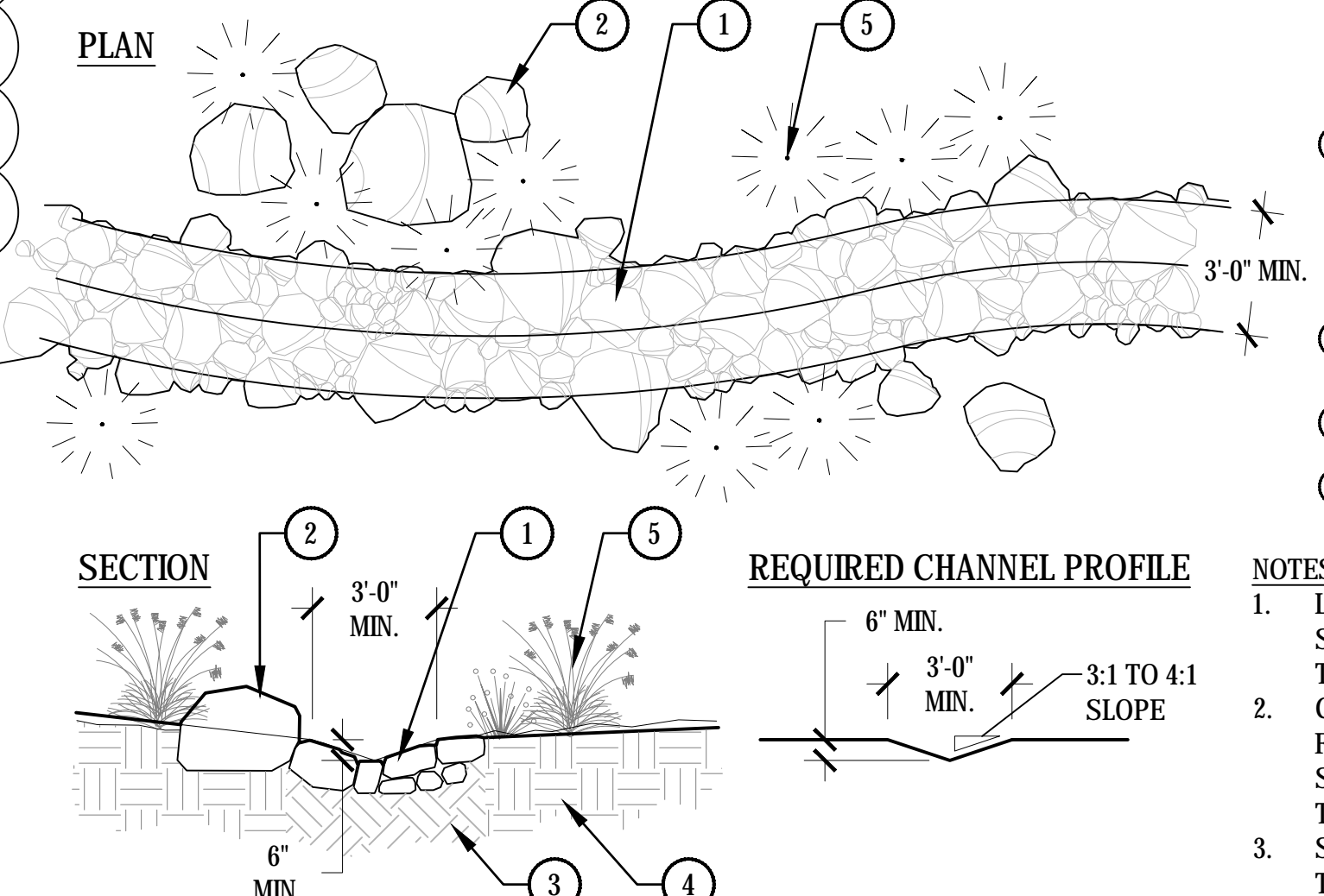
CHANNEL AND DROP STRUCTURE SECTION



CHANNEL FRONT ELEVATION

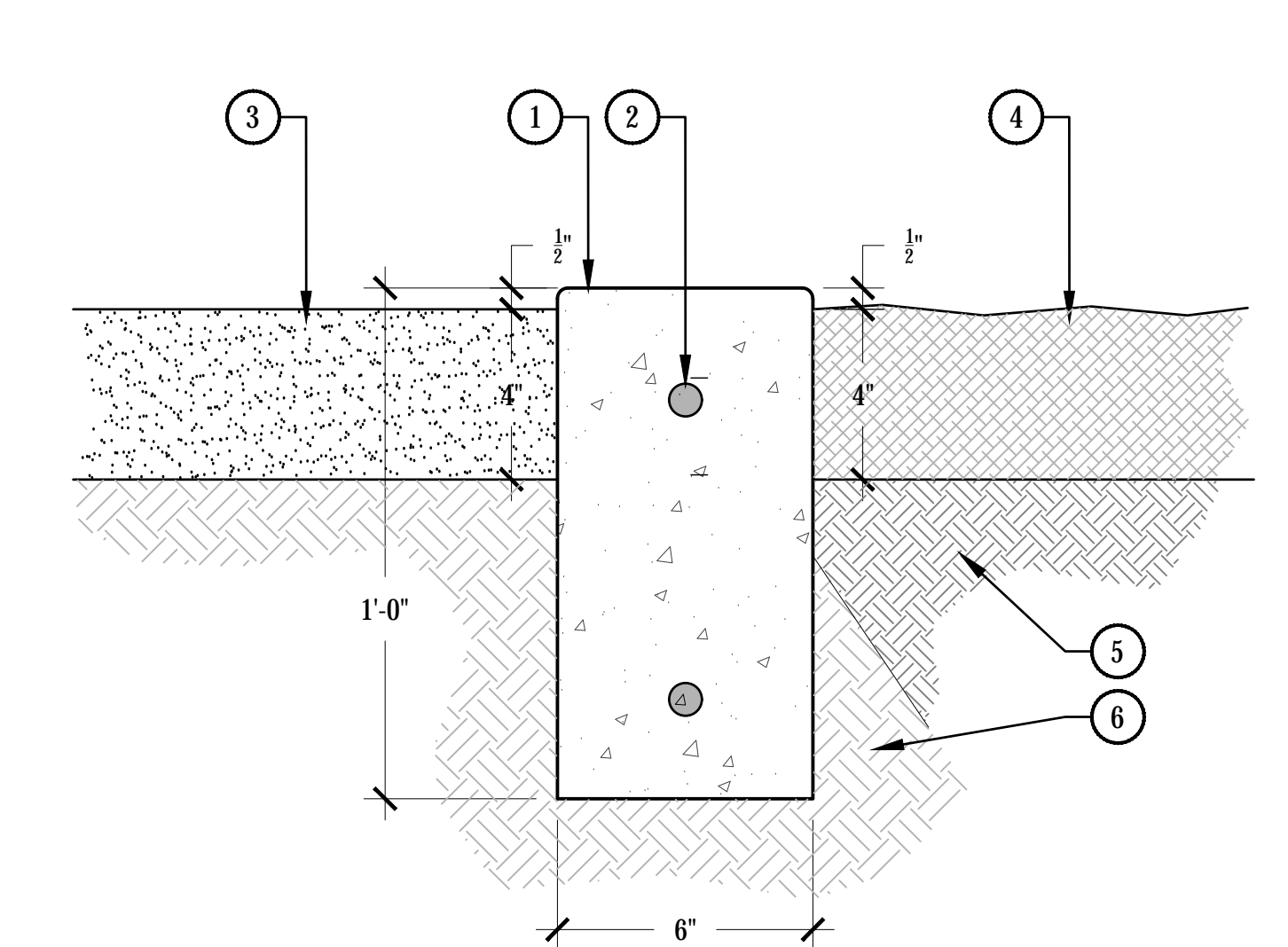
- NOTES:**
- CHANNEL SHALL HAVE A MAXIMUM SLOPE OF 6% AND A MINIMUM SLOPE OF 4% PER CIVIL ENGINEERING REQUIREMENTS.
 - LIMESTONE BOULDERS AND ROCK SHALL BE FROM THE STOCK PILE FOR THIS PROJECT.
 - CONTACT LANDSCAPE ARCHITECT FOR APPROVAL OF FIRST DROP STRUCTURE INSTALLED FOR PRIOR TO SETTING OTHERS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE DROP STRUCTURES.
 - SET ROCK AND BOULDERS TO MEET THE DESIGNED CHANNEL VOLUME AS DESIGNATED BY THE CIVIL ENGINEER.

