BUILDING DEPARTMENT

303 East B Street, Civic Center, Ontario, CA 91764 Phone (909)395-2023, Fax (909)395-2180

GRADING CORRECTION LIST (2013 California Codes)

Plan Check No.	**Review No:**	**Plan Check Expiration Date: 1 year from submittal**
Site Address:		Number of Story:
Project Description:		Area square feet:
Type of Occupancy:		Wind Speed: V_{asd} = 85 mph (CRC) or V_{ult} = 110 mph (CBC), exposure C
Type of Construction:		Airport Noise Impact Zone (PART 150): YES / NO.

Applicant:	Phone:
Owner:	Phone:
Architect/Engineer/Draftsman:	Phone:

Reviewed by:	Date:	Ph: , e-mail:

INSTRUCTIONS:

⇒ **Numbers in brackets refer to code sections of 2013 California Building Code [CBC], 2013 California Residential Code [CRC], 2013 California Plumbing Code [CPC], and 2013 California Green Buildings Standards Code [*CalGreen*].**

⇒ **Correct original drawings. Reprint and submit <u>3 new sets plan and 2 sets of reports</u> together with the "marked-up" set. Return this corrections list with corrected plans.**

⇒ **In the Respond column, please indicate the sheet number and detail or note number on the plan where the corrections are made.**

⇒ **Itemize any changes, revisions, or additions made to drawings that are not a direct answer to a correction on a separate sheet.**

⇒ **Additional plan check fee will be required <u>after second review</u> on hourly rate basis.**

Item #	Sheet #	Correction Requested	Respond
	A. CLEARANCES:		
1		Obtain approval from the following departments: -Planning Department -Engineering Department -Landscape Department (for landscape plan) -Public Work Agency (for trash enclosure)	
2	FYI	Grading/storm drain/sewer/water permit must be issued first prior to the issuance any building permits. Submit grading/storm drain/ sewer/water plan for review and approval.	
3		The proposed rough/precise-grading plans will not be approved until the mass/rough-grading plans are approved first for the Tract / Tentative Parcel Map No. _____, under plan check No. _____.	
4		Comply with notification of adjoining property by giving a 10-day	

		written notice to the adjacent property owners of intent to excavate where excavation is deeper than the foundation of adjoining building or located closer to property line than the depth of excavation. [CBC 3307.1]	
5		Every excavation on a site located 5 ft or less from the street lot line shall be enclosed with a barrier not less than 6 ft in height. [CBC 3306.9]	
	B. GEOTECHNICAL/SOIL REPORTS:		
1		A preliminary soil report prepared by a civil engineer is required where a tentative and final map is required. [CRC R401.4.1.1.1, CBC 1803.5.11, 12].	
2		a) Geological report/soil report is required. [CBC J104.3] b) The soil report must be stamped, dated, and signed by the soil engineer of record. [CBC1803.1, J104.3]	
3		Submit a review letter by soils engineer and incorporate any requirements and recommendations into the plans.	
4		The soils report requires foundation excavations to be reviewed by soils engineer. Note on the plan: *"Prior to requesting a Building Department foundation inspection, the soils engineer shall inspect and approve the foundation excavations".*	
5		The soil report must be updated to comply with the parameter of the 2013 CBC. (The submitted report is based on the outdated version of 2010 CBC or earlier code)	
6		Soil report over two years must be updated. Submit an updated addendum for the soil report from the soil engineer of record.	
7		The **soil report** shall include, but need not be limited to, the following information [CBC 1803.6, J104.3, & J104.4]: 1) A plot showing the location of the soil investigations. 2) A complete record of the soil boring and penetration test logs and soil samples. 3) A record of the soil profile. 4) Elevation of the water table, if encountered. 5) Recommendations for foundation type and design criteria, including but not limited to: a) Bearing capacity of natural or compacted soil b) Provisions to mitigate the effects of expansive soils c) Mitigation of the effects of liquefaction, differential settlement, and varying soil strength d) The effects of adjacent loads 6) Expected total and differential settlement. 7) Deep foundation information in accordance with 2013 CBC 1803.5.5. 8) Special design and construction provisions for footings or foundations founded on expansive soils, as necessary. 9) Compacted fill material properties and testing in accordance with 2013 CBC1803.5.8 as follows: a) Specifications for the preparation of the site prior to placement of compacted fill material. b) Specifications for material to be used as compacted fill. c) Test method to be used to determine the maximum dry density and optimum moisture content of the material to be used as compacted fill. d) Maximum allowable thickness of each lift of compacted fill material. e) Field test method for determining the in-place dry density	

