GENERAL NOTES

1. ALL CURRENT APPLICABLE FEDERAL, STATE, AND CITY AND COUNTY OF DENVER (CITY) RULES, REGULATIONS, POLICIES, PROCEDURES, SPECIFICATIONS, STANDARDS AND DETAILS SHALL BE FOLLOWED.

2. THE APPLICANT AND PERMITTEE ARE RESPONSIBLE FOR OBTAINING ALL NECESSARY PROJECT PERMITS ASSOCIATED WITH CONSTRUCTION AND RELATED ACTIVITIES SUCH AS STREET OCCUPANCY, STREET CUT, EROSION CONTROL, ENVIRONMENTAL AND/ OR AIR QUALITY, AND PARKS PERMITS.

3. UTILITY PLAN REVIEW APPROVAL DOES NOT CONSTITUTE APPROVAL FOR ANY WORK ON, IN, UNDER, OR OVER PRIVATE PROPERTY.

4. NO WORK SHALL BE PERMITTED AT NIGHT OR ON SATURDAYS, SUNDAYS, AND HOLIDAYS WITHOUT PRIOR AUTHORIZATIONS OR UNLESS OTHERWISE SPECIFIED IN THE STREET OCCUPANCY PERMIT. CITY MAY RESTRICT WORK ON RIGHT-OF-WAY (ROW) DURING ADVERSE WEATHER CONDITIONS OR DURING PERIODS OF HIGH TRAFFIC VOLUME.

5. UNLESS CONFINED IN A PREDEFINED BERM CONTAINMENT AREA, THE CLEANING OF CONCRETE DELIVERY CHUTES IS PROHIBITED AT THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. (DENVER REVISED MUNICIPAL CODE § 56-102 (A.) (C.))

6. ALL PROPOSED UTILITIES MUST REMAIN OUTSIDE THE SIGNAL EQUIPMENT CLEAR ZONE PER CURRENT TRANSPORTATION STANDARDS AND DETAILS. THIS APPLIES TO ALL INTERSECTIONS THROUGHOUT THE CITY, WHETHER OR NOT THERE IS AN EXISTING SIGNAL PRESENT.

7. THE PERMITTEE SHALL MAINTAIN AT LEAST ONE COPY OF THE APPROVED PLANS, SPECIFICATIONS, AND STANDARDS ON THE JOB SITE AT ALL TIMES.

8. DISTURBANCE TO PAVED PEDESTRIAN FACILITIES WITHIN 10 FEET OF AN EXISTING CURB RAMP WILL REQUIRE THAT CURB RAMP TO BE UPGRADED TO CURRENT CITY AND AMERICANS WITH DISABILITIES ACT (ADA) CRITERIA IF NOT CURRENTLY COMPLIANT.

9. WHERE POSSIBLE, UTILITY CORRIDOR ALIGNMENTS AND APPURTENANCES SHALL AVOID PARK FRONTAGES ALONG THE ROW AND LOCATE ON THE OPPOSITE SIDE OF STREET ADJACENT TO PARK LAND.

10. WHERE POSSIBLE, UTILITY CORRIDOR ALIGNMENTS AND APPURTENANCES SHALL AVOID DESIGNATED PARKWAYS. THE APPLICANT SHALL ATTEMPT TO LOCATE PROPOSED UTILITIES ALONG ALTERNATE ROADWAYS OR CORRIDORS, IF POSSIBLE.

11. PROPOSED UTILITIES SHALL REMAIN CLEAR OF CITY PARK-OWNED LAND, WITHOUT WRITTEN PERMISSION FROM PARKS.

12. SUBSURFACE UTILITY CORRIDORS SHOULD BE LOCATED UNDER SIDEWALKS, ROADS, OR OTHER HARDSCAPE WHENEVER POSSIBLE TO ALLOW FULL ACCESS TO THE "AMENITY ZONE" FOR STREET TREES, LANDSCAPE plantings, GREEN INFRASTRUCTURE AND ALTERNATE PUBLIC AMENITIES.

13. ABOVE GRADE EQUIPMENT IS SUBJECT TO SIGHT TRIANGLE RESTRICTIONS AS DESCRIBED IN THE CITY’S TRANSPORTATION ENGINEERING PLAN (TEP) REVIEW SUBMITTAL REQUIREMENTS.

STANDARD CONSTRUCTION ENGINEERING NOTES

1. ALL WORK SHALL COMPLY TO TRANSPORTATION STANDARDS & DETAILS (TS&D).

2. THE NEW UTILITY PEDESTALS NEAR THE ALLEY ENTRANCE SHOULD BE PLACED AS FAR BACK FROM THE CURB AS PRACTICAL, AND AT LEAST 50 FEET FROM THE ALLEY EDGE. MUST ALSO MEET ENCROACHMENT REGULATION

3. REVIEW THE CITY TRAFFIC ENGINEER’S REGULATIONS REGARDING THE PLACEMENT OF UNDERGROUND UTILITIES IN THE AREAS BEHIND THE CURB RETURNS AT INTERSECTIONS, AKA "CLEAR ZONE" RESTRICTIONS. (TS&D 7.9)

4. THE UTILITY SHOULD APPROACH THE PROPERTY OWNER AT ADJACENT PROPERTY AND DISCUSS THE PLACEMENT OF THE PROPOSED UTILITY PEDESTALS/BOXES.

