

GENERAL CONSTRUCTION NOTES

1. BASIS OF ELEVATIONS: (USE CITY OF NEWARK BENCHMARK, NGVD 29)
2. APPROVAL BY THE CITY ENGINEER SHALL IN NO WAY RELIEVE THE DEVELOPER AND/OR THEIR ENGINEERS FROM RESPONSIBILITY FOR THE DESIGN OF THE IMPROVEMENTS AND FOR ANY DEFICIENCIES RESULTING FROM THE DESIGN THEREOF OR FROM ANY REQUIRED CONDITIONS OF APPROVAL FOR THE PROJECT.
3. CONTRACTOR SHALL NOTIFY THE CITY OF NEWARK PUBLIC WORKS INSPECTOR 48 HOURS IN ADVANCE OF ANY WORK. FAILURE TO NOTIFY THE CITY AS REQUIRED MAY RESULT IN REJECTION OF ALL WORK NOT INSPECTED BY THE CITY.
4. CONSTRUCTION HOURS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE APPROVED BY THE CITY ENGINEER. NO WORK MAY BE PERFORMED ON CLOSED FRIDAYS, CITY HOLIDAYS, AND DURING FURLOUGH WITHOUT PRIOR APPROVAL FROM THE CITY ENGINEER.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT CITY OF NEWARK STANDARD DETAILS, SPECIFICATIONS, AND 2006 STATE OF CALIFORNIA STANDARD SPECIFICATIONS. CONSTRUCTION MATERIAL SUBMITTALS SHALL BE APPROVED BY THE PROJECT ENGINEER-OF-RECORD AND SUBMITTED INTO THE CITY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
6. NO CHANGE SHALL BE MADE IN THE FIELD PRIOR TO RESUBMITTAL AND APPROVAL BY CITY ENGINEER OF REVISED PLANS.
7. AN ENCROACHMENT PERMIT SHALL BE OBTAINED FROM THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN DISTRICT RIGHT-OF-WAY AND FOR THE CONSTRUCTION, MODIFICATION, OR CONNECTION TO DISTRICT-MAINTAINED FACILITIES. ALL WORKMANSHIP, EQUIPMENT, AND MATERIALS SHALL CONFORM TO DISTRICT STANDARDS AND SPECIFICATIONS.
8. AN ENCROACHMENT PERMIT WILL BE REQUIRED FROM THE CALIFORNIA DEPARTMENT OF TRANSPORTATION FOR ANY CONSTRUCTION WITHIN STATE RIGHT-OF-WAY.
9. A DRILLING PERMIT FROM ACWD IS REQUIRED PRIOR TO THE START OF ANY SUBSURFACE DRILLING ACTIVITIES FOR WELLS, EXPLORATORY HOLES, AND OTHER EXCAVATIONS, INCLUDING BUT NOT LIMITED TO DEWATERING WELLS. CONTACT ACWD'S ENGINEERING DEPARTMENT TO OBTAIN A PERMIT.
10. PRIOR TO ANY SOIL IMPROVEMENT WORK, THE PROJECT GEOTECHNICAL ENGINEER SHALL COORDINATE WITH ACWD TO ENSURE COMPLIANCE WITH ACWD ORDINANCE NO. 2010-01.
11. ALL EXISTING STREETS SHALL REMAIN OPEN TO TWO-WAY TRAFFIC AT ALL TIMES EXCEPT AS PERMITTED BY THE CITY ENGINEER.