		of the compacted fill. f) Minimum acceptable in-place dry density expressed as a percentage of the maximum dry density determined in accordance with Item 3. g) Number and frequency of field tests required to determine compliance with Item 6. 10) Identify the nature and distribution of existing soils 11) Conclusions and recommendations for grading procedures. 12) Soil design criteria for any structures or embankments required to accomplish the proposed grading; and 13) Where necessary, slope stability studies, recommendations, and conclusions regarding site geology. 14) For structures assigned to **Seismic Design Category D** shall include evaluation of the following [CBC1803.5.11,12]: a) Slope stability. b) Liquefaction. c) Total and differential settlement. d) Surface displacement due to faulting or seismically induced lateral spreading or lateral flow. e) The determination of dynamic seismic lateral earth pressure on foundation walls and retaining walls supporting more than 6 ft of backfill height. f) The potential for liquefaction and soil strength loss evaluated for site peak ground acceleration, earthquake magnitudes and source characteristic consistent with the maximum considered earthquake ground motion. Peak ground acceleration shall be determined based on a site-specific study in accordance with Section 21.5 of ASCE 7; or, Section 11.8.3 of ASCE 7. g) An assessment of potential consequences of liquefaction and soil strength loss, including estimation of differential settlement, lateral movement, lateral loads on foundations, reduction in foundation soil-bearing capacity and soil reaction, soil downdrag and reduction in axial and lateral soil reaction for pile foundation, increases in soil lateral pressures on retaining walls, and floatation of buried structures. h) Discussion of mitigation measures such as, but not limited to, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements and forces, ground stabilization, or any combination of these measures and how they shall be considered in the design of the structure. 15) For sites with mapped maximum considered earthquake spectral response accelerations at short periods **(*Ss*) greater than 0.5g** as determined by CBC 1613, a study of the liquefaction potential of the site shall be provided, and the recommendations incorporated in the plans. [CBC J104.4]	
8		Sufficient number of boring shall be made to a depth of not less than 10-feet below the level of the foundations to provide assurance of the soundness of the foundation bed and its load-bearing capacity. [CBC 1803.5.6]	
9		Where excavation will remove lateral support design from any foundation, an investigation shall be conducted to access the potential consequences and address mitigation measures. [CBC 1803.5.7]	