5. ORIENT VALVES OUT OF THE PEDESTRIAN PATH.

6. POLE/PEDESTAL MUST BE POSITIONED 5 FEET MIN AWAY FROM FIRE HYDRANTS.

7. CONTACT DOTI - ROW SERVICES CONSTRUCTION ENGINEERING (RWSCE) SECTION FOR A PRECONSTRUCTION MEETING PRIOR TO START OF PERMITTING, (303) 446-3469 OR PWPERMITS@DENVERGOV.ORG

8. PERMIT APPLICANT MUST APPLY AT LEAST 5 BUSINESS DAYS BEFORE THE START OF WORK TO OBTAIN A REVOCABLE ST. OCCUPANCY PERMIT, A ST. CUT PERMIT OR A ROW CONSTRUCTION PERMIT. THE SUBMITTAL MUST INCLUDE A COMPLETED APPLICATION FORM & A DETAILED SITE-SPECIFIC TRAFFIC CONTROL PLAN TO BEGIN A REVIEW OF THE WORK SCOPE, SCHEDULE AND LOCATION. SUBMIT TO PWPERMITS@DENVERGOV.ORG

9. WORKING ON AN ARTERIAL ROAD MAYBE RESTRICTED TO EITHER NIGHT-ONLY OR WEEKEND WORK TIMES.

10. APPLICANT SHALL COORDINATE THE CLOSURE OF DRIVEWAYS IN THE PROJECT AREA WITH THE ADJACENT PROPERTIES. ACCESS MUST BE PROVIDED TO ALL BUILDINGS DURING CONSTRUCTION.

11. THE MAXIMUM ROAD CLOSURE AT ANY TIME IS LIMITED TO 2 BLOCKS AND 1 SINGLE INTERSECTION. SIDEWALKS SHALL REMAIN OPEN & FUNCTIONAL ON OPPOSITE SIDE OF CLOSURE

12. APPLICANT SHALL COORDINATE THE TEMPORARY CLOSURE AND RELOCATION OF RTD BUS STOPS WITHIN THE PROJECT AREA AS NEEDED. CONTACT RTD (303)299-6561 AT LEAST 1 WEEK IN ADVANCE OF THE START OF WORK.

13. APPLICANT SHALL ATTEND THE BI-WEEKLY DOWNTOWN COORDINATE MEETINGS, HELD AT THE DENVER WASTEWATER BUILDING ON EVERY OTHER WEDNESDAY AT 1:30PM. CONTACT JOE SAEJIW (JOE.SAEJIW@DENVERGOV.ORG) FOR INFO.

14. WORK MUST BE APPROVED FOR SCHEDULING DURING THE HOLIDAY CONSTRUCTION MORATORIUM. THE MORATORIUM IS IN EFFECT FROM THANKSGIVING TO JAN 1. EMERGENCY REPAIRS ARE EXCEPTED.

15. DURING COLORADO ROCKIES HOME GAMES, NO CLOSURES OF ANY TRAVEL LANE, PARKING LANE OR SIDEWALK WILL BE ALLOWED 2 HOURS BEFORE, DURING AND AFTER THE EVENT.

16. ALL FLOW-FILL OR NORMAL CLSM (CONTROLLED LOW-STRENGTH MATERIAL) SHALL BE AIR-ENTRAINED TO BETWEEN 6% - 25% WHEN USED IN THE UPPER 3 FEET OF TRENCHES. ALL FLASH-FILL MATERIAL (USING ONLY FLY ASH WITHOUT AGGREGATE) USED FOR RAPID SET TIME SHALL BE AIR-ENTRAINED TO BETWEEN 15% - 21% WHEN USED IN THE UPPER 3 FEET OF TRENCHES. MATERIAL AND METHODS SHALL MEET TS&D 12.4 & RULES & REGULATIONS FOR STREET CUTS. MATERIALS PLACED AT LESS THAN MINIMUM SLUMP SPECS WILL REQUIRE A 3-YEAR EXTENDED WARRANTY, 6 YEARS TOTAL.

17. FULL-PILE REPLACEMENT IS REQUIRED ON ALL CONCRETE ROADWAYS, SIDEWALKS & ALLEYS.

18. ANY SURFACE FEATURE PROPOSED THAT IMPACTS A PEDESTRIAN RAMP ENOUGH TO REQUIRE CONCRETE PANEL REPLACEMENT SHALL REQUIRE UPGRADE OF THE AFFECTED RAMP TO CURRENT DENVER & ADA STANDARDS.

