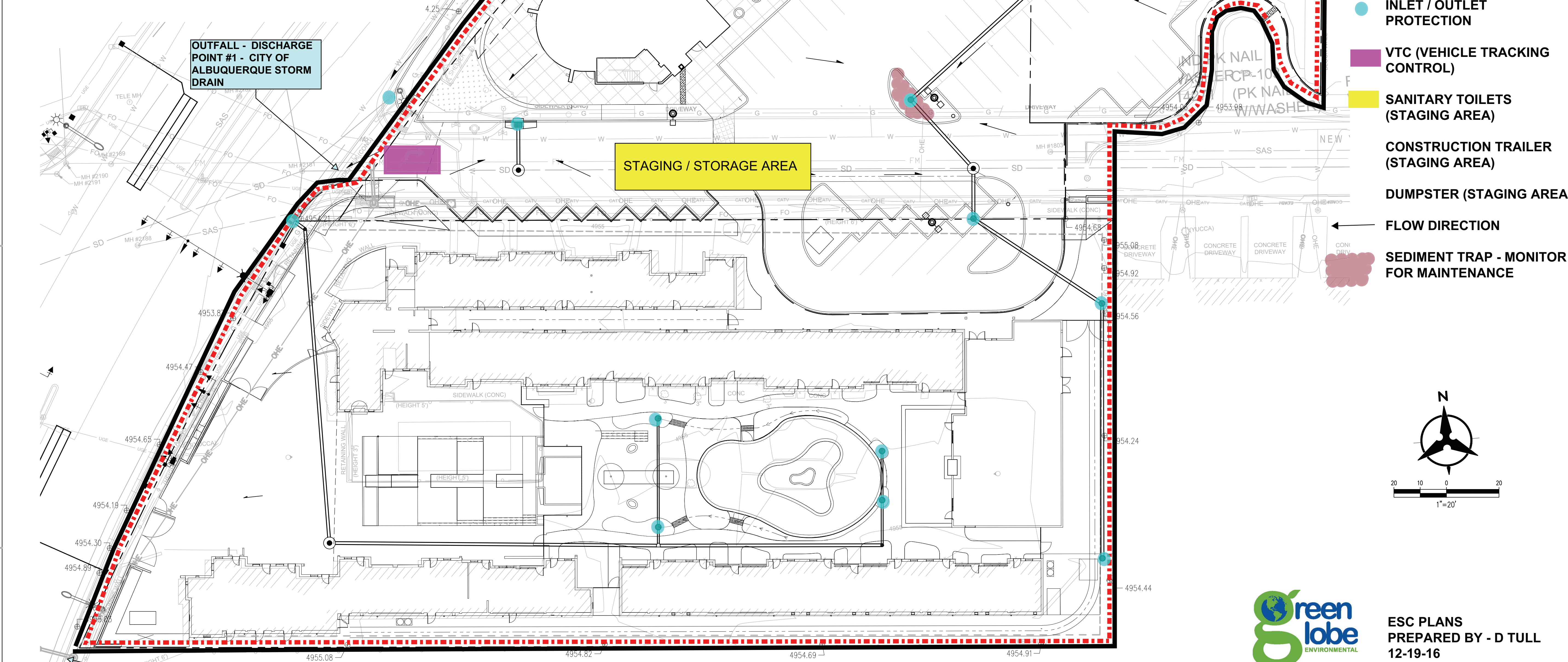


**EROSION CONTROL/ENVIRONMENTAL PROTECTION/STORM WATER POLLUTION PREVENTION PLAN**

**WATER AND WASTEWATER GENERAL NOTES**

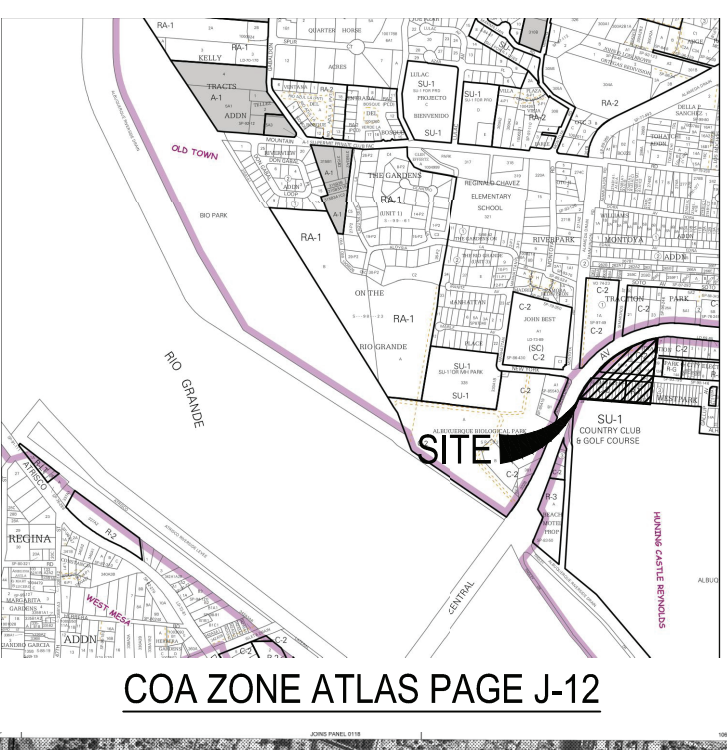
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL NECESSARY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, OBTAINING AN NPDES PERMIT PRIOR TO CONSTRUCTION, FILLING OUT THE NOTICE OF INTENT (NOI) APPLICATION, AND FILLING OUT THE NOTICE OF TERMINATION (NOT) APPLICATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION OF AND INSPECTION REPORTS FOR THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL SUBMIT THE SWPPP WITH THE PROPOSED CONSTRUCTION STAGING AREA AND TEMPORARY SANITARY FACILITIES CLEARLY SHOWN. ANY CHECK DAMS, SILT FENCES, OR OTHER BEST MANAGEMENT PRACTICES (BMPs) THAT ARE REQUIRED IN THE APPROVED SWPPP SHALL BE INCLUDED IN AND ARE INCIDENTAL TO THE SWPPP BID AMOUNT.
2. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED SWPPP ON-SITE AT ALL TIMES, AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN.
3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM THE REGULATORY AGENCIES.
4. THE CONTRACTOR SHALL IMPLEMENT THE APPROVED SWPPP AND ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
5. THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING BMPs IDENTIFIED IN THE APPROVED SWPPP IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS AS SPECIFIED IN THE SWPPP.
6. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED. WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR.
7. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING. WHEN CONSTRUCTION ACTIVITIES CEASE AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME WITHIN 14 DAYS, STABILIZATION MEASURES MUST BE INITIATED, UNLESS INDICATED OTHERWISE ON THESE PLANS OR ON THE LANDSCAPING PLAN. NATIVE GRASS SEEDING SHALL BE SEEDING PER SECTION 1012 OF THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHARTER, LATEST EDITION.
8. ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNATED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.) GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMITS REQUIRED TO HAUL OR DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDE GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINTS, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM AT 505-827-9329.
10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER. CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION.
12. WHERE STORM INLETS ARE SUSCEPTIBLE TO INFLOW OF SILT OR DEBRIS FROM CONSTRUCTION ACTIVITIES, PROTECTION SHALL BE PROVIDED ON THEIR UPSTREAM SIDE UTILIZING BMPs IDENTIFIED IN THE APPROVED SWPPP.