10		Where foundation will bear on controlled low-strength material (**CLSM**), a geotechnical investigation shall be conducted per CBC 1803.5.9.	
11		Provide additional soil test at location of the proposed buildings/structures. [CBC 1803.3]	
12		The site shall be classified as Site Class **D**, unless the soil investigation is performed and bored sample data is included for a minimum depth of 100' in accordance with ASCE 7-10 Section 20.1	
13		Site Class **A and B** shall not be assigned to a site if there is more than 10' of soil between the rock surface and the bottom of the spread footing or mat foundation, per ASCE 7-10 Section 20.1	
14		A site-response analysis in accordance with Section 21.1 of ASCE 7-10 shall be provided for Site Class **F** soils per ASCE 7-10 Section 20.2.	
	C. GENERAL REQUIREMENTS:		
1		Provide **3** complete sets of plans & 2 sets reports/calculations upon final approval, wet stamped & signed by a licensed Civil Engineer.	
2		Show the correct address of building on plans. [CRC R105.3, CBC105.3]	
3		The addresses of the new & existing buildings and the names, addresses, and telephone numbers of the owner(s), the civil engineer(s) preparing the plans, and the soil engineer shall be specified on the plans. [CBC 105.3]	
4		Provide a vicinity map.	
5		Provide on the plans complete and correct legal description (Tract, Lot, Block, and Grant Deed) and the assessor parcel number (APN). [CBC 105.3]	
6		a) Identify clearly all the lot lines. b) Identify all streets and alleys as private or public street. c) Identify all existing property lines to remain or to be adjusted including the map number which is recorded under. d) Identify all the public properties/right-of ways that are to be vacated or dedicated (if any) and include the map number which is recorded under.	
7		Prior to the plan final approval, plans and calculations shall be stamped and wet signed by an engineer licensed by the State of California [BP 5537, 6735]	
8		Print on the plans the Conditions of Approval memo from the City of Ontario Building Department, copy of such is attached.	
9		Print on the plans the Requirements for Certification memo from the City of Ontario Building Department, a copy of such is attached.	
10		Provide an index of drawings on the cover sheet of plans.	
11		Provide legends and abbreviations that are shown throughout the plans. [CBC 105.3]	
12		Provide a dimensional/horizontal control plan. [CBC105.3]	
13		Void or delete all plans, details, and notes that do not pertain to this project.	
14		Provide an index map that indicates the area of the property shown on each sheet.	
15		Indicate on the plans the yardage of soil cut and fill; number of acres of each lot; and the lengths of each pipe of different type and diameter, such as water, storm drainage, and sewer. [CBC 105.3 & J104.1]	
16		Show location of the trash enclosure(s).	

17		Show on the plans any existing and/or new easements. Submit copies of all legally recorded easements	
18		Indicate on the plans if the private streets' light poles are to be public or private. If they are to be private, then submittal is required to include design, structural calculations, and electrical plans for light poles.	
19		Plans must include a statement of special inspections prepared by the registered geo/soil or civil engineer as a condition for permit issuance [CBC 1705.6]. The statement must be in accordance with CBC 1704.3.	
20		Print on plan CBC Table 1705.6 for the Required Verification And Inspection Of Soils.	
21		The statement of special inspections of the required **verification and inspection of soils** shall identify the following [CBC 1704.3.1]: a) The materials, systems, components, and work required to have special inspection or testing by the building official or the registered geo/soil and civil engineers b) The type and extent of each special inspection c) The type and extent of each test d) For each type of special inspection, identifications as to whether it will be continuous special inspection or periodic special inspection e) Names of individuals or firms that will perform the special inspections	
22		Clarify on the plans if the private streets precise-grading, private-main storm-drainage systems and each lot/building's laterals, private-sanitary-sewer systems and each lot/building's laterals, and private-domestic-water systems and each lot/building's service are to be designed as part of the submitted precise-grading plans or if they are to be under separate plan submittals and separate permits. If to be under separate plan submittals and separate permits, then indicate so on the plans and include their plan check number; or if they are to be under the proposed precise-grading plan, then submit complete design of them in accordance with the applicable codes. [CBC105.3]	
23		References made on the plans to standard details and drawings that are used and produced by the City of Ontario Engineering Department, CALTRANS, and APWA are not acceptable since these details and drawings are for the use on the right of way and may not conform to the applicable codes, (2013 CBC/2012 IBC or the 2013 CPC/ 2012 UPC). Therefore, review these details for their code compliance, modify them if needed. All of the referenced standard details and drawings, and any other details and drawings referenced therein must be **incorporated / printed on the plans.**	
24		Submit a separate sheet on the grading-plans showing the areas and depths (existing and proposed finished contour lines) of any contaminated or unstable soil condition reported in the soil report, and if they are to be removed and hauled away	
25		Provisions must be shown on the plans to control water runoff and erosion during construction or demolition activities; erosion control plans must be submitted. [CBC 3307.1]	
26		Every newly constructed building or structure must show compliance with 2013 *CalG*reen. Fill out and print on plan the attached required mandatory measures forms. a) Provide & show location of designated parking for any combination of low-emitting, fuel efficient and carpool/van pool vehicles per *CalG*reen Table 5.106.5.2 and marked as "CLEAN	