19. FINAL RESTORATION OF THE STREET PAVEMENT SHALL OCCUR WITHIN 14 CALENDAR DAYS OF THE INITIAL CUT ON RESIDENTIAL STREETS & ALLEYS, OR WITHIN 48 HOURS ON COLLECTOR & ARTERIAL STREETS.
STANDARD CONSTRUCTION ENGINEERING NOTES (CONT'D)

20. The use of steel plates to cover excavations on roadways isn't allowed from 9/1 to 4/30. Special permission by the city maybe given when snow is not forecasted before final restoration will occur. On concrete roads, the plate shall be ramped with asphalt for a minimum 24-inch width around the edge of the plate. On asphalt roads, plates shall be recessed a minimum 1.5-inch deep and at least a minimum 18-inch width around the excavation. Additional methods of securing the place from movement may be required by the city. The contractor shall designate and supply the contact information for a responsible party to be available as a 24-hour contact during plate use.

21. Moratorium roads are asphalt roads resurfaced in the past 3 years. Street cuts on these roads shall be milled a minimum of 50 feet in each direction of the excavation and overlaid from curb-to-curb or curb-to-center line of street. See TS&D 12.2.

UTILITY NOTES

1. **CAUTION:** Prior to date of construction, the permittee shall verify existing utilities with the utility notification center of Colorado (UNC or Colorado 811) and/or utility companies. The permittee shall verify existence, size, and location of existing utilities and facilities prior to construction and shall notify the engineer of any discrepancies. Call 811 or visit [https://colorado811.org](https://colorado811.org).

2. Prior to commencement of construction, the permittee shall contact all affected or nearby utilities to coordinate work to be performed and proposed scheduling.

3. The applicant shall correctly show on submitted drawings the locations of all utilities in the vicinity where the applicant may bore, trench, excavate, and install facilities, conduit, fiber, fiber enclosures, vaults, and handholds. In the event that the facilities, conduit run, fiber enclosures, vaults, or handholds are located within the 10 feet of any utility, the applicant shall be responsible for the design and installation that will prevent damage to the installation under normal utility operating conditions. It is the responsibility of the applicant to obtain information on each of the utilities as applicable such as location, size, pressure, temperature, voltage, etc.

4. It is the responsibility of the applicant to examine the site for evidence of failures of or deficiencies in utility company facilities (i.e. Xcel Energy, Denver Water, Denver Public Works, Denver Fiber Outside Plant, Denver Wastewater Management, Metro Wastewater Reclamation District, etc.) and to immediately call any such evidence of pre-existing damage to the attention of the utility company along with proper documentation. The applicant hereby agrees that the repair of any and all damages (direct or indirect), that may be subsequently discovered and proven to have been caused by the construction activities, is the sole responsibility of the applicant without such evidence of pre-existing damage. Furthermore, the repair is agreed to be the sole responsibility of the applicant. It shall be the applicant's responsibility to protect all utility company facilities within the area of construction. This includes all steps necessary to prevent subsidence of the soil adjacent to or near utility company facilities.

5. Any casing or sleeve installed under the roadway shall be the same diameter as the bore as to eliminate a void around the casing. In the event jacking operations result in voids, the resultant voids shall be grouted or otherwise backfilled, subject to city approval. Ends of bored sections shall not be covered before being inspected.

6. For all manholes in asphalt streets, add a 2” riser ring directly under the cover to facilitate future rotomill/overlay operations.

7. New utility pedestals near the alley entrances must meet rules and regulation for encroachments and shall be placed as far back from the curb as practical, and at least 50 feet from the alley edge.

8. Utility company shall approach the property owner at adjacent property and discuss the placement of the proposed utility pedestals/boxes.

9. To avoid potential tripping hazards, orient valves so covers are outside of sidewalk.

10. Proposed utility poles/pedestals must be placed at least 5 feet away from fire hydrants.

11. All utilities shall be installed with a minimum 36 inch bury depth (measured from finish grade to top of utility). It is preferred utilities are installed with a minimum 48 inch bury depth in landscaped areas and tree lawns.

DENVER WATER NOTES

1. The permittee shall notify Denver Water at (303) 628-6671 prior to any construction that could affect or disturb a Denver Water facility.

2. Applicant assumes full responsibility for all damages incurred to Denver Water facilities due to activities authorized by the approved plans.

3. Denver Water, at the sole expense of the applicant, will make all replacement or repair of Denver Water facilities attributed to the work.

4. In the event the applicant's facilities are damaged or destroyed due to Denver Water's repair, replacement and/or operation of its facilities, repairs shall be made by the applicant at its sole expense.

5. Adding fiber optics to an existing duct not previously permitted requires the duct to be separately approved by the city and county of Denver Public Works Department via utility plan review prior to installation, and as such will be subject to the aforementioned provisions.