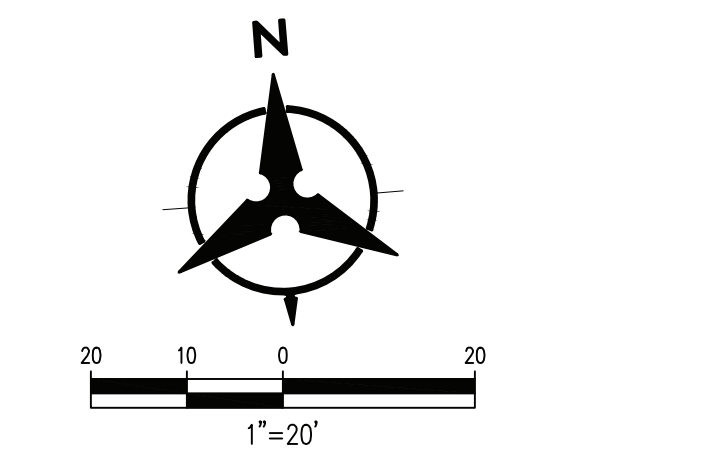
OUTFALL - DISCHARGE POINT #1 - CITY OF ALBUQUERQUE STORM DRAIN

STAGING / STORAGE AREA

OUTFALL - DISCHARGE POINT #2 - OVERLAND FLOW TO MRGCD ALBUQUERQUE RIVERSIDE DRAIN LOCATED ~ 275' TO THE SOUTH



- ESC PLAN LEGEND**
- LIMITS OF DISTURBANCE / PERMITTED AREA
  - - - PERIMETER BMP - AT CONSTRUCTION FENCE (SF/WF, FILTER SOX AT BASE ON INSIDE OF FENCE)
  - INLET / OUTLET PROTECTION
  - VTC (VEHICLE TRACKING CONTROL)
  - SANITARY TOILETS (STAGING AREA)
  - CONSTRUCTION TRAILER (STAGING AREA)
  - DUMPSTER (STAGING AREA)
  - FLOW DIRECTION
  - SEDIMENT TRAP - MONITOR FOR MAINTENANCE



ESC PLANS PREPARED BY - D TULL 12-19-16

**EROSION AND SEDIMENT CONTROL PLAN**

TOTAL SITE ACRES 3.0 ACRES  
TOTAL DISTURBED AREA 3.0 ACRES

REFER TO ESC 101 FOR EROSION AND SEDIMENT CONTROL PLAN BUILDING PERMIT SET, ZONE ATLAS LOCATOR. REFER TO SITE SWPPP FOR ADDITIONAL COMPLIANCE REQUIREMENTS. REFER TO THE ESC BMP DETAILS FOR INSTALLATION, INSPECTION AND MAINTENANCE REQUIREMENTS.

**DRAINAGE NARRATIVE**

**SITE INTRODUCTION:**  
THE SITE IS LOCATED AT THE INTERSECTION OF CENTRAL AVE AND NEW YORK AVE. EAST OF THE ALBUQUERQUE AQUARIUM AND BIOPARK. THE APPROXIMATELY 2.8 ACRES OF THE ENTIRE DEVELOPMENT IS CURRENTLY FULLY DEVELOPED AND CONSISTS OF TWO COMPONENTS: THE EXISTING EL VADO SITE (SOUTHERN 1.32 ACRES) AND THE NEW CASA GRANDE TRACTS (NORTHERN 1.47 ACRES).

PER FEMA MAP PANEL #35001C0331H (THIS SHEET), THE SITE IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE 'A'. THIS MEANS THAT THE SITE IS SUBJECT TO FLOODS ON AN AVERAGE OF 1 FOOT OR LESS.

THE TWO PROJECTS (EL VADO AND CASA GRANDE) WILL BE PERMITTED SEPARATELY HOWEVER THIS DRAINAGE MANAGEMENT PLAN WILL COVER THE DRAINAGE SCHEME FOR BOTH DEVELOPMENTS. STAMPED AND SIGNED GRADING AND DRAINAGE PLANS FOR BOTH PROJECTS WILL BE INCLUDED WITH THIS SUBMITTAL.