- AS03**
- LARGE LIMESTONE BOULDER DROP STRUCTURE - BURY 1/4 OF BOTTOM BOULDER. STACK BOULDERS TILTED INTO SLOPE AS SHOWN. ADD ROCK TO FILL IN LARGE CAPS. DROP STRUCTURE SHALL BE STRUCTURALLY SOUND AND HAVE A NATURAL APPEARANCE
 - LIMESTONE ROCK LINED CHANNEL - 12" DEPTH MIN. CHANNEL SHALL HAVE A MINIMUM SLOPE OF 4% AND A MAXIMUM SLOPE OF 6% PER VOLUME REQUIREMENTS. 70% 6"-8" DIA. ROCK, 30% 8"-12" DIA. ROCK
 - FREESTANDING AND/OR CLUSTERED LIMESTONE BOULDERS AROUND CHANNEL PER LANDSCAPE PLANS - BURY 1/4 FOR NATURAL APPEARANCE
 - CHANNEL BOTTOM
 - COMPACTED SUB-GRADE PER GEOTECH RECOMMENDATIONS
 - UNDISTURBED SOIL
 - PLANTINGS PER LANDSCAPE PLAN
 - OUTER EDGE OF CHANNEL (BEHIND)
 - CONTOUR LINES



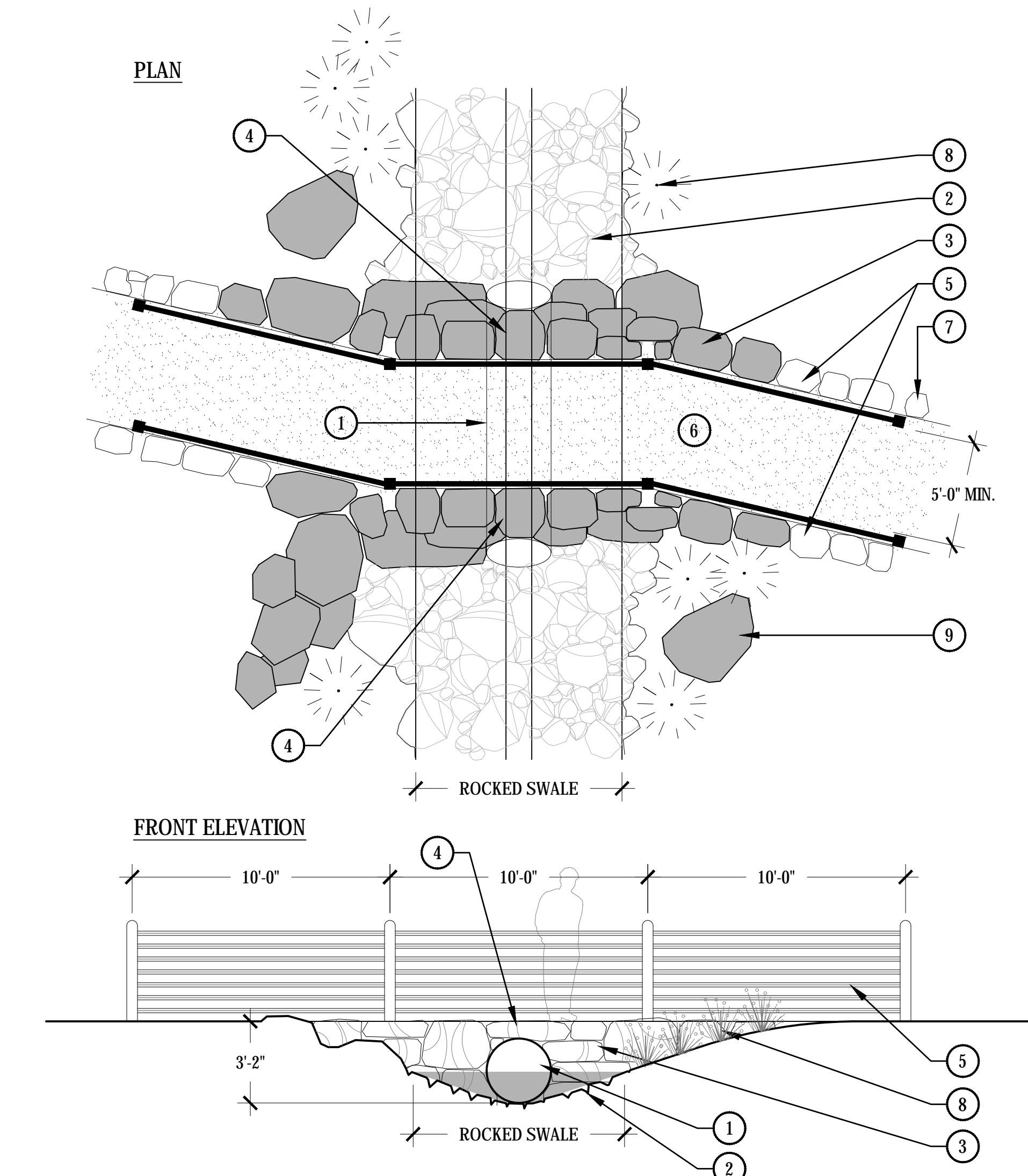
2 NARROW ROCKED CHANNEL

SCALE: 1/4" = 1'-0"