6. Parallel ducts or cable will not be permitted within five (5) feet of a Denver Water facility (mains or conduits), and a minimum of ten (10) feet of clearance is required between potable and non-potable mains (e.g., storm, sanitary, reuse).

7. When crossing a Denver Water main or conduit, a minimum vertical clearance of eighteen (18) inches is required.

8. A Denver Water representative must be present when installation crosses a sixteen (16) inch or larger main.

9. Locates and potholes shall be required for all crossings involving Denver Water facilities including, but not limited to, hydrant lateral runs and service line crossings.

10. In the event of a conflict with requirements, the latest versions of Denver Water's engineering standards and capital projects construction standards shall supersede these provisions.

City and County of Denver

REQUIRED PLAN NOTES

Date: 05/18/20

SHEET NO. 2
DENVER FIBER OUTSIDE PLANT NOTES
1. BY APPROVAL OF THESE DRAWINGS, THE APPLICANT ACKNOWLEDGES THAT THE CITY AND COUNTY OF DENVER OPERATES ITS OWN OUTSIDE PLANT (OSP) FIBER OPTIC INFRASTRUCTURE THROUGHOUT THE CITY, AND THAT SAID INFRASTRUCTURE SERVES TO PROMOTE THE HEALTH, SAFETY, AND WELFARE OF THE CITY. SAID FACILITIES ARE CRITICAL TO CITY OPERATIONS, ARE CONTINUALLY BEING ENHANCED AND EXTENDED, AND CANNOT BE DISTURBED.
2. APPLICANT ASSUMES FULL RESPONSIBILITY FOR ALL DAMAGES INCURRED TO THE DENVER FIBER OSP INFRASTRUCTURE DUE TO ACTIVITIES AUTHORIZED BY THE APPROVED PLANS.
3. IF DAMAGE OCCURS TO THE DENVER FIBER OSP THE APPLICANT MUST IMMEDIATELY CONTACT TRANSPORTATION OPERATIONS AT 720-865-4000. INITIAL RESTORATION MUST BE COMPLETED WITHIN A MAXIMUM OF 24 HOURS.
4. DENVER FIBER OSP STAFF OR APPROVED PERMITTEE, AT THE SOLE EXPENSE OF THE APPLICANT, WILL MAKE ALL REPLACEMENT OR REPAIR OF DENVER FIBER OSP CABLING INFRASTRUCTURE ATTRIBUTED TO THE WORK.
5. IF DURING REPAIR DAMAGE IS SUSTAINED TO ANY OTHER INFRASTRUCTURE, REPAIRS SHALL BE MADE AT THE SOLE EXPENSE OF THE APPLICANT.
6. ADDITIONAL EMPTY CONDUIT MAY BE REQUIRED BY THE CITY TO BE INSTALLED BY THE APPLICANT, AT THE SOLE EXPENSE OF THE APPLICANT, AND ACKNOWLEDGED ON THESE DRAWINGS, IF DEEMED APPROPRIATE TO ADVANCE CITY OSP PURPOSES.
7. LOCATES AND POTHOLAS SHALL BE REQUIRED FOR ALL CROSSINGS INVOLVING ALL DENVER FIBER OSP CABLING INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO ACCESS VAULTS AND CONDUIT. CONTACT COLORADO 811 FOR OSP FACILITY LOCATES.

DENVER PARKS NOTES
1. PARK LANDS AND DESIGNATED PARKWAYS ARE PRIMARY COMMUNITY AND NEIGHBORHOOD AMENITY FEATURES THAT DEFINE COMMUNITY CHARACTER, SUPPORTS PUBLIC USE, ENHANCES MANAGEMENT OF AIR AND WATER AND PROMOTES ENVIRONMENTAL HEALTH. IN CONSIDERATION OF THE SIGNIFICANCE OF THESE AREAS AS PUBLIC AMENITIES, DENVER PARKS UTILITY POLICY LIMITS SURFACE AND SUBSURFACE UTILITIES ON PARK LANDS AND PARKWAYS AND PUBLIC ROW ADJACENT TO THEM.
2. UTILITY CORRIDOR ALIGNMENTS, SURFACE BOXES AND TRANSMISSION POLES SHALL AVOID BEING PLANNED ON OR UNDER PARK LANDS, DESIGNATED PARKWAYS, OR PUBLIC ROW ADJACENT TO PARK LANDS.
3. UTILITY CORRIDOR ALIGNMENTS AND SURFACE BOXES LOCATED ON PARKS LANDS AND DESIGNATED PARKWAYS SHOULD BE AVOIDED. ANY UTILITY CORRIDOR ALIGNMENT LOCATED ON PARKS LAND OR DESIGNATED PARKWAYS SHALL BE COORDINATED WITH DENVER PARKS.
4. UTILITY CORRIDOR ALIGNMENTS AND SURFACE BOXES LOCATED IN PUBLIC ROW ADJACENT TO PARKS LAND SHALL LOCATED ACROSS THE STREET FROM PARKS LANDS IF POSSIBLE. IF UTILITY CORRIDOR ALIGNMENT CAN NOT BE LOCATED ACROSS THE STREET FROM PARK LANDS, THE UTILITY CORRIDOR ALIGNMENT AND ALL SURFACE BOX LOCATIONS ADJACENT TO PARKS LAND SHALL BE COORDINATED WITH DENVER PARKS.