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12. THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR PRIVATE PROPERTY ADJACENT TO THE WORK SITE THROUGHOUT THE PERIOD OF CONSTRUCTION.
13. ALL UTILITIES INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE AND CABLE TELEVISION SERVICES, SHALL BE PROVIDED UNDERGROUND IN ACCORDANCE WITH CITY OF NEWARK SUBDIVISION STANDARDS.
14. LOCATION OF UNDERGROUND UTILITIES WAS TAKEN FROM THE RECORDS OF THE CONTROLLING AGENCIES. NO RESPONSIBILITY FOR THEIR ACCURACY IS ASSUMED BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND/OR LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL CALL USA, PHONE 800-227-2600 48 HOURS PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
15. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY.
16. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED BEFORE PLACING BASE ROCK.
17. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL NECESSARY UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.
18. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES PRIOR TO COMMENCING ANY ON-SITE WORK. THE CONTRACTOR SHALL ALWAYS BEGIN WORK AT THE DOWNSTREAM POINT OF CONNECTION AND PROCEED UPSTREAM. IF UTILITY INVERTS DO NOT CORRESPOND TO THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING.
19. ALL ABOVE-GROUND WATER FACILITIES SHALL BE INSTALLED OUTSIDE PUBLIC RIGHT-OF-WAY.
20. SANITARY SEWER AND WATER LINE CONNECTIONS MADE TO EXISTING FACILITIES SHALL BE MADE BY UNION SANITARY DISTRICT AND ALAMEDA COUNTY WATER DISTRICT, RESPECTIVELY, AT THE DEVELOPER'S EXPENSE.
21. ALL STORM DRAIN LINES WITHIN THE PUBLIC AND PRIVATE STREET RIGHT-OF-WAY AND STORM DRAIN EASEMENTS SHALL BE CONSTRUCTED OF RCP CLASS III, WITH RUBBER GASKETED JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. ALL STORM DRAIN LINES GREATER THAN 42" DIAMETER SHALL BE DOUBLE RUBBER GASKETED. CONTRACTOR SHALL SUBMIT CERTIFICATES OF COMPLIANCE FOR RCP PIPE, DOUBLE RUBBER GASKETS, AND GROUT PROPOSED FOR PIPE JOINTS TO CITY OF NEWARK. ALL JOINTS SHALL BE WATER TIGHT AND ARE SUBJECT TO THE CITY ENGINEER'S APPROVAL.
22. TELEVISIONING STORM DRAIN SYSTEM – AFTER PLACEMENT OF THE ROCK, THE STORM DRAIN SYSTEM, INCLUDING THE MAIN LINE, LATERALS AND INTERIORS OF STORM STRUCTURES IN ALL PUBLIC AND PRIVATE RIGHT OF WAY AND STORM DRAIN EASEMENTS, SHALL BE VISUALLY INSPECTED BY MEANS OF CLOSED-CIRCUIT TELEVISION. DEFECTS MUST BE REPAIRED AND THE SYSTEM MUST BE TELEVISIONED TO CONFIRM SATISFACTORY REPAIR WORK PRIOR TO PAVING. THE STORM DRAIN SYSTEM MUST ALSO BE TELEVISIONED AFTER PAVING. IMMEDIATELY AFTER FLATWORK AND ASPHALT PUNCHLIST IS COMPLETED, AND PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL TELEVISION THE

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STORM DRAIN SYSTEM AGAIN. ANY NECESSARY CLEAN OUT AND REPAIRS MUST BE COMPLETED PRIOR TO ACCEPTANCE.

VIDEO INSPECTION SHALL BE CONDUCTED BY AN ENTITY INDEPENDENT FROM AND UNRELATED TO THE PIPE INSTALLER.

VIDEO INSPECTION WILL BE DONE ONE SECTION (STRUCTURE TO STRUCTURE) AT A TIME. THE CAMERA WILL PAN THE INTERIORS OF ALL STRUCTURES AND WHEN IN THE PIPE, WILL STOP AT EACH JOINT TO ROTATE 360° TO PAN THE ENTIRE JOINT.

THE VIDEO CAMERA SHALL BE SPECIFICALLY DESIGNED AND CONSTRUCTED FOR SUCH INSPECTION. LIGHTING FOR THE CAMERA SHALL BE SUITABLE TO ALLOW A CLEAR COLOR PICTURE OF THE ENTIRE PERIPHERY OF THE PIPE. THE CAMERA SHALL BE OPERATIVE IN 100% HUMIDITY CONDITIONS WITHOUT CAUSING THE CAMERA TO FOG. THE CAMERA, TELEVISION MONITOR, AND OTHER COMPONENTS OF THE VIDEO SYSTEM SHALL BE CAPABLE OF PRODUCING PICTURE QUALITY TO THE SATISFACTION OF THE ENGINEER; AND IF UNSATISFACTORY, EQUIPMENT SHALL BE REMOVED AND REPLACED.

THE PROJECT INSPECTOR SHALL BE NOTIFIED 48 HOURS PRIOR TO TELEVISION AND MUST BE ONSITE TO CONFIRM FLOW RATE PRIOR TO TELEVISION. THE CAMERA SHALL BE MOVED THROUGH THE LINE IN A DOWNSTREAM DIRECTION AT A MODERATE RATE, STOPPING WHEN NECESSARY TO PERMIT PROPER DOCUMENTATION OF THE STORM DRAIN CONDITION. IN NO CASE WILL THE TELEVISION CAMERA BE PULLED AT A SPEED GREATER THAN 30 FEET PER MINUTE. MANUAL WINCHES, POWER WINCHES, TV CABLE, AND POWERED REWINDS OR OTHER DEVICES THAT DO NOT OBSTRUCT THE CAMERA VIEW OR INTERFERE WITH PROPER DOCUMENTATION OF THE STORM DRAIN CONDITIONS SHALL BE USED TO MOVE THE CAMERA THROUGH THE LINE.