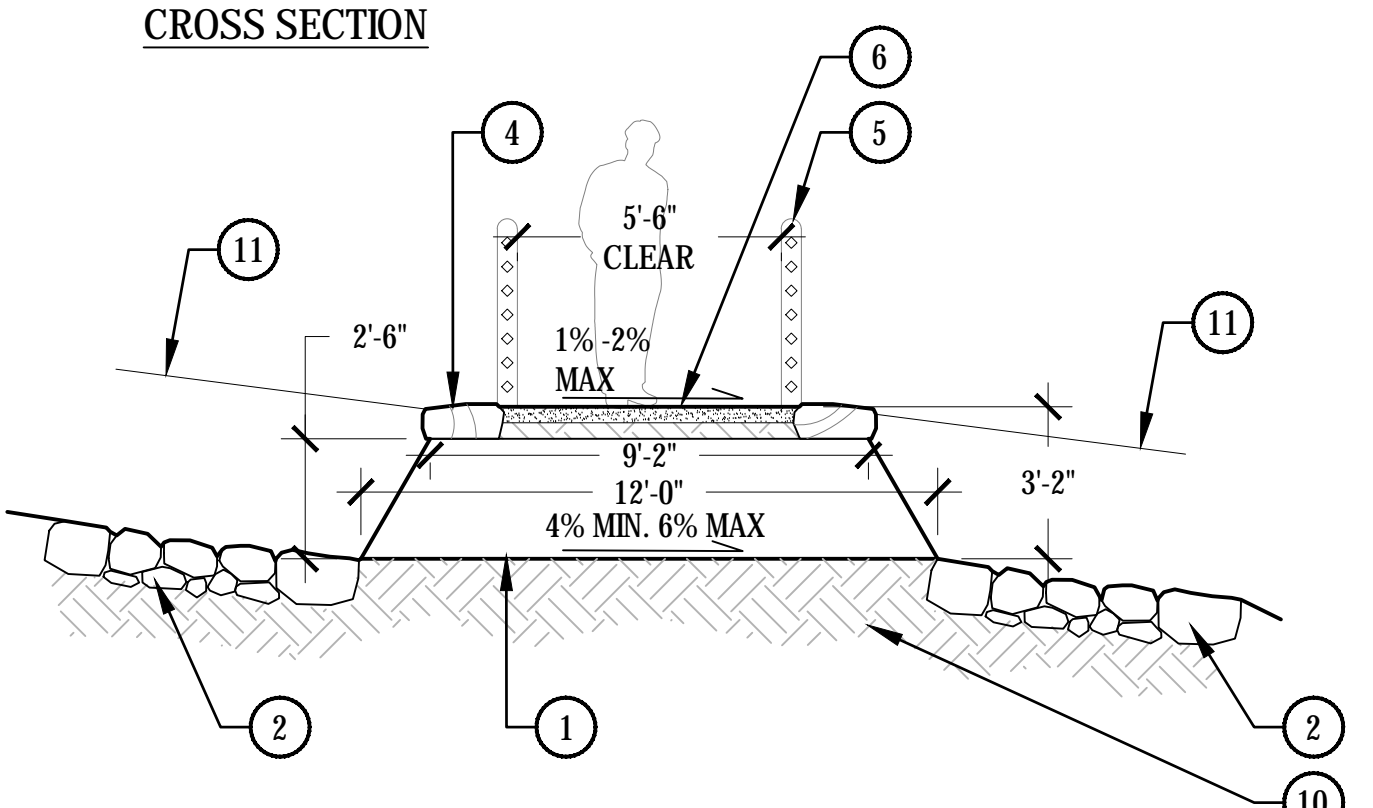
3 CONCRETE LANDSCAPE EDGER

SCALE: 3" = 1'-0"



4 CULVERT CROSSING

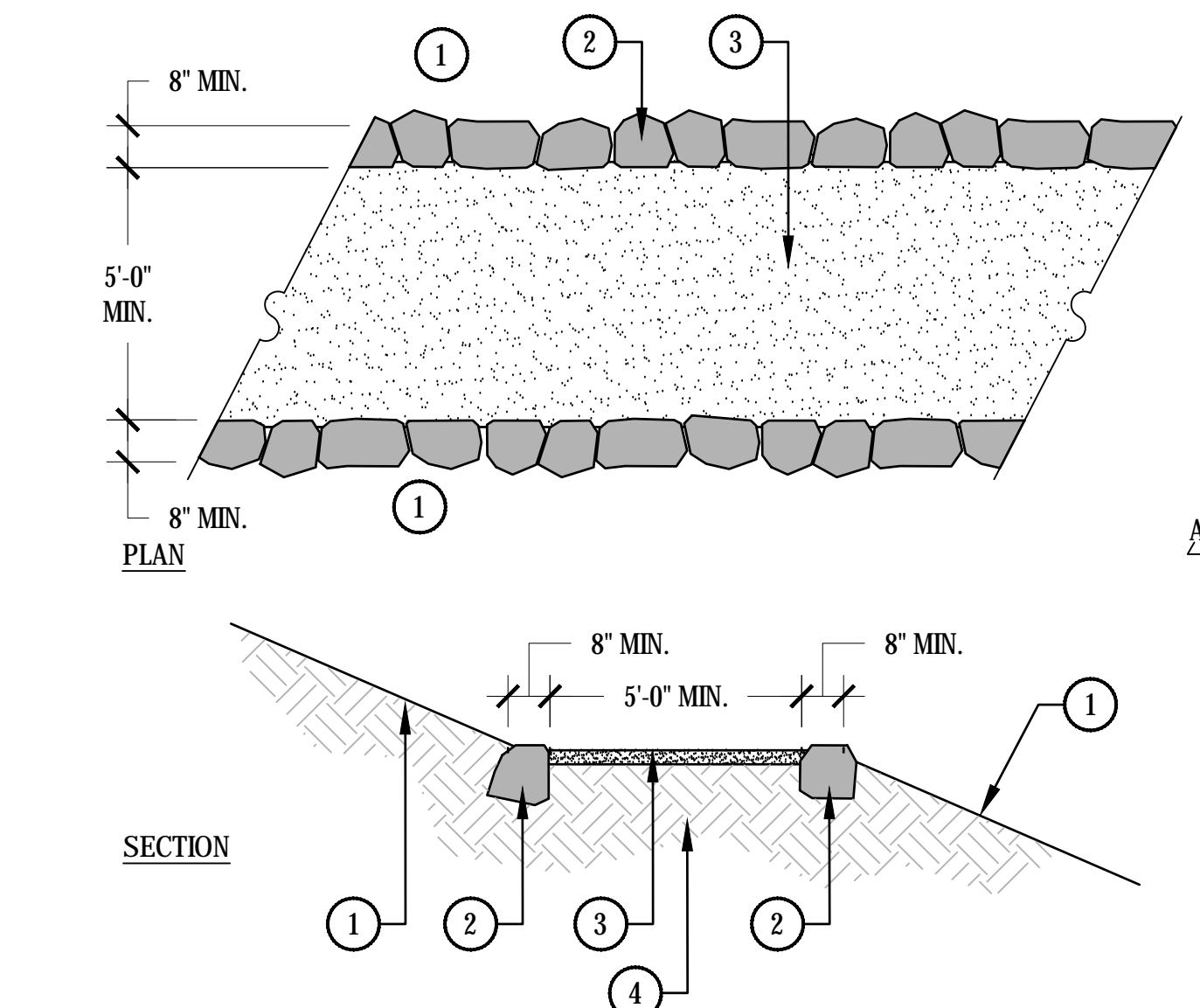
SCALE: 1/4" = 1'-0"