		AIR/VANPOOL/EV" [*CalG*reen 5.106.5.2.1]. b) Provide & show location of bicycle parking: ▪ S**hort-term bicycle parking:** provide permanently anchor bicycle racks within 200 feet of the visitor's entrance, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. [*CalG*reen 5.106.4.1.1] ▪ L**ong-term bicycle parking:** provide secure parking for 5% of tenant vehicular parking spaces being added with a minimum of one space for new building with over 10 tenant-occupants or for additions or alterations that add 10 or more tenant vehicular parking spaces. [*CalG*reen 5.106.4.1.2]	
27		Newly constructed one and two family dwellings and townhouses shall install an automatic residential fire sprinkler system in accordance with Section R313.3 or NFPA 13D. Submit a complete fire sprinkler plan & pipe sizing calculation for review.	
	D. GENERAL NOTES:		
1		Indicate on plan the applicable current codes: -2013 CBC / 2012 IBC -2013 CRC / 2012 IRC -2013 CPC / 2012 UPC -2013 *CAL*Green	
2		Add on the plan as reference the PDEV and Plan Check numbers.	
3		Indicate on plan the following note: ▪ Airport Noise Impact Zone (PART 150): YES / NO. ▪ Basic Wind Speed: V_{asd} = 85 mph (CRC) or V_{ult} = 110 mph (CBC), exposure C.	
4		Note on plan: *"Separate permit is required for accessory building, swimming pool, CMU wall, retaining wall, fence, demolition, _____.* [CBC J103.1]	
5		Add this note on plan: *"City of Ontario requires all new buildings, and demolition / renovation/tenant improvement permit applicant with project valuation of $100,000.00 or more to prepare a Construction & Demolition Recycling Plan (CDRP). Fill out "**FORM CDRP"** and submit to Ontario Municipal Utilities Company - Solid Waste Department for approval. Call (909)395-2664 for further information & assistance".*	
6		Add on the plan the following notes: *"All of the grading procedures, recommendations, and specifications that are indicated on the geotechnical report No._____, Dated_____, prepared by_____ must be adhered to."*	
7		The following statement shall be incorporated on the plan and shall be wet signed and dated prior to the plan final approval by the soil engineer: *"This plan has been reviewed and conforms to the recommendations provided in the soil report dated _____." Signature and date _____.*	
8		If there is any export or import of earthwork, the location where soil is taken to or taken from is subject to the Building Department approval. Please add note on the plans indicating "*No grading permit will be issued until the Building Department approves the soil importation/exportation location".* [CBC 105.3]	

