SECTION 32 00 01
SITEWORK & GRADING
Construction Specification

PART 1 GENERAL

1.1 PURPOSE:

A. SMCCCD's Sitework & Grading Design Standard is intended to provide a basic level of site information for use by Architects, Engineers and Contractors doing work on one of the SMCCCD campuses. Due to the nature of campus level site information, more focused project specific data may be required by a design team and in that case this standard is intended to provide an example and format for such work.

B. San Mateo County Community College District is strongly committed to promoting sustainability throughout their campus projects. Section 01 81 13 Sustainability of the Design Standard provides guidelines and recommendations for implementing sustainability strategies. Where relevant, specific sustainability criteria is noted in this section; however, each project team should review and cross reference that front section while developing the specific project and its documentation. Each discipline shall confirm that specific performance and manufacturer information provided in the specification section is in alignment with code requirements, LEED criteria, and any other goals for sustainability.

PART 2 PRODUCTS

2.1 SITE GRADING

A. Site grading and drainage is to be designed by a qualified civil engineer, licensed by the State of California for such work. The engineer's stamp, signature and date shall appear on each site plan.

B. For the majority of the work on campus, Division of the State Architect SS, FLS, AC permits are required.

C. In some instances, work may affect city, county, state, GGNRA, or private property. Coordinate closely with the Vice Chancellor of Facilities and/or the Director of Community & Government Relations to secure appropriate approvals

D. Grading shall be designed to balance cut and fill as best as possible to minimize off haul or import

2.2 SITE ROADWAYS AND PARKING

A. Paving sections will be a minimum of: TI of 4 for parking stalls, TI of 5 for parking lot drive aisles, TI of 7 for roads.

A. Pavements:

1. Flexible pavement will be asphaltic concrete. Section thickness is determined by the engineer and the project geotech as appropriate for the traffic index and sub grade conditions. In all cases AC thickness will be a minimum of 2.5 inches.

2. Rigid pavements will be Portland cement concrete. Section thickness and reinforcements is determined by the engineer and the project geotech as appropriate from the traffic index and sub grade conditions. In all cases vehicular pavement thickness will be a minimum of 6 inches.

3. Pervious pavements will be porous AC/ porous PCC or stabilized DG. Section thickness is determined by the engineer and is appropriate for the traffic index, sub grade conditions and approved by the geotechnical engineer. Pervious pavements will need to be approved by the District, as they are typically more expensive to build and require on-going maintenance.

4. All pavement section design will be based on a 20-year life span.

B. Roads:

1. Cross and/or longitudinal slope to promote proper drainage.

2. Lane widths of 12-foot minimum.

3. Horizontal and vertical curves to meet Caltrans standards per Chapter 200 of the current edition of the Caltrans Highway Design Manual.

4. Signage and striping that meets Caltrans/Sam Trans standards.

5. Promote safe driving at speeds appropriate for a college campus.

6. Promote pedestrian safety; safe crossing locations.

7. Provide accessible ramps where roadway sidewalks are planned.

8. Roadway sidewalks to be 5-foot wide minimum measured from back of curb.

9. Roadways with no sidewalks shall have a minimum 2-foot wide shoulder.

C. Parking Lots:

1. Drive aisle widths shall be a minimum of 25-feet for 90-degree parking and 20-feet for diagonal parking, coordinated with the local fire marshal requirement.

2. The ratio of standard to compact stalls shall generally be 70% standard, 30% compact. This is a general guidelines, but must be reviewed on a project by project basis with the Vice Chancellor of Facilities.

3. Parking stalls will meet the minimum criteria:

4. Standard stalls shall be 8.5 feet by 18 feet.

5. Compact stalls shall be 7.5 to 8.0 feet by minimum 16 feet.

6. Auto accessible stall min. 9 feet wide x 18 feet deep with a 5 foot wide loading and unloading passenger side aisle, min. 18 feet long. 2 spaces may share the same 5 foot aisle. Comply with current accessibility codes.

7. Van accessible stall min. 9 feet wide x 18 feet deep with a 8 foot wide loading and unloading passenger side aisle, min. 18 feet in length. Comply with current accessibility codes.

8. Pavement slopes within an accessible stall and loading zone shall not exceed 2% in any direction, or as required by Title 24 and A.D.A.

D. Wheel Stops:

1. In general, SMCCCD is not in favor of having wheel stops in its parking lots except where necessary. In general, only provide wheel stops where they are required to

prevent parked vehicles from impeding with pedestrian walkways (e.g., cross-hatched paths of travel on asphalt pavement, sidewalks) or to prevent collisions with light fixtures/caissons, trees, shrubs or other landscape or hardscape elements.

2.3 SITE GRADING

A. Establish the finish floor elevation 6 inches above the finish ground adjacent to a building and allow for positive slope away from building for attached hardscape areas. If 6 inches cannot be maintained the use of curbing along the building face is to be used.

B. Asphalt surfaces: 2% minimum slope desired, 1% absolute minimum slope. Parking lots shall not exceed 6% maximum without approval of the Vice Chancellor of Facilities. Roadways shall not exceed 10% slope without approval of the Vice Chancellor of Facilities District and local fire marshal.

C. Concrete surfaces: 2% minimum slope desired, 0.5% absolute minimum slope.

D. Soil surface shall not exceed 2 feet horizontal to 1 foot vertical maximum slope except as approved by the Vice Chancellor of Facilities and Geotechnical Engineer.

2.4 SITE EROSION CONTROL

A. All projects shall have an erosion control plan.

B. Discuss SMCCCD's wishes for project to conform to the current C3 requirements for site disturbance with or the Vice Chancellor of Facilities.

C. Avoid where possible disturbing areas susceptible to high rate of erosion.

2.5 TREE GRATES

A. SMCCCD's accepted tree grate is Urban Accessories, 4' x 4' square, 1" thick, Rainbow Pattern, Unfinished Cast Iron, 1" thick grate, air space no greater than ¼", center grate opening 12-1/2". Install with S standard method: 1" x 1" x ¼"L steel frame set into concrete paving.

2.6 STANDARD DETAILS

Refer to and incorporate the following standard details, as appropriate. **Sheet Number**	**Standard Detail**
1	6" Vertical Curb
2	6" Vertical Curb and Gutter
3	6" Flush Curb
4	A.C. Deep Lift
5	Valley Gutter
6	Asphalt Pavement Section
7	Concrete Sidewalk
8	Typical Concrete Details

9	Retaining Wall
10	Trench Detail
11	Pipe Saddle Detail
12	24” Catch Basin Detail
13	Typical Manhole Detail
14	Cleanout with Lateral Stub
15	Fire Hydrant Assembly
16	Thrust Block Detail
17	Accessible Ramp
18	In-Line Accessible Ramp
19	Detectable Warning Surface
20	Typical Accessible Ramp Grooving Detail
21	Sign Detail
22	Sign Detail
23	Parking Detail
24	Parking Detail

2.7 APPROVED MANUFACTURERS

A. Urban Accessories

PART 2 EXECUTION

2.8 SUBSTITUTIONS

A. Yes, if performance and quality equivalency can be evidenced.

2.9 ASSOCIATED DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS

Site Data - District Supplied Documentation

Division 31 Design Standards and Construction Specifications

Division 32 Design Standards and Construction Specifications

Division 33 Design Standards and Construction Specifications

Section 34 00 00 Transportation Design Standard

END OF SECTION

(Standard Detail Sheets 1 – 24 follow)