CROSS SECTION

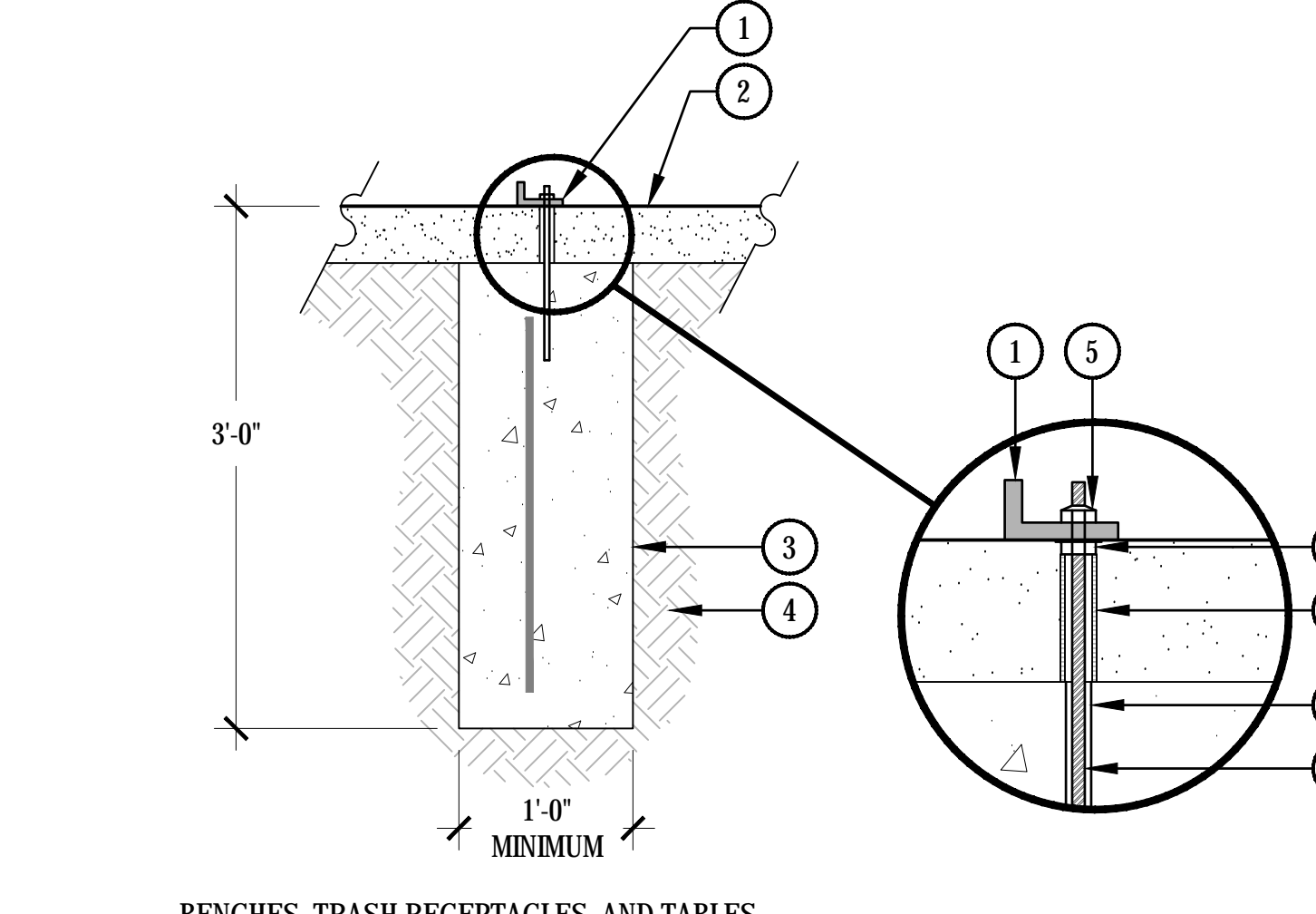
- NOTES:**
- CHANNEL SHALL HAVE A MAXIMUM SLOPE OF 6% AND A MINIMUM SLOPE OF 4% PER CIVIL ENGINEERING REQUIREMENTS.
 - LIMESTONE BOULDERS AND ROCK SHALL BE FROM THE STOCK PILE FOR THIS PROJECT.
 - CONTACT LANDSCAPE ARCHITECT FOR APPROVAL OF ROCK STRUCTURE.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE ROCK STRUCTURE.
 - SET ROCK AND BOULDERS TO MEET THE DESIGNED CHANNEL VOLUME AS DESIGNATED BY THE CIVIL ENGINEER.

- AS03**
- 30" DIAMETER STORM PIPE - SEE CIVIL PLANS FOR SPECIFICATIONS. TAPER ENDS AS SHOWN
 - ROCKED SWALE - SEE DETAIL 1/L-501
 - LARGE LIMESTONE BOULDER STRUCTURE - BURY 1/4 OF BOTTOM BOULDER. STACK BOULDERS TILTED INTO SLOPE PER DETAIL 1/L-501. ADD ROCK TO FILL IN LARGE CAPS.
 - COVER TOP AND SIDES OF PIPE WITH BOULDERS TO HIDE PIPE
 - BARRIER FENCE - SEE DETAIL 1/L-502
 - CRUSHER FINES PATH - SEE DETAIL 1/L-503
 - TRANSITION BOULDER STRUCTURE TO ROCK EDGER THAT BORDERS THE CRUSHER FINES PATH
 - PLANTINGS PER LANDSCAPE PLAN
 - FREESTANDING AND/OR CLUSTERED LIMESTONE BOULDERS AROUND CHANNEL PER LANDSCAPE PLANS - BURY 1/4 FOR NATURAL APPEARANCE
 - COMPACTED SUB-GRADE PER GEOTECH RECOMMENDATIONS
 - GRADE (BEHIND)



5 CRUSHER FINES PATH

SCALE: 1/4" = 1'-0"

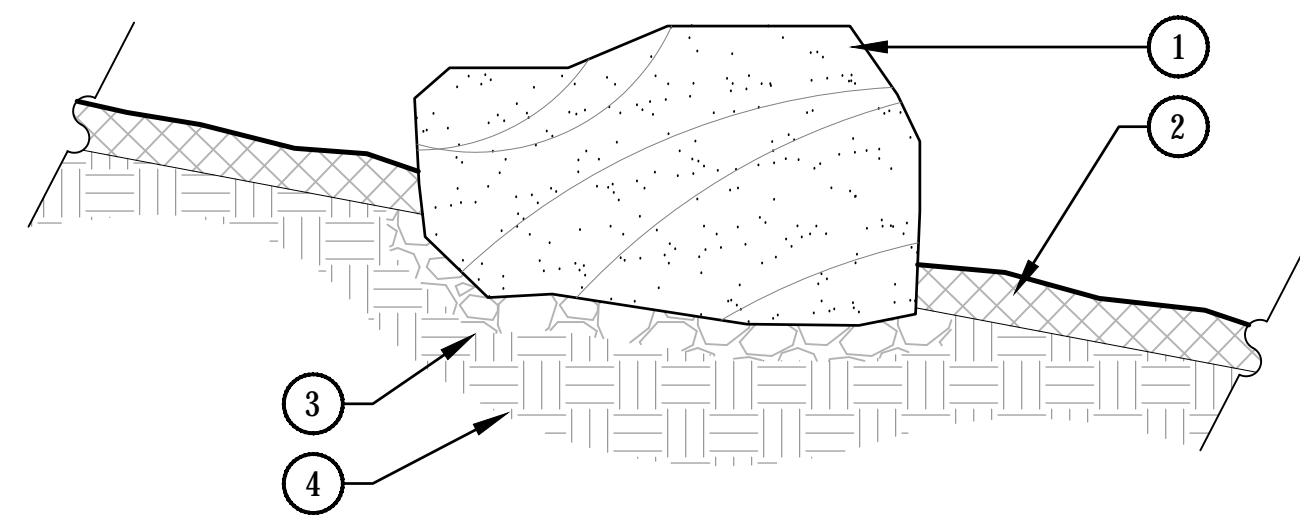


6 SURFACE MOUNT IN CRUSHER FINES

SCALE: 1" = 1'-0"

- NOTES:**
- AFTER SIGNIFICANT SETTLING TIME, ALL-THREAD ROD(S) TO BE CUT FLUSH.