**METHODOLOGY:**  
THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE. THEREFORE, THE DEVELOPMENT PROCESS MANUAL SECTION 22.2 WAS USED TO ANALYZE THE SITE'S PROPOSED DRAINAGE. PRECIPITATION ZONE 2 WAS USED DUE TO THE SITE LYING EAST OF THE RIO GRANDE AND WEST OF SAN MATEO. PER SECTION 22.2, THE ON-SITE STORM DRAINS WERE SIZED BASED OFF OF MANNING'S EQUATION. THE ON-SITE INLETS WERE SIZED WITH THE INLETS IN SUMP CONDITION AND USING MANUFACTURER PROVIDED NOMOGRAPHS.

**EXISTING CONDITIONS:**  
THE CURRENT CONDITIONS OF THE SITE ARE EXTREMELY FLAT. BASED ON THE EXISTING SURVEY THERE ARE A NUMBER OF EXISTING INLETS LOCATED AT THE INTERSECTION OF CENTRAL AND NEW YORK AVE AS WELL AS TWO ADDITIONAL CURB INLETS LOCATED WITHIN NEW YORK AVE EAST OF THE SITE. THESE INLETS TIE TO AN EXISTING 18" RCP STORM DRAIN THAT RUNS DOWN NEW YORK AVE AND DRAINS TO THE EAST. BASED ON AS-BUILT INFORMATION, CITY OF ALBUQUERQUE SYSTEM MAPS AND THE SITE'S DESIGN SURVEY, THE SITE APPEARS TO DRAIN ENTIRELY INTO THIS EXISTING PIPE BY EITHER THE EXISTING INLETS AT CENTRAL OR THE INLETS TIE TO AN EXISTING 18" RCP STORM DRAIN. DURING LARGER STORM EVENTS, DRAINAGE APPEARS TO BE CONVEYED IN NEW YORK AVE, VIA SURFACE FLOW UNTIL IT HAS AN OPPORTUNITY TO DRAIN INTO FURTHER DOWNSTREAM INLETS.

**PROPOSED CONDITIONS:**  
BOTH THE EL VADO SITE AND CASA GRANDE SITE ARE ALLOWED TO DISCHARGE ENTIRELY TO PUBLIC INFRASTRUCTURE.

THE DEVELOPED FLOWS FOR BOTH THE EL VADO SITE AND THE CASA GRANDE SITE WILL CONTINUE TO DRAIN TO THE EXISTING 18" STORM DRAIN. A PRELIMINARY GEOTECHNICAL REPORT WAS COMPLETED FOR THE SITE WHICH DESCRIBED VERY LOOSE TO LOOSE SOILS PRESENT. THIS COMBINED WITH SHALLOW GROUNDWATER, AND THE PROXIMITY TO EXISTING EARTHQUAKE FAULTS ZONES, THE SITE HAS POTENTIAL FOR LIQUEFACTION, LATERAL SPREADING AND SEISMIC SETTLEMENT, WHICH WOULD PREVENT ON-SITE PONDING. SHALLOW WATER HARVESTING AREAS (LESS THAN 6") WILL BE PLACED THROUGHOUT THE LANDSCAPING AREAS AND MEDIAN ISLANDS IN AN ATTEMPT TO MEET THE "FIRST FLUSH" REQUIREMENTS BY THE CITY; HOWEVER DUE TO THE SOIL CHARACTERISTICS NOTED ABOVE THE REQUIRED FIRST FLUSH VOLUME WILL NOT BE MET. AS AN ALTERNATIVE TO THIS REQUIREMENT, WATER QUALITY INLETS/MANHOLES WILL BE INSTALLED ON-SITE STEGICALLY PLACED UPSTREAM OF THE POINT OF CONNECTION TO THE CITY SYSTEM.

BASED ON THE PROPOSED SITE GRADING, THE SITE WILL BE DIVIDED INTO 13 ON-SITE BASINS. BASIN 4 CONSISTS OF MOSTLY LAND WITH THE RIGHT OF WAY AS SUCH WAS DESIGNED TO SURFACE FLOW AND DISCHARGE DIRECTLY TO CENTRAL AVE TO THE WEST.