ENVIRONMENTAL NOTES
1. REGULATED ASBESTOS CONTAMINATED SOILS (RACS) MAY BE ENCOUNTERED IN BUILDING DEBRIS THROUGHOUT THE CITY DURING EXCAVATION. ALL RACS MUST BE MANAGED, DOCUMENTED, AND DISPOSED IN ACCORDANCE WITH STATE REGULATIONS PERTAINING TO SOLID WASTE SITES AND FACILITIES, SECTION 5 - ASBESTOS WASTE MANAGEMENT. STATE REGULATIONS REQUIRE ANY DISTURBED DEBRIS BE CHARACTERIZED TO DETERMINE APPLICABILITY OF THE REGULATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPETENT TRAINED PERSONNEL CAPABLE OF IDENTIFYING RACS IN DEBRIS AND HAVING ACCESS TO AN ONSITE CERTIFIED ASBESTOS BUILDING INSPECTOR (CABI) IN CASE OF RACS DISCOVERY.
2. CONTRACT OR SHALL TAKE REASONABLE MEASURES TO PREVENT PARTICULATE MATTER FROM BECOMING AIRBORNE AND TO PREVENT THE VISIBLE DISCHARGE OF FUGITIVE PARTICULATE EMISSIONS BEYOND THE PROPERTY LINE FROM WHICH THE EMISSIONS ORIGINATE. THE MEASURES TAKEN MUST BE EFFECTIVE AT ALL TIMES ON THE SITE, INCLUDING PERIODS OF INACTIVITY SUCH AS EVENINGS, WEEKENDS, AND HOLIDAYS AS WELL AS ANY OTHER PERIOD OF INACTIVITY.
3. DURING ANY SOIL DISTURBING ACTIVITIES, IF UNKNOWN/UNIDENTIFIED UNDERGROUND STORAGE TANKS, DRUMS, ODOROUS SOIL, STAINED SOIL, ASBESTOS-CEMENT PIPE (TRANSIT), BUILDING DEBRIS, OR WASTE MATERIALS ARE ENCOUNTERED, CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA OF THE DISCOVERY UNTIL DENVER DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (DDPHE) MAKES A DETERMINATION OF HOW TO PROCEED. CONTRACTOR SHALL IMMEDIATELY NOTIFY DDPHE OF THE DISCOVERY AT (720) 460-8376.
5. THE CONTRACTOR SHALL DIRECT NON-RECYCLABLE, NON-HAZARDOUS WASTES FROM CITY-OWNED OR CONTROLLED PROPERTY OR FACILITIES TO THE DENVER ARAPAHOE DISPOSAL SITE (DADS) LANDFILL FOR DISPOSAL, FOLLOWING THE REQUIREMENT AND PROCEDURAL GUIDANCE PER CITY EXECUTIVE ORDER 115. LABORATORY ANALYTICAL RESULTS WILL BE REQUIRED PRIOR TO DADS ACCEPTANCE FOR SOIL AND POSSIBLY OTHER MATERIALS. EARLY TESTING IS RECOMMENDED; DDPHE CAN ASSIST. CONTACT DDPHE AT (720) 865-5448 WITH QUESTIONS.
6. NOISE CONTROL. ALL NOISE CAUSED BY CONSTRUCTION OF, OR RESULTING FROM COMPLETED PROJECTS, MUST COMPLY WITH DENVER’S NOISE ORDINANCE, DENVER REVISED MUNICIPAL CODE CHAPTER 36 "NOISE CONTROL". EXEMPTED HOURS FOR CONSTRUCTION IN THE CITY AND COUNTY OF DENVER ARE FROM 7 AM TO 9 PM MONDAY THROUGH FRIDAY AND 8 AM TO 5 PM ON SATURDAYS AND SUNDAYS. IF THERE IS A NEED TO WORK OUTSIDE OF THE EXEMPTED HOURS: 1) THE CONTRACTOR SHALL REQUEST A VARIANCE, AND 2) THE VARIANCE PROCESS NEEDS TO BE STARTED A MINIMUM OF THREE MONTHS PRIOR TO THE DESIRED START DATE. ANY QUESTIONS SHOULD BE DIRECTED TO DDPHE COMMUNITY NOISE PROGRAM AT (720) 865-5410.
Demolition

The owner, site developer, contractor and/or their authorized agents shall ensure that all potential pollutants generated during demolition or construction work associated with this project be prevented from discharge to stormwater conveyance systems in the vicinity of this project site in accordance with the following:

1. The owner, site developer, contractor and/or their authorized agents shall prevent sediment, debris and all other pollutants from entering the storm sewer system during all demolition, excavation, trenching, boring, grading, or other construction operations that are part of this project. The owner, site developer, contractor and/or their authorized agents shall be held responsible for remedying any impacts to the municipal separate storm sewer system, receiving waters, waterways, wetlands, and or other public or private properties, resulting from work done as part of this project.