- SITE AMENITY MOUNTING BRACKET
- CRUSHER FINES. REFER TO LANDSCAPE PLAN
- CONCRETE FOOTER WITH (1) #4 REBAR. SPACE FOOTERS TO CORRESPOND WITH SPECIFIC FURNITURE PIECE
- COMPACTED SUBGRADE TO 95% STANDARD PROXY DENSITY
- GALVANIZED LOCKING NUT
- GALVANIZED NUT
- 2" GALVANIZED STEEL PIPE SPACER
- EPOXY ALL-THREAD ROD IN PLACE
- GALVANIZED ALL-THREAD ROD



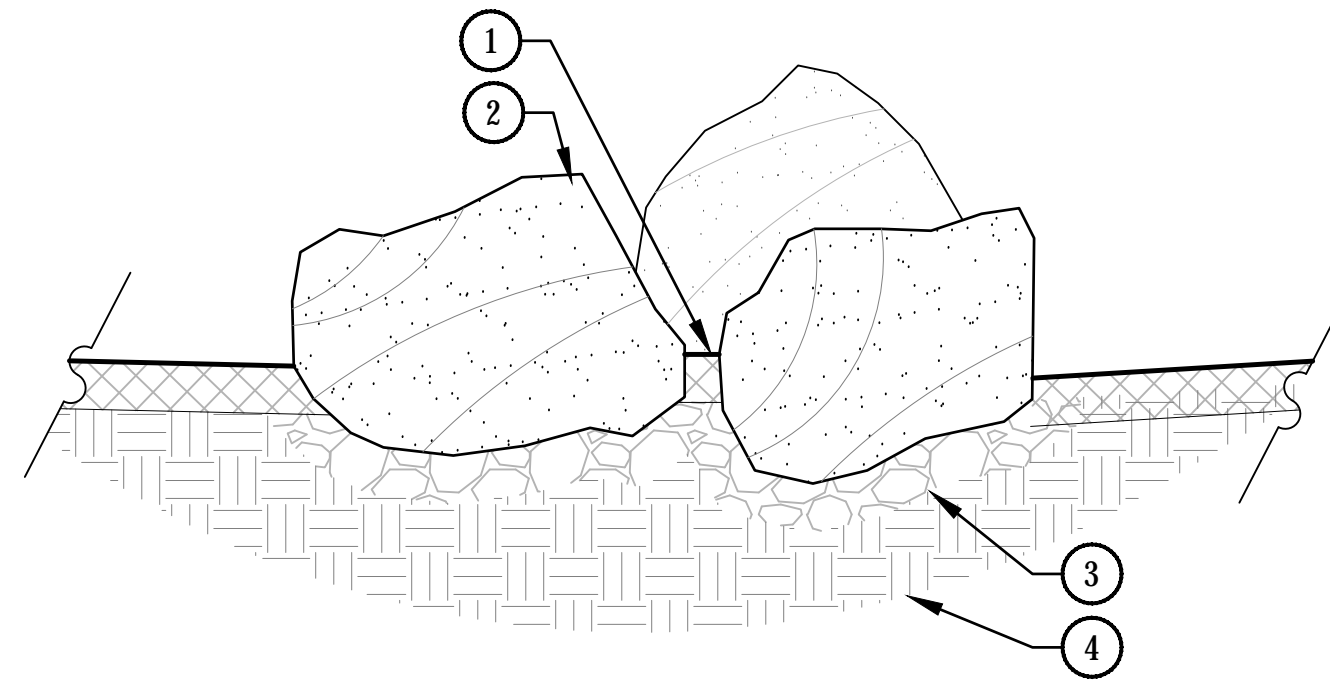
- ① LIMESTONE BOULDER SALVAGED FROM SITE. NATURALLY SET BOULDER SO THAT A MINIMUM 1/4 OF BOULDER IS BELOW FINISH GRADE. REFER TO MATERIAL SCHEDULE, SHEET L-001
- ② ADJACENT LANDSCAPE. REFER TO LANDSCAPE PLANS
- ③ 3" MINIMUM BASE COMPACTED TO 95% OF STANDARD PROXY DENSITY
- ④ UNDISTURBED GRADE

NOTES:

1. THESE ARE FREE STANDING BOULDERS ONLY.
2. ESTIMATE THAT BOULDERS ARE 1.5 TONS EACH ON AVERAGE (0.5 TON MIN. - 2.5 TONS +)
3. BOULDERS TO BE FROM ON-SITE STOCKPILE.
4. CONTRACTOR TO PROVIDE FIELD MOCK-UPS FOR NAU LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION.

1 LANDSCAPE BOULDER

SCALE: 3/4" = 1'-0"



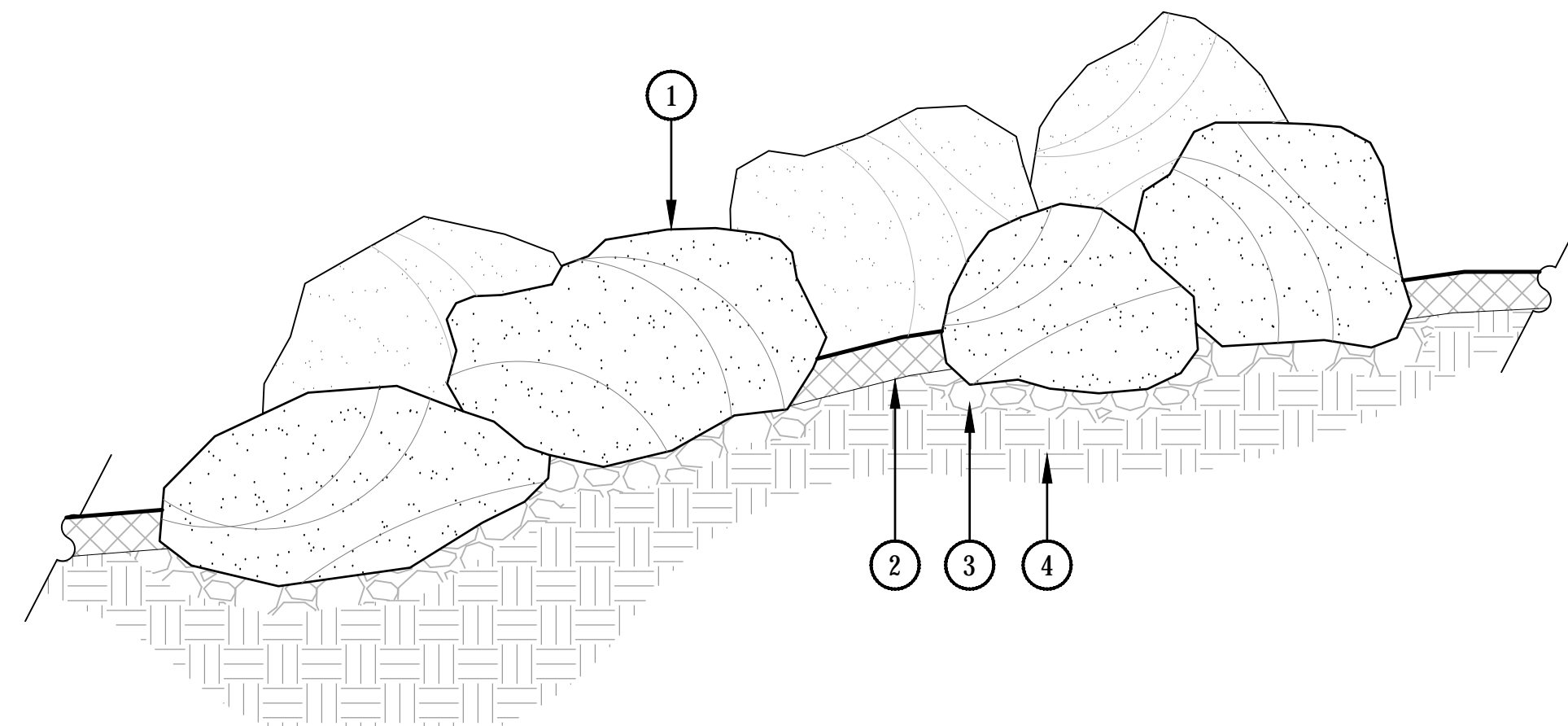
- ① MULCH TO BOULDERS. NO GAPS
- ② LIMESTONE BOULDERS SALVAGED FROM SITE. NATURALLY SET BOULDER SO THAT A MINIMUM 1/4 OF BOULDER IS BELOW FINISH GRADE. REFER TO MATERIAL SCHEDULE, SHEET L-001
- ③ 3" MINIMUM BASE COMPACTED TO 95% OF STANDARD PROXY DENSITY
- ④ UNDISTURBED GRADE