THE IMPORTANCE OF ACCURATE DISTANCE MEASUREMENTS IS EMPHASIZED. MEASUREMENT FOR LOCATION OF DEFECTS SHALL BE ABOVE GROUND BY MEANS OF A METER DEVICE. MARKING ON THE CABLE, OR THE LINE, WHICH WOULD REQUIRE INTERPOLATION FOR DEPTH OF INSERTION PIT, WILL NOT BE ALLOWED. ACCURACY OF THE DISTANCE METER SHALL BE CHECKED BY USE OF A WALKING METER, ROLL-A-TAPE, OR OTHER SUITABLE DEVICE AND THE ACCURACY SHALL BE SATISFACTORY TO THE ENGINEER.

DOCUMENTATION OF THE TELEVISION RESULTS SHALL BE AS FOLLOWS:

THE PURPOSE OF TELEVISION SHALL BE TO SUPPLY A VISUAL AND AUDIO RECORD OF PROBLEM AREAS OF THE LINES THAT MAY BE REPLAYED. RECORDING PLAYBACK SHALL BE AT THE SAME SPEED THAT IT WAS RECORDED. THE FORMAT SHALL BE DVD. THE ACCOMPANYING AUDIO SHALL PROVIDE A DESCRIPTION OF WHAT IS ENCOUNTERED SUCH AS JOINTS, PROBLEM AREAS, AND BROKEN PIPE. THE DVD SHALL HAVE DISPLAYED THE NUMBER OF FEET FROM THE STARTING STRUCTURE FOR EACH SEGMENT.

SECTIONS OF PIPE FROM STRUCTURE TO STRUCTURE SHALL BE AUDIBLY AND VISUALLY IDENTIFIED IN THE VIDEO USING THE SAME NOMENCLATURE AS ON THE IMPROVEMENT PLANS, E.G. "SDMH #2 TO SDMH #3" OR "STA 10+55". EACH DVD MUST BE LABELED WITH THE FOLLOWING INFORMATION: DATE, PROJECT #, THE LOCATIONS, AND TYPES OF STRUCTURES SHOWN ON THE DVD.

TITLE TO THE DVD SHALL BE APPROVED BY THE PROJECT INSPECTOR. THE CONTRACTOR SHALL SUBMIT A COPY OF THE DVD FOR REVIEW BY THE ENGINEER DURING THE PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE A WRITTEN SUMMARY OF THE DVD WITH DIMENSIONS AND INFORMATION, SPECIFICALLY IDENTIFYING PROBLEM AREAS AND BROKEN PIPE.

23. TRENCH BACKFILL SHALL BE IN ACCORDANCE WITH THE RESPECTIVE AGENCIES AND THE CITY OF NEWARK TRENCH BACKFILL SPECIFICATIONS. ALL TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED. COMPACTION TEST RESULTS SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO PAVEMENT FINAL LIFT.