2. The owner, site developer, contractor and/or their authorized agents shall remove all sediment, mud, construction debris, or other potential pollutants that may have been discharged to or, accumulate in the flow lines of storm drainage appurtenances, and public rights of ways of the city and county of Denver, as a result of construction activities associated with this project. All removals shall be conducted in a timely manner.

3. The owner, site developer, contractor and/or their authorized agents shall insure that all loads of cut and fill material imported to or exported from this site shall be properly covered to prevent loss of the material during transport on public rights of way.

4. The use of rebar to anchor best management practices, other than portable toilets, is prohibited.

5. The owner, site developer, contractor and/or their authorized agents shall implement the following best management practices (BMPs) on stormwater construction sites:
   - a) Vehicle tracking control: This BMP is required at all access points for ingress/egress from off-site impervious surfaces to construction site.
   - b) Inlet protection: This BMP is required on all existing or proposed storm sewer inlets in the vicinity of the construction site that may receive site runoff. The BMP must be appropriate to the type of storm inlet and appropriate for the ground surface at the inlet.
   - c) Interim site stabilization: This BMP is required to provide a measure for preventing the discharge of sediment from construction sites where overlot grading or other site disturbance has occurred. This BMP is particularly necessary on sites where construction activities/disturbance will be limited to small areas of the project site. Acceptable BMPs include:
     - preserving existing vegetation
     - seeding and planting
     - mulching
     - mulching and seeding
     - temporary/permanent re-vegetation operations
     - chemical soil stabilizer application (requires WMD approval)
   - d) Waste management/containment: This BMP requires that all construction wastes, fuels, lubricants, chemical wastes, trash, sanitary wastes, contaminated soils or debris shall be contained on site. Protected from contact with precipitation or surface runoff. Periodically removed from the construction site, and properly disposed of.
   - e) Spill prevention /containment: This BMP defines the measures proposed for preventing, controlling, or containing spills of fuel, lubricants, or other pollutants, and protecting potential pollutants from contact with precipitation or runoff.
   - f) Chute washout containment: Water used in the cleaning of cement truck delivery chutes shall be discharged into a predefined, bermed containment area on the job site. The required containment area is to be bermed so that wash water is totally contained. Wash water discharged into the containment area shall be allowed to infiltrate or evaporate. Dried cement waste is removed from the containment area and properly disposed of.
   - i. The direct or indirect discharge of water containing waste cement to the storm sewer system is prohibited.
   - g) Sweeping: This BMP requires that impervious surfaces which are adjacent to or contained within construction sites be swept on a daily basis or as needed during the day when sediment and other materials are tracked or discharged on to them. Either sweeping by hand or use of street sweepers is acceptable. Street sweepers using water while sweeping is preferred in order to minimize dust. Flushing off paved surfaces with water is prohibited.
   - h) Perimeter control: This BMP requires that a construction site install a perimeter control measure along the edge of the construction site, to prevent or filter the discharge of surface runoff from the construction site. The type of perimeter control used shall be determined based on-site conditions and location. Maintenance and repair of the control measure shall occur as needed, in a timely manner.
   - i) Stock piles: Soils that will be stockpiled for more than thirty (30) days shall be protected from wind and water erosion within fourteen (14) days of stockpile construction. Stabilization of stockpiles located within 100 feet of receiving waters, or with slopes 3 to 1 or greater shall be completed within seven (7) days following stockpile construction. Stabilization and protection of the stockpile may be accomplished by any of the following: mulching, temporary/permanent revegetation operations, chemical soil stabilizer application (requires Denver DOTI approval), or erosion control matting/geotextiles. If stockpiles are located within 100 feet of receiving waters, a drainageway or the site perimeter, additional sediment controls shall be required.
   - j) Saw cutting operations: The contractor shall protect all storm sewer facilities adjacent to any location where pavement cutting operations involving wheel cutting, saw cutting, or abrasive water jet cutting are to take place. The contractor shall remove and properly dispose of all waste products generated by said cutting operations on a daily basis or as needed throughout the work day. The discharge of any water contaminated by waste products from cutting operations to the storm sewer system is prohibited.
   - k) Structural controls: Development sites that are required to provide detention and water quality enhancement facilities for storm runoff need to install the detention facilities early in the construction build-out of the site. Projects that are using underground detention are required to install a pretreatment structure(s) or sedimentation basin(s) as a means of treating potentially polluted storm water prior to entering the detention structure. Use of these structures is required for entrapping sediment and construction debris during the active construction phase of the project. A narrative section of a management plan should address operation and maintenance of the structural controls being used as an active construction BMP.
   - l) Erosion and sediment control 'best management practices' shall be maintained and kept in effective operating condition for the duration of this project. All necessary maintenance and repair shall be completed immediately upon discovery of any deficiency or defect.
OFFICE OF THE FORESTER UTILITY PLAN NOTES