NOTES:

1. PLACE BOULDERS FOR APPEARANCE OF NATURAL LIMESTONE OUTCROPPINGS. OVERLAP AND ABUT BOULDERS TO CREATE GRADE CHANGES. COORDINATE PLACEMENT WITH NAU LANDSCAPE ARCHITECT.
2. BOULDERS TO BE FROM ON-SITE STOCKPILE.
3. CONTRACTOR TO PROVIDE FIELD MOCK-UPS FOR NAU LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION.

2 BOULDER CROPPING

SCALE: 1" = 1'-0"



- ① LIMESTONE BOULDERS SALVAGED FROM SITE. NATURALLY SET BOULDERS SO THAT A MINIMUM 1/4 OF BOULDER IS BELOW FINISH GRADE. SEE MATERIAL SCHEDULE SHEET L-001.
- ② MULCH TO BOULDERS. NO GAPS
- ③ COMPACTED SUBGRADE TO 95% STANDARD PROXY DENSITY
- ④ UNDISTURBED GRADE

NOTES:

1. ALLOW 6" PLAY IN WIRE FOR STAKING.
2. REMOVE GUY WIRES & POSTS AFTER 1 YEAR.
3. CORRECTIVE PRUNING (DEAD OR DAMAGED WOOD) TO BE COMPLETED IMMEDIATELY AFTER PLANTING. DO NOT CUT LEADER OR LIVE BRANCHES.
4. STAKE IN DIRECTION OF PREVAILING WIND. PROVIDE STAKES FOR DECIDUOUS TREES 3" CALIPER AND GREATER. EVERGREEN TREES 6" HEIGHT AND GREATER. DO NOT STAKE TREES SMALLER THAN SIZES SPECIFIED IN THIS NOTE.
5. PERFORM DRAINAGE TEST AT EACH PLANTING PIT PRIOR TO INSTALLATION OF PLANT MATERIAL. IF PIT (FILLED WITH WATER) DOES NOT DRAIN IN 30 MINUTES, INFORM LANDSCAPE ARCHITECT REGARDING ADJUSTING PLANT LOCATION OR CORRECTING DRAINAGE CONDITION.

3 TYP. DECIDUOUS & EVERGREEN TREE PLANTING

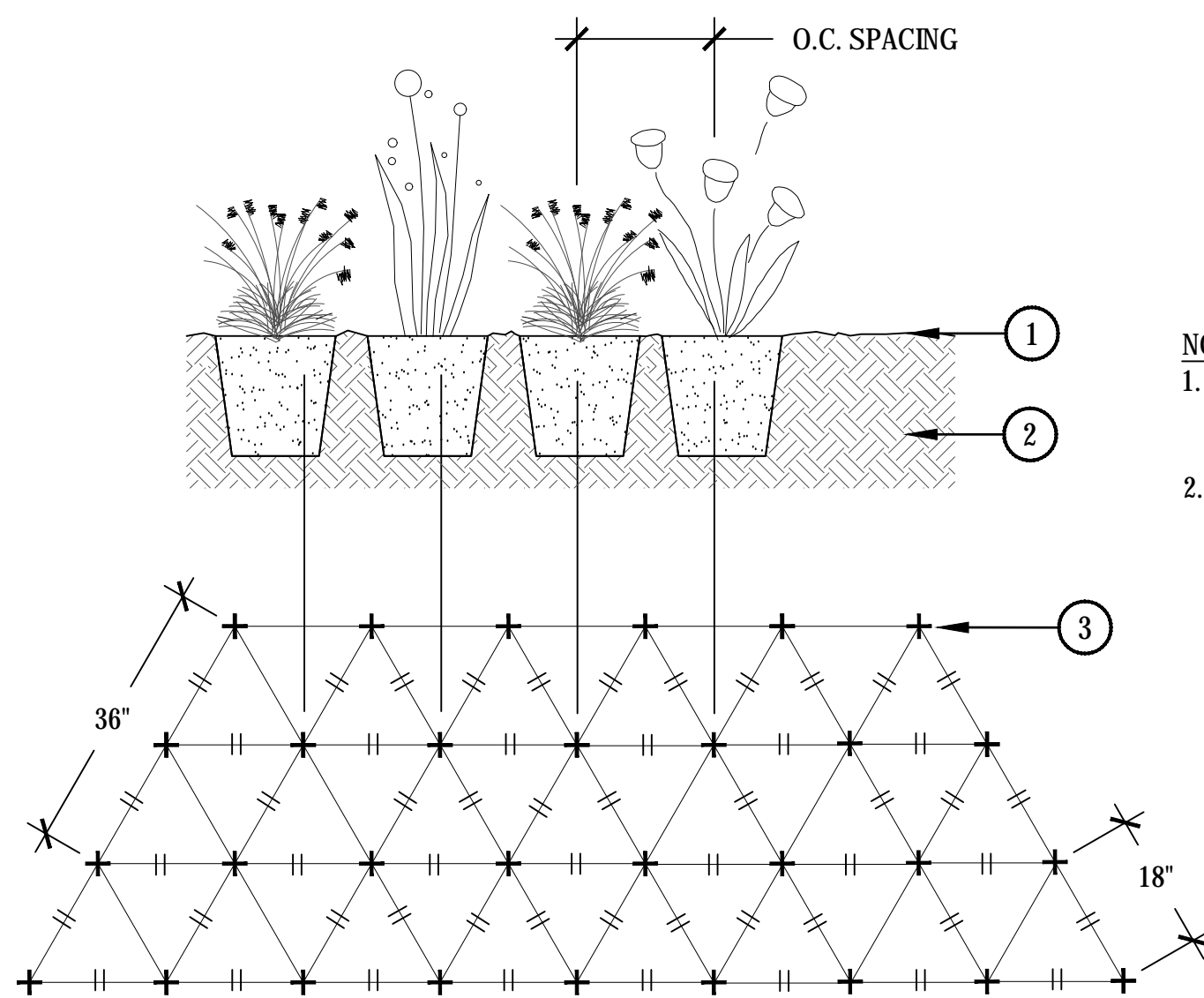
SCALE: NTS

NOTES:

1. PLACE BOULDERS FOR APPEARANCE OF NATURAL LIMESTONE OUTCROPPINGS. OVERLAP AND ABUT BOULDERS TO CREATE GRADE CHANGES. COORDINATE PLACEMENT WITH NAU LANDSCAPE ARCHITECT.
2. BOULDERS TO BE FROM ON-SITE STOCKPILE.
3. CONTRACTOR TO PROVIDE FIELD MOCK-UPS FOR NAU LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION.