24. FINAL PAVEMENT RESTORATION SHALL BE COMPLETED BY THE NEXT BUSINESS DAY.
25. CUTS IN EXISTING PAVEMENT SHALL BE REPLACED WITH THE EQUIVALENT SECTION PLUS 1" ADDITIONAL ASPHALT OR 3" INCHES OF ASPHALT OVER 6" BASE ROCK, WHICHEVER IS GREATER.
26. ALL UNPROTECTED ELECTRICAL TRENCHES SHALL BE CAPPED WITH 6" OF CONCRETE.
27. NO CONCRETE SIDEWALK SHALL BE PLACED UNTIL ALL UTILITIES INCLUDING CABLE TELEVISION AND STREET LIGHT CONDUIT ARE IN PLACE.
28. THE DEVELOPER SHALL ENSURE THAT A WATER VEHICLE FOR DUST CONTROL OPERATIONS IS KEPT READY AND AVAILABLE AT ALL TIMES DURING CONSTRUCTION AT THE CITY ENGINEER'S DIRECTION.
29. EXACT EXTENT OF NEW PAVEMENT TO BE INSTALLED SHALL BE DETERMINED BY THE CITY ENGINEER UPON COMPLETION OF ROADWAY EXCAVATION. NEW PAVEMENT SHALL CONFORM TO EXISTING SOUND STRUCTURAL SECTION.
30. THE GREATER STRUCTURAL STREET SECTION SHALL EXTEND INTO THE CURB RETURN OF THE STREET WITH THE LESSER STRUCTURAL STREET SECTION.
31. CONTRACTOR SHALL PROVIDE STATIC AND VIBRATORY ROLLERS AS REQUIRED BY CITY ENGINEER.
32. THE CONTRACTOR SHALL PROVIDE AND USE A STEEL ROLLER (12-TON MINIMUM), LOADED WATER WAGON OR OTHER PIECE OF HEAVY EQUIPMENT IN THE PRESENCE OF THE PUBLIC WORKS INSPECTOR TO CHECK THE STABILITY OF EACH LAYER OF ROADWAY SECTION INCLUDING SUBGRADE, BEFORE PROCEEDING WITH HIS NEXT OPERATION.
33. SUBGRADE AT THE GRADING PLANE SHALL HAVE A RELATIVE COMPACTION OF NOT LESS THAN 90%.
34. AGGREGATE SUBBASE SHALL BE CLASS II AND SHALL HAVE A RELATIVE COMPACTION OF NOT LESS THAN 95%.
35. AGGREGATE BASE SHALL BE CLASS II AND SHALL HAVE A RELATIVE COMPACTION OF NOT LESS THAN 95%.
36. ASPHALT CONCRETE FOR INITIAL COURSES, SHALL BE TYPE "A" ¾ - INCH MAXIMUM MEDIUM GRADING; ASPHALT CONCRETE FOR FINAL LIFT SHALL BE TYPE "A" ½ - INCH MAXIMUM MEDIUM GRADING. THE AMOUNT OF ASPHALT BINDER TO BE MIXED WITH AGGREGATE SHALL BE SUCH THAT THE AIR VOID CONTENT OF THE RESULTING ASPHALT CONCRETE SHALL BE NOT LESS THAN 3% NOR MORE THAN 5%. STABILOMETER VALUE AS DETERMINED BY CALIFORNIA TEST METHOD NO. 304 SHALL BE 38 MINIMUM.

ALL MIXTURES SHALL BE SPREAD AT A TEMPERATURE OF NOT LESS THAN 260 DEGREES F, AND NOT GREATER THAN 300 DEGREES F. INITIAL ROLLING SHALL BE PERFORMED IMMEDIATELY AFTER PLACEMENT. NO ASPHALT CONCRETE IS TO BE PLACED WHEN THE ATMOSPHERIC TEMPERATURE IS BELOW 50 DEGREES F.

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ASPHALT CONCRETE SHALL BE COMPACTED TO AN AVERAGE RELATIVE DENSITY OF 94% OF THE MAXIMUM THEORETICAL DENSITY (ASTM D-2041) PRIOR TO THE MAT COOLING BELOW 250 DEGREES F. NO SINGLE TEST SHALL BE LESS THAN 92%.

THE USE OF RECYCLED ASPHALT PRODUCTS (RAP) WILL NOT BE PERMITTED.

37. A MINIMUM 18" DEEP ROOT BARRIER SHALL BE PLACED ADJACENT TO THE CONCRETE AT THE FOLLOWING LOCATIONS:
 - A. ON ALL SIDES OF TREE WELLS; AND
 - B. A MINIMUM 10' IN LENGTH AT BACKS OF CURBS AND EDGES OF SIDEWALKS ADJACENT TO TREE PLANTING AREAS IF TREE IS WITHIN 8' OF CONCRETE.
38. A REPRESENTATIVE OF THE DEVELOPER'S ENGINEER SHALL STAKE UTILITY LOCATIONS AT THE TIME CURB STAKES ARE SET TO ENSURE THAT THE LETTERS WILL BE STAMPED IN CONCRETE IN THE PROPER LOCATION.
39. CURB SHALL BE STAMPED WITH AN "S", "W" OR OTHER LETTER CORRESPONDING TO THE APPROPRIATE UTILITY WHEREVER A UTILITY CROSSES THE CURB LINE.
40. ALL GRADE BREAKS SHALL BE ROUNDED IN THE FIELD FOR PROPER APPEARANCE.
41. EMULSIFIED ASPHALT FOR USE AS A PAINT BINDER SHALL BE MIXING TYPE EMULSION GRADE SS-1H. THE RATE OF PAINT BINDER OR FOG SEAL APPLICATION SHALL BE 0.02 TO 0.10 GALLONS PER SQUARE YARD.
42. LIQUID ASPHALT FOR USE AS A PRIME COAT SHALL BE GRADE SC-70.
43. REMOVE OR OVERLAY EXISTING PAVEMENT AS NECESSARY TO PROVIDE UNIFORM CROSS-SLOPE FROM CENTERLINE TO LIP OF GUTTER.
44. THE CONTACTOR SHALL DO WHATEVER IS NECESSARY TO MAKE A SMOOTH TRANSITION FROM EXISTING PAVEMENT TO NEW ASPHALT CONCRETE.
45. ADJUST RIM OF ALL CLEAN OUTS, MANHOLES, VALVE COVERS AND SURVEY MONUMENT COVERS TO GRADE.
46. ELEVATIONS SHALL BE SET ON ALL MONUMENTS PRIOR TO ACCEPTANCE OF STREET IMPROVEMENTS.
47. CURB RAMPS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE LATEST VERSION OF THE STATE STANDARD PLANS (A88A & B) AND THESE SPECIAL PROVISIONS.