9		Add on the plan the following notes: Special inspections are required for existing site soil conditions, fill placement, and load-bearing requirements [CBC 1705.6, Table 1705.6, J105.2] and must in accordance with the following: a) The approved soils report and the grading plans shall be used to determine compliance. b) During soil fill placement, the special inspector shall determine that the proper materials and procedures are used in accordance with the provisions of the approved soils report.	
10		Gas, telephone, and electrical utility lines, systems, and their construction are not reviewed by the Building Department. Submit gas, telephone, electrical, and utility plans and obtain permits from the utility companies. If shown on the plans, please state the following notes on the plans: *"The gas, telephone, and electrical utility lines and their construction are not parts of the City of Ontario, Building Department review or approval; they are shown for reference only"*	
11		The fire protection systems and their construction are not reviewed by the Building Department. Submit fire protection plans and obtain permits from the City of Ontario, Fire Department, and for their work in the public way from the Engineering Department. If shown on the plans, please state the following notes on the plans*: "The fire protection system is not a part of the City of Ontario Building Department review or approval. It is shown for reference only"* and *"Public systems and any proposed work of the fire protection systems in public right of ways are not parts of the City of Ontario, Building Department review or approval; they are shown for reference only"*.	
12		Any work shown on the plans to be done in the right of way is not reviewed by the Building Department. Proposed work in the right of way is to be reviewed & approved by the City of Ontario, Engineering Department. If shown on the plans, please state the following note on the plans: *"Public systems and any proposed work in public right of ways are not parts of the City of Ontario, Building Department review or approval"*.	
13		Add on the plan the following notes: Special inspections are required for existing site soil conditions, fill placement, and load-bearing requirements [CBC 1705.6, Table 1705.6, J105.2] and must in accordance with the following: a) The approved soils report and the grading plans shall be used to determine compliance. b) During soil fill placement, the special inspector shall determine that the proper materials and procedures are used in accordance with the provisions of the approved soils report.	
14		Add on the plan the following EXCAVATION & FILL NOTES: • The person making or causing an excavation to be made shall provide written notice to the owners of adjoining buildings advising them that the excavation is to be made and that the adjoining building should be protected. Said notification shall be delivered not less than 10-days prior to the scheduled starting date of the excavation. [CBC 3307.1] • Excavations for any purpose shall not remove lateral support from any footing or foundation without fist underpinning or protections the footing or foundation against settlement or	

		lateral translation. [CBC 1804.1] • The excavation outside the foundation shall be backfilled with soil that is free of organic material, construction debris, cobbles and boulders, or a controlled low-strength material (CLSM) [CBC 1804.2]. For CLSM requirements see its definition in Chapter 2 and the provisions CBC1803.5.9. • The fill material shall not include organic or other deleterious materials. [CBC J107.4] • No rock or similar irreducible material greater than 12", or as indicated in the soil report, (whichever is smaller), in any dimension shall be included in fills. [CBC J107.4] • All fill material shall be compacted to 90% of maximum density as determined by ASTM 1557, Modified Proctor, in lifts not exceeding 12" in depth, or as indicated in the soil report, whichever is more conservative. [CBC J107.5] • The ground surface shall be prepared to receive fill by removing vegetation, topsoil, and other unsuitable materials, and scarifying the ground to provide a bond with the fill material. [CBC J107.2] • Provide benching where existing grade is at a slope steeper than 5 horizontal to 1 vertical (20%) and the depth of the fill exceeds 5', and must be in accordance with CBC Figure J107.3. [CBC J107.3] • The required permanent erosion control devices and/or methods shall be installed as soon as practicable and prior to calling for final inspections [CBC J110.1].	
	E. GRADING:		
1		A complete site plan showing lot dimension, yard setbacks, street name(s), north arrow, existing building to remain/removed, distance between buildings and location of private sewage disposal system is required. [CRC R106.2, CBC 105.3]	
2		Indicate any ascending or descending slopes on the site plan. [CRC R106.2, CBC J104.2]	
3		Show existing grade and proposed finished grade in contour intervals, spot elevations to indicate general site slope and drainage pattern. [CRC R106.2, CBC J104.2]	
4		Plan shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of the code. [CBC J104.2]	
5		Indicate the location and size and identify the use and type of all the site's existing structures and improvements to be demolished or to remain. If no demolitions are to be performed, then indicate so on the plans. [CBC 105.3, CBC J104.2]	
6		The grading plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of the code. [CBC J104.2, J108.3]	
7		Demonstrate on the plans the methods of protection of adjoining property during excavation, fill, re-compaction, grading in accordance with CBC 3307.1.	
8		Justify the lot lines crossing through pads (structures) and clarify if the lot lines are going to be adjusted. [CBC 105.3]	