1. Utility Projects that do not go through the Office of the City Forester (OCF) review process or do not receive OCF approval; OCF reserves the right to plant in the PRW and cannot be held liable for any damage that occurs to utility within PRW where utility is not placed at a minimum depth of 36 inches.

2. OCF reserves the right to declare unencumbered space in the PRW for future and replacement PRW trees. Should these areas be violated by any utility, the utility owner shall (re)move utility at owner's expense.

3. The contractor shall not cut, prune, plant, remove, inject or spray trees or other landscaping elements within row, unless such work is otherwise specified on the approved plans or receives prior written authorization from the OCF.

4. Any disturbed landscaping will be replaced to equal or better condition than that which existed prior to work.

5. Seeding, sodding, and planting shall be as specified or otherwise approved by the City. Construction, maintenance, and watering requirements shall conform to the city standard specifications. Where landscape restoration must be delayed due to seasonal requirements, a separate permit may authorize such work.

6. The City requires compliance with the following when work is necessary and/or required adjacent to trees in the PRW or other public spaces:

   A) Tree Protection Zone (TPZ) is the area equal to 1.5 feet per 1-inch diameter tree measured at 4.5 feet above grade or the dripline of the tree, whichever is greater.
      i. TPZ fencing shall be established prior to work commencing, see tree protection detail available on website
      ii. All work within TPZ must be authorized in writing by OCF, including but not limited to:
         a. Entrance and/or Access
         b. Moving, Resizing, Removing, or Altering in any manner
         c. Storage of soils/materials/debris/equipment
         d. Changes in grade
      iii. All pit locations must be staked and approved prior to an excavation.
      iv. Excavation; including but not limited to trenching, potholing, bore pits, and handhole installation; shall not occur within the TPZ without prior written authorization from OCF and verifying location of existing roots that may be impacted by excavation:
         a. Approved root discovery methods include: hand work, pneumatic excavation, ground penetrating radar, or other OCF approved method.
         b. Adjust the route to avoid roots as much as possible.
         c. Roots 2 inches in diameter and larger shall not be cut, pruned, severed, or damaged. If conflict arises, contractor must contact OCF prior to contiuinuing work.
            i. Roots of any size shall be pruned prior to exaction to minimize damage from ripping or tearing
         d. Minimize the work pit to no wider than the trench.
         e. Store Soil opposite the tree side of the trench.
         g. Exposed roots must be kept moist at all times. Cover exposed roots with burlap or other material that will hold moisture against exposed roots.
      v. Tunneling/directional boring must be at least 36 inches below grade, 48 inches preferred.
         a. Final depth of installed utility must be at a minimum of 36 inches below final grade. Due to the inability to consistently maintain accurate boring depths, it is strongly recommended to target a depth of 48 inches to ensure no violation of the 36-inch minimum depth occurs. The city may order the lowering of installed utilities when they are discovered not to be deeper than the 36-inch minimum.

   B) The Critical Root Zone (CRZ) is the area within the TPZ and equal to 1 linear foot radius per 1-inch diameter of tree trunk measured at 4.5 feet above the ground.
      i. No root disturbance shall occur within this area.
         a. If not possible, contractor must meet with OCF personnel on site.
            i. When work occurs within CRZ, excavation must be performed with hand-tools, pneumatic excavation or other OCF approved method.
   C) The Structural Root Zone (SRZ) is the area within the TPZ and equal to 0.9 times per inch diameter of the tree measured at 4.5 feet above the ground (0.9*X).
      i. No activity shall occur within this zone with the exception of directional boring at a minimum depth of 36 inches below grade, 48 inches preferred.
         a. Final depth of installed utility must be at a minimum of 36 inches below final grade. Due to the inability to consistently maintain accurate boring depths, it is strongly recommended to target a depth of 48 inches to ensure no violation of the 36-inch minimum depth occurs. The city may order the lowering of installed utilities when they are discovered not to be deeper than the 36-inch minimum.