TRUNCATED DOMES SHALL BE PREFABRICATED ARMOR TILE TACTILE DETECTABLE WARNING SURFACE TILE BY ENGINEERED PLASTICS, INC., OR APPROVED EQUAL.

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48. THE ENGINEER SHALL PROVIDE MYLAR COPIES AND AN ELECTRONIC VERSION OF IMPROVEMENT PLANS REVISED TO REFLECT "AS-BUILT" CONDITIONS PRIOR TO FINAL ACCEPTANCE OF WORK.

STORMWATER TREATMENT MEASURES NOTES

1. A CERTIFICATION BY A LICENSED CIVIL ENGINEER AND/OR LICENSED LANDSCAPE ARCHITECT THAT THE POST-CONSTRUCTION STORMWATER QUALITY MEASURES WERE INSTALLED AND ARE OPERATING PROPERLY SHALL BE SUBMITTED TO THE CITY AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR ANY BUILDING(S) OR FINAL ACCEPTANCE OF WORK, WHICHEVER IS FIRST.
2. THE BIOTREATMENT SOIL MIX USED IN ALL BIORETENTION AREAS SHALL COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE MOST CURRENT RWQCB MUNICIPAL REGIONAL PERMIT. IF THE BIOTREATMENT SOIL MIX SUPPLIER IS INCLUDED ON ALAMEDA CLEAN WATER PROGRAM'S "BIOTREATMENT SOIL MIX SUPPLIER LIST" (SUPPLIER LIST), A BIOTREATMENT SOIL MIX SUPPLIER CERTIFICATION STATEMENT (CERTIFICATION STATEMENT) SHALL BE COMPLETED BY THE SUPPLIER AND SUBMITTED TO THE CITY OF NEWARK A MINIMUM OF 14 DAYS PRIOR TO DELIVERY OF THE MATERIAL TO THE JOB SITE. IF THE BIOTREATMENT SOIL MIX SUPPLIER IS NOT INCLUDED ON THE SUPPLIER LIST, A BIOTREATMENT SOIL MIX SPECIFICATION VERIFICATION CHECKLIST (VERIFICATION CHECKLIST) SHALL BE COMPLETED BY THE SUPPLIER AND SUBMITTED TO THE CITY OF NEWARK A MINIMUM OF 14 DAYS PRIOR TO DELIVERY OF THE MATERIAL TO THE JOB SITE. COPIES OF THE SUPPLIER LIST, CERTIFICATION STATEMENT AND VERIFICATION CHECKLIST MAY BE DOWNLOADED FROM THE COUNTYWIDE PROGRAM'S WEBSITE AT [HTTP://WWW.CLEANWATERPROGRAM.ORG/RESOURCES/RESOURCES-DEVELOPMENT.HTML](http://www.cleanwaterprogram.org/resources/resources-development.html).
3. CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER FOR REVIEW AND APPROVAL OF LABORATORY RESULTS FOR THE BIORETENTION SOIL MIX (COMPOST AND SAND) PER ATTACHMENT L OF THE MRP AND THE SPECIFICATION FOR THE CLASS 2 PERMEABLE ROCK PER CALTRANS SPECIFICATIONS PRIOR TO THE CONSTRUCTION OF ANY BIORETENTION AREAS.
4. THE CONTRACTOR SHALL CONTACT THE CITY OF NEWARK PUBLIC WORKS INSPECTOR FOR INSPECTIONS OF THE TREATMENT MEASURES. INSPECTIONS WILL INCLUDE TRENCH CONSTRUCTION, PLACEMENT OF SUBDRAIN, CLASS 2 PERMEABLE ROCK, BIORETENTION SOIL MIX BACKFILL, AND LANDSCAPING/IRRIGATION.