9		Provide top of curb (TC), elevations at each end, beginning, corner, flow-line (FL), finish grade (FG), and at 50-feet intervals of all proposed curbs and curb-and-gutters, property lines, gutters, swales, and at adjacent lots. [CBC 105.3]	
10		Indicate the flow line (FL) of the existing street's and/or private access's gutters at 50' minimum intervals and at front of each change of direction and lot corner. [CBC 105.3]	
11		Indicate the Top of Grate (TG) elevation of each proposed catch basin and area drain. [CBC 105.3]	
12		Provide cross sections of areas that are marked on the plans. Show in the cross sections the surfaces' types and slopes; existing and proposed grades; curbs, gutters, and swales; and retaining walls, underground structures and pipes if any. [CBC 105.3]	
13		Identify the types of all the surfaces' finish, (concrete pavement, concrete walkways, asphalt pavement, vegetated areas, landscaping, hardscaping, etc…). [CBC 105.3]	
14		Provide on the plans detailed drawings of construction of all called out curbs, swales, catch basins, gutters, and walkways. [CBC 105.3]	
15		For residential: a) Lots shall be graded to drain surface water away from the foundation walls. The grade shall fall a minimum of 6" within the first 10 ft (5%). Where lot lines, walls, slopes or other physical barrier prohibit 6" of fall within 10 ft, drains or swales shall be constructed to ensure drainage away from the structure. [CRC R401.3] b) Impervious surfaces within 10 ft of the building foundation shall be sloped a minimum of 2% away from the building. [CRC R401.3 exception]	
16		For nonresidential: The ground immediately adjacent to the foundations shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5%-slope) for a minimum distance of 10' measured perpendicular to the face of the wall. If physical obstructions or lot lines prohibit 10' of horizontal distance, a 5% slope shall be provided to an approved alternative method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 2% where located within 10' of the building foundation. Impervious surfaces within 10' of the building foundation shall be sloped a minimum of 2% away from the building. [CBC 1804.3]	
17		Check each individual proposed building footing FF elevation for, and include on the plans a note stating the following: *"The top of any exterior foundation shall extend above the elevation of street gutter at point of discharge or the inlet of an approved drainage device a minimum of 12" plus 2%."* [CBC 1808.7.4]	
18		If the building exterior walls are of wooden materials, provide a minimum of 8" clearance from the top of the foundation to the finish grade. Show on the grading plans a minimum of 8" separation from the Top of Footing (TF) to Finished Grade (FG) adjacent to the building. [CBC 2304.11.2.2, CRC R317.1 item 2]	
19		Indicate the area of floor used for parking of automobile or other vehicles (garages, carports) shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway. [CRC R309.1, CRC R309.2]	
20		Maintain 5 ft. clearance between septic tank and seepage pits or cesspools, and minimum clearances to buildings and property lines	