7. Should any tree damage occur, contractor shall contact the OCF immediately
   A) OCF shall issue an order directing the responsible party to prune, remove, or otherwise take such action as is necessary to repair said damage
   B) If damage is beyond repair, the responsible party shall compensate the city for the lost monetary value of the tree and may include replacement

8. The City & County of Denver tree retention and protection specifications must be followed. For a copy of the tree protection specifications please contact the Office of the City Forester at (720) 913-0651 or email at forestry@denvergov.org
OFFICE OF THE FORESTER TREE PROTECTION NOTES

1.EXISTING TREES TO BE PRESERVED IN PUBLIC RIGHT OF WAY (ROW) OR PUBLIC PLACE SHALL BE PROTECTED PER OCF STANDARDS AND PRACTICES. TREE PROTECTION SHALL BE:
   A) INSTALLED PRIOR TO COMMENCEMENT OF DEMOLITION AND/OR CONSTRUCTION ACTIVITIES
   B) INSPECTED AND APPROVED BY OCF STAFF
   C) REMAIN IN PLACE AND AS APPROVED UNTIL CERTIFICATE OF OCCUPANCY OR SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE IS ISSUED

2. TREE PROTECTION REQUIREMENTS;
   A) TREE PROTECTION ZONE (TPZ) SHALL BE INSTALLED AT THE DRIPLINE, FURTHEST EXTENT OF TREE CANOPY, OR IS EQUAL TO EIGHTEEN INCHES RADIIALLY FROM THE TREE FOR EVERY ONE INCH OF TRUNK DIAMETER AT BREAST HEIGHT (DBH = 4.5' ABOVE SOIL LINE), whichever is greater
   B) INSTALL SIX FOOT (6') CHAIN LINK FENCING PRIOR TO COMMENCEMENT OF PROJECT CONSTRUCTION ACTIVITIES
   C) OCF STAFF SHALL INSPECT AND APPROVE BOUNDARIES OF TREE PROTECTION ZONE(S) PRIOR TO COMMENCEMENT OF DEMOLITION OR CONSTRUCTION ACTIVITIES
   D) ONCE TPZ IS IN PLACE, THE FOLLOWING ARE NOT PERMITTED WITHIN TPZ WITHOUT PRIOR WRITTEN APPROVAL FROM OCF:
      i. ENTRANCE AND/OR ACCESS
      ii. MOVING, RESIZING, REMOVING, OR ALTERING IN ANY MANNER
      iii. STORAGE OF MATERIALS/DEBRIS/EQUIPMENT
      iv. CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO; ROTOTILLING, TRENCHING, GRADING, INSTALLATION OF UNDERGROUND UTILITIES AND/OR SITE IMPROVEMENTS, LANDSCAPING, IRRIGATION WORK
   E) "TREE PROTECTION ZONE" SIGNS SHALL REMAIN IN PLACE AS POSTED BY OCF AND SHALL BE MAINTAINED IN THE CONDITION IN WHICH THEY WERE INSTALLED
   F) TREE PRUNING FOR CLEARANCE ISSUES MUST HAVE PRIOR AUTHORIZATION BY OCF STAFF
   G) NO ROOT 2 INCHES OR LARGER SHALL BE CUT; CONSULT WITH OCF STAFF

3. EXISTING ROW OR PUBLIC PLACE TREES APPROVED FOR REMOVAL BY OCF MUST BE PROTECTED IN PLACE UNTIL REMOVED BY AN OCF-LICENSED TREE CONTRACTOR;
   A) AN OCF TREE REMOVAL PERMIT IS REQUIRED
   B) TREE REMOVAL PERMITS ARE NOT INCLUDED WITH BUILDING PERMITS AND/OR PLAN APPROVAL AND MUST BE OBTAINED SEPARATELY FROM THE OCF
   C) FAILURE TO PROTECT TREES UNTIL REMOVAL OR REMOVING WITHOUT A OCF-ISSUED PERMIT WILL RESULT IN NOTICE OF VIOLATION AND/OR MAY INCLUDE CITATIONS/FINES

4. CLEAR VISIBILITY INTO TPZ MUST BE MAINTAINED. ALL CONSTRUCTION BANNERS, SCREENS, BARRIERS, AND/OR SIGNS (EXCEPT OCF-POSTED TPZ SIGNS) MUST BE SEMI-TRANSPARENT AND NOT IMPede INSPECTION OF TPZ BY OCF STAFF

5. FOR PROJECTS WITH A DURATION OF 5 DAYS OR LONGER;
   A) PROTECTED TREES SHALL BE DEEP-ROOT WATERED AT A MINIMUM INTERVAL OF ONCE PER WEEK WHEN TEMPERATURES ARE AT OR ABOVE 40-DEGREES F
   B) TREES SHALL BE WATERED AT THE RATE OF 20 GALLONS PER INCH CALIPER
   C) INSECT AND DISEASE TREATMENTS SHALL BE APPLIED WHEN NECESSARY OR AS ORDERED BY OCF
      i. OCF MAY ASK FOR DOCUMENTED PROOF OF WATERING AND/OR TREATMENT.