BASIN 1 CONTRIBUTES TO A SMALL POND ALONG THE EASTERN PORTION OF THE CASA GRANDE PROPERTY. THIS THEN ULTIMATELY OUTFALLS INTO THE ADJACENT HAMMERHEAD ROAD. BASIN 2 AND 3 DISCHARGE INTO AREA INLETS WITHIN THE CASA GRANDE PARKING LOT. THIS FLOW THEN CONNECTS TO THE EXISTING STORM DRAIN WITHIN NEW YORK AVE. BASIN 5 DISCHARGES INTO A CURB INLET ALONG THE WESTERN PORTION OF THE CASA GRANDE SITE. THIS STORM DRAIN THEN DIRECTLY CONNECTS TO THE EXISTING STORM DRAIN WITHIN NEW YORK AVE. AS WELL.

BASINS 6, 7, AND 8 DISCHARGE TO AREA INLETS WITHIN THE FIRE ACCESS ROAD OR PARKING LOT. THIS FLOW THEN CONNECTS TO THE EXISTING STORM DRAIN AT THE SAME MANHOLE AS BASINS 2 AND 3. BASINS 9, 10, 11, AND 12 ARE ALL SMALL BASINS CONTRIBUTING TO SMALLER DOME INLETS AROUND THE POOL AREA AND COURTYARD ON THE EL VADO SITE. BASIN 13 INCLUDES THE AMPHITHEATER WHICH WILL CONNECT TO THE ON-SITE STORM DRAIN. BASINS 9, 10, 11, 12, AND 13 ALL DISCHARGE TO THE BACK OF AN EXISTING INLET WITHIN CENTRAL AVE.

INLET 1 ON THE CASA GRANDE SITE IS A WATER QUALITY INLET PER THE CITY OF ALBUQUERQUE HYDROLOGY DEPARTMENT'S REQUIREMENT. THIS INLET WILL TREAT BASIN 2 AND 3.

INLET 4 WITHIN THE MEDIAN LANDSCAPE IS ANOTHER PROPOSED WATER QUALITY INLET AND WILL BE USED TO TREAT BASINS 6, 7 AND 8.

A WATER QUALITY MANHOLE LOCATED ON THE WESTERN SIDE OF EL VADO WILL BE CONSTRUCTED PER THE SAME HYDROLOGY REQUIREMENT. THIS MANHOLE IS THE FURTHEST POINT DOWNSTREAM ON THE EL VADO SITE.

THIS DRAINAGE MANAGEMENT PLAN AND GRADING PLANS DEMONSTRATE THAT THE DRAINAGE ELEMENTS PROPOSED WITH THE PROJECT ARE CAPABLE OF SAFELY CONVEYING THE 100 YEAR, 6 HOUR STORM EVENT IN ACCORDANCE WITH THE DEVELOPMENT PROCESS MANUAL. WITH THIS SUBMITTAL WE ARE SEEKING CITY OF ALBUQUERQUE HYDROLOGY APPROVAL IN SUPPORT OF FOUNDATION PERMIT, BUILDING PERMIT APPROVAL AND PUBLIC WORK ORDER APPROVAL.

**GRADING LEGEND**

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- - - EXISTING INDEX CONTOUR
- - - EXISTING INTERMEDIATE CONTOUR
- EXISTING GROUND SPOT ELEVATION
- - - EXISTING INDEX CONTOUR
- - - EXISTING INTERMEDIATE CONTOUR
- PROPOSED FINISHED GRADE SPOT ELEVATION
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- PROPOSED WATER HARVESTING AREAS (FIRST FLUSH REQUIREMENT)



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ARCHITECT

ENGINEER



PROJECT

CASA GRANDE  
2400 & 2424 CENTRAL AVENUE, SW  
ALBUQUERQUE, NM 87104

REVISIONS


DRAWN BY: MHS  
REVIEWED BY: MJB  
DATE: 08/04/2016  
PROJECT NO.: 15-0147  
DRAWING NAME:

**EROSION AND SEDIMENT CONTROL PLAN**

SHEET NO.  
**ESC 101**  
OF