		of 5 ft. for septic tank and 8 ft. for the seepage pit. [CPC Table H1.7]	
	F. BUILDING ON SLOPE:		
1		Building to have a level setback from ascending slopes exceeding 3:1 (H:V) a minimum of H/2 but need not exceed 15 ft. [CBC 1808.7.1, Figure 1808.7.1]	
2		Foundation to be setback from descending slopes exceeding 3:1(H:V) a minimum of H/3 but need not exceed 40ft. [CBC 1808.7.2, Figure 1808.7.1]	
	G. CUTS, FILLS & SETBACKS:		
1		All graded cut or fill slopes shall not be steeper than two horizontal to one vertical (50%). [CBC J106.1, J107.6]	
2		Toe of cut or fill slopes shall not be nearer to a site property line than one-fifth the height of the fill, with a minimum 2 ft. and a maximum 20 ft. [CBC J108.2, Figure J108.1]	
3		Top of cut or fill slope shall not be nearer to a site property line than one-fifth the height of the slope, with a minimum 2 ft. and a maximum 10 ft. [CBC J108.2, Figure J108.1]	
4		Where existing grade is at slope steeper than 5:1 (H:V) and the depth of the fill exceeds 5 ft benching shall be provided. A Key shall be provided which is at least 10 ft in width and 2 ft in depth. [CBC J107.3, Figure J107.3]. Print on plan benching detail CBC Figure J107.3.	
	H. DRAINAGE:		
1		Submit plans for the required on-site storm drainage, sanitary sewer, and domestic water systems.	
2		Provide hydrology calculations to justify drainage design.	
3		The private storm drainage, sanitary sewer, and domestic water service systems must be designed in accordance with CPC Chapter 11, 717.0, and 610.0 respectively.	
4		The storm-drainage sizing calculation must be based on a minimum of 1.5" of rainfall rate per hour for 100-year storm per Chart 14 of Technical Paper No. 40 of the US Weather Bureau as referenced by the 2013 CPC/2012 UPC Appendix D. See the attached copy of the chart.	
5		Show on the plans the layout of all drainage pipes, area drains, and catch basin; and include detailed drawings of their construction	
6		Water shall not flow across property lines into adjacent property unless: a) It is the natural drainage pattern, b) The amount of water draining into adjacent property after the completion of the project is no more than what is currently draining into the adjacent lot, and c) There is no change in drainage pattern for water crossing the property line. In any case, the plans must reflect clearly the drainage pattern and collecting means that is to be used. [CBC J109.4]	
7		Callout the concrete strength, rebar size, rebar grade, & rebar spacing for the catch basins, head wall, retaining walls, screen walls, & overflow spill walls.	
8		Where surface water drainage is created due to paved areas, the sheet flow, the sumps, gratings, or floor drains shall be piped to a storm drain or an approved water course. [CPC 1101.10]	

	I. EROTION CONTROL:		
1		To protect adjacent property, provide permanent erosion control means. [CBC J108.3 & J109.4]	
2		The faces of cut and fill slopes shall be prepared & maintained to control erosion. Provide hardscaping or vegetation. [CBC J110.1]	
3		Where necessary, check dams, cribbing, riprap, or other devices or methods shall be employed to control erosion and provide safety. [CBC J110.2]	
	J. OFF-SITE GRADING:		
1		If there is grading to be done off-site and the off-site property is under a separate ownership, a separate grading permit shall be obtained for such work. In addition, the owner of the adjacent lot where off-site grading work will be done shall sign the following statement on the grading plan: *"I have reviewed and approved the grading work shown on this plan to be done on my property."* The adjacent owner's signature shall be notarized	
2		In the event off-site grading work is done on an adjacent lot that is under the same ownership as the subject lot, then a separate grading permit is not required for the adjacent lot as long as the grading permit issued covers the assessor parcel number (APN) of both the subject and adjacent lots	
	K. STORM DRAIN:		
1		The private storm drainage systems must be designed in accordance with CPC chapter 11.	
2		Indicate on the plans and detail the proposed storm drain drywells, underground chambers size, type, depth, and distances away from structures and property lines.	
3		For storm drain systems specify on the plans the pipe material, diameter, slope, and minimum cover.	
4		The storm drainage system that directly collects the building roof's rainwater shall be designed in compliance with CPC Chapter 11. Submit justification based on that chapter for the proposed design.	
5		Provide detail and indicate the sizes of each catch basin, vertical & horizontal dimensions.	
6		Indicate the maximum depths of the catch basins. They are not to exceed 4' measured from the bottom of the base without structural calculations. Structural calculations must be submitted for catch basins that are deeper than 4' (retaining wall design).	
7		Provide details of the proposed trench drains.	
8		Show the truck well's storm drainage means, and provide detail drawings of construction.	
9		For storm drainage systems, provide cleanouts at maximum 100 feet spacing and for each aggregate horizontal change in direction exceeding 135 degrees [CPC 1101.12 and 719.1]. In lieu of clean outs, provide manholes at 300 feet maximum spacing [CPC 719.6].	
10		Add the following notes on both storm drain & sewer plan: ▪ Storm water shall not be drained into sewers intended for sanitary drainage only". [CPC 1101.2] ▪ All inlets and outlets into and out of the manholes shall incorporate the use of a flexible compression joints located between 12" and 36" from the manhole. No flexible compression joint shall be embedded in the manhole base. [CPC	