4 SLOPED BOULDER CROPPING

SCALE: 3/4" = 1'-0"



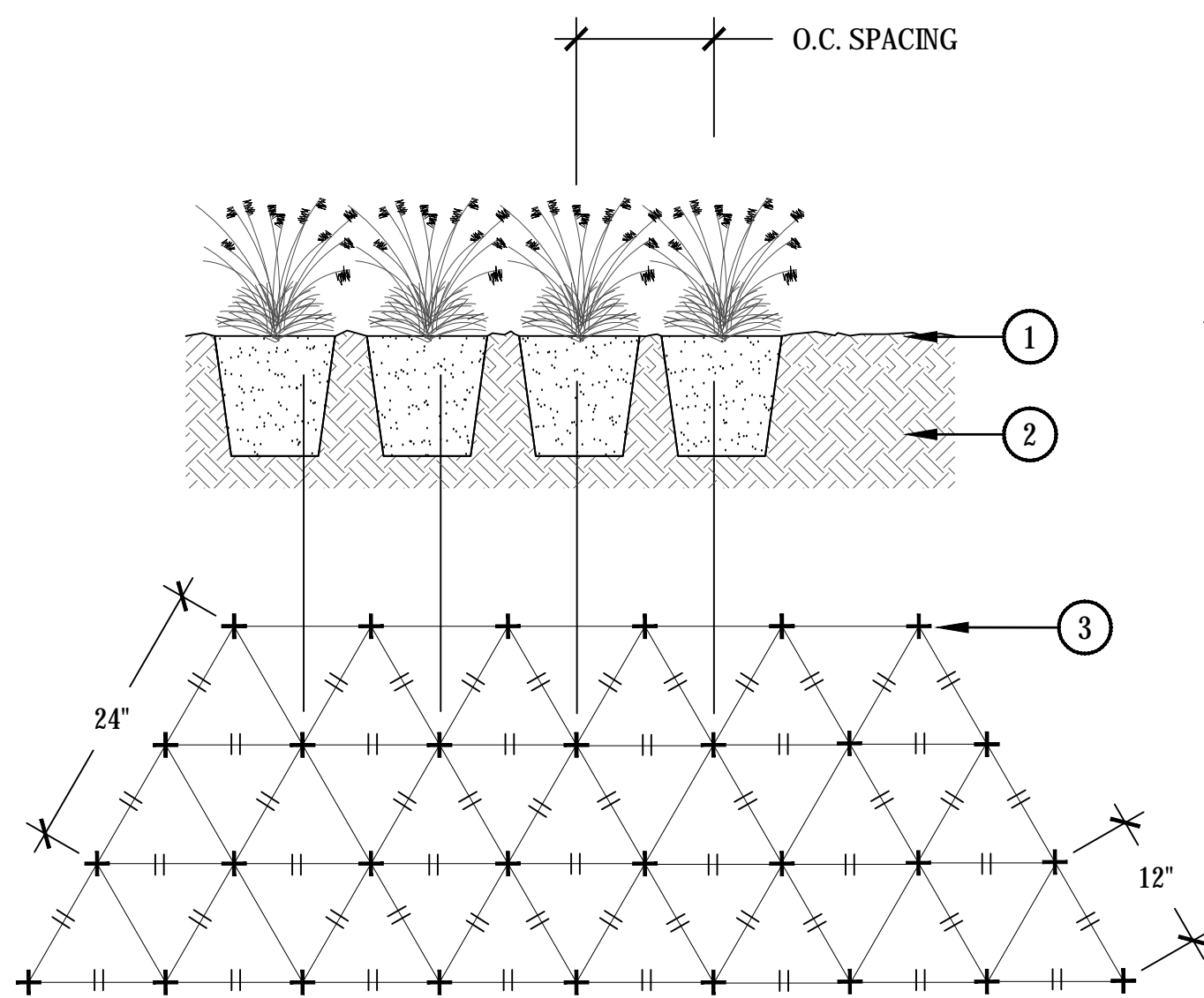
- ① APPLY SPECIFIED SEED MIX AND PINE NEEDLE COVER AFTER PLUGS ARE PLANTED
- ② AMENDED PLANTING BED TILLED TO A DEPTH OF 6"
- ③ CENTER OF GRASS/PERENNIAL PLUG

NOTES:

1. REFERENCE TALL MEADOW PLUG MIXES FOR SPECIES COMPOSITION, SHEET L-002
2. CLUSTER PERENNIALS PLUGS IN NATURAL GROUPINGS OF 5-15 PLANTS

6 PLUG PLANTING - TALLGRASS MEADOW

SCALE: NTS



- ① APPLY SPECIFIED SEED MIX AND PINE NEEDLE COVER AFTER PLUGS ARE PLANTED
- ② AMENDED PLANTING BED TILLED TO A DEPTH OF 6"
- ③ CENTER OF GRASS PLUG

NOTES:

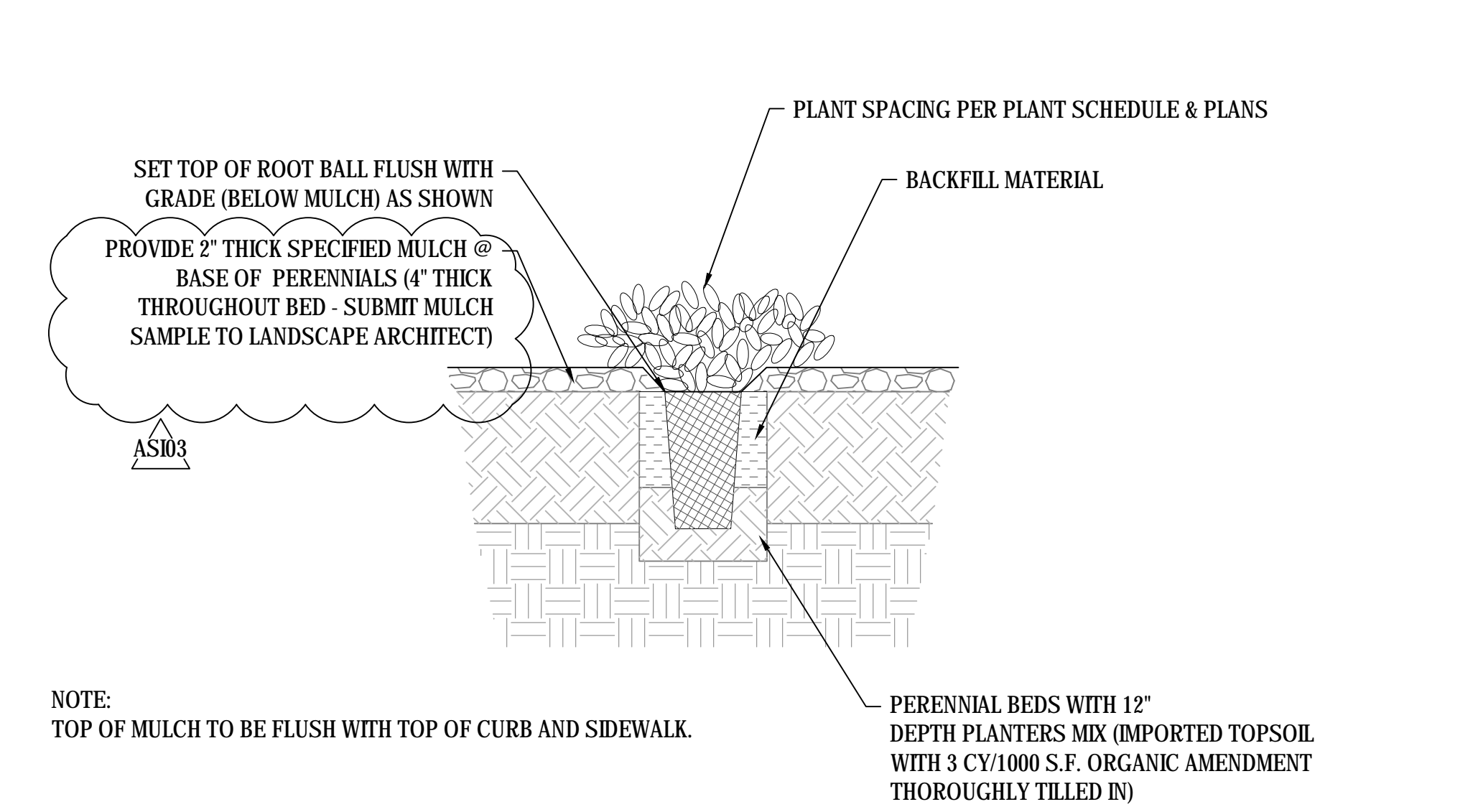
1. REFERENCE MEADOW PLUG MIX ON SHEET L-002

7 PLUG PLANTING - SHORT MEADOW

SCALE: 1" = 1'-0"

5 TYP. SHRUB & ORNAMENTAL GRASS PLANTING

SCALE: NTS

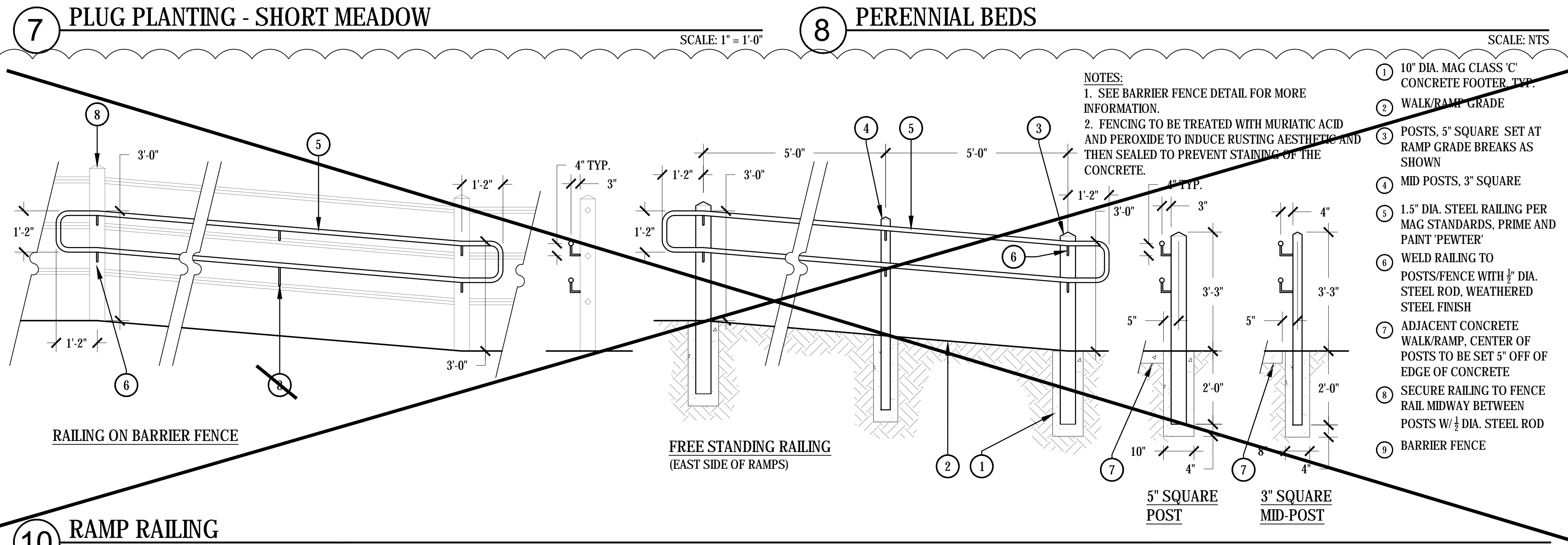


- ① IRRIGATED SEED OR DRYLAND SEED RE: IRRIGATION PLAN
- ② VERTICAL SPADE CUT EDGE FILLED WITH SPECIFIED MULCH. TAPER EDGE OF BED SO MULCH IS DEEPER AGAINST SPADED EDGE.
- ③ 3" DEPTH SPECIFIED MULCH
- ④ PLANTING BED
- ⑤ IRRIGATION HEADS SHOULD BE LOCATED ADJACENT TO MULCH BEDS. OFFSET HEAD INTO GRASS AREA TO ENSURE STABLE SUPPORT.

- NOTE:
1. IF IRRIGATION HEAD IS LOCATED ADJACENT TO MULCH BEDS, OFFSET HEAD INTO GRASS AREA TO ENSURE STABLE SUPPORT.

9 SPADE CUT EDGE

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



NOTES:

1. SEE BARRIER FENCE DETAIL FOR MORE INFORMATION.
2. FENCING TO BE TREATED WITH MURIATIC ACID AND PEROXIDE TO INDUCE RUSTING AESTHETIC AND THEN SEALED TO PREVENT STAINING OF THE CONCRETE.

- ① 10" DIA. MAG CLASS 'C' CONCRETE FOOTER, TYP.
- ② WALK/RAMP GRADE
- ③ POSTS, 5" SQUARE SET AT RAMP GRADE BREAKS AS SHOWN
- ④ MID POSTS, 3" SQUARE
- ⑤ 1.5" DIA. STEEL RAILING PER MAG STANDARDS, PRIME AND PAINT 'PEWTER'
- ⑥ WELD RAILING TO POSTS/FENCE WITH 1/2" DIA. STEEL ROD, WEATHERED STEEL FINISH
- ⑦ ADJACENT CONCRETE WALK/RAMP. CENTER OF POSTS TO BE SET 5" OFF OF EDGE OF CONCRETE
- ⑧ SECURE RAILING TO FENCE RAIL MIDWAY BETWEEN POSTS W 1/2" DIA. STEEL ROD
- ⑨ BARRIER FENCE

10 RAMP RAILING

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