		719.6 and 1101.12.1] ▪ The two-way cleanout must be an approved type as defined in the CPC Section 203.0 & per Section 707.4 exception (4).	
11		Incorporate on the plans the detail of the proposed plastic piping **jointing** to other type of pipe or materials, such as concrete, manholes, storm units, etc…, for sanitary sewer and storm drainage systems at manholes, catch basins, clarifiers, treatment units, and headwalls. The proposed standard drawings are only for concrete pipes to other compatible concrete pipes or to other concrete structures.	
12		Provide profiles of the storm drainage and building sewer systems of their entire developed length to include profiles and details of the buildings/structures over them perpendicularly and horizontally, and distances to the property lines and footings.	
13		Provide easements for any on-site storm drainage, building sewer, and domestic water systems that cross adjacent lots. [CPC 307.1, 609.6, & 721.0]. Show on plan the easement area.	
14		Provide velocity reducer (rip-rap) at lower end of down drain [CBC J110.2]. Provide detail.	
	L. SEWER:		
1		The private domestic sewer systems must be designed in accordance with CPC 717.0.	
2		The sewer lines must reflect the systems' fixture units loads at upstream and downstream, each node, and at each building point of connection.	
3		For sewer systems specify on the plans the pipe material, diameter, slope, and minimum cover.	
4		For private sewer systems, provide cleanouts at maximum 100 feet spacing and for each aggregate horizontal change in direction exceeding 135 degrees [CPC 719.1]. In lieu of clean outs, provide manholes at 300 feet maximum spacing [CPC 719.6].	
5		The maximum and minimum Fixture Unit Loading on building sewer piping must be in accordance with CPC Table 717.1. [CPC 717.0]	
6		Indicate the public or private sewer main next upstream **manhole rim elevation.** Provide an approved backwater valve if the buildings' F.F. elevation is lower than the manhole rim elevation. [CPC 710.1]	
7		Provide an additional sewer pipe connecting downstream the backwater valve to serve plumbing fixtures of future mezzanines and for floors above the first-floor. [CPC 710.1]	
8		Cleanouts for drains that passes through a backwater valve shall be clearly identified with a permanent label stating "BACKWATER VALVE DOWNSTREAM". [CPC 710.1]	
9		Backwater valves must be accessible. Provide manholes for access of backwater valves. [CPC 710.6]	
10		Proposed sewer connects to existing sewer system. Provide sizing calculation to verify existing sewer system adequacy for new sewer loads. [CPC 717.0]	
11		Sewer pipe 8" diameter with 1/16" per foot slope (1/2 % slope) must maintain a minimum fixture unit load of 1,500. [CPC table 717.1]	
	M. WATER:		
1		The private domestic water service systems must be designed in	

		accordance with CPC 610.0.	
2		In order to verify the domestic water pipe sizing calculations, indicate on the plans the proposed pipe information: a) Type of material b) Pipe size c) Total developed length from the main point of connection on the public street to the farthest supplied outlet within the building or on the premises d) Elevation difference from the main point of connection on the street to the highest water supply outlet in the building or on the premises e) Static pressure f) Required residual pressure g) Water meter size h) Backflow preventer size and type i) The pipe minimum cover	
3		Building sewer or drainage piping of clay or material that are not approved for use within a building <u>shall not be run or laid in the same trench</u> as the water pipes unless both of the following requirements are met [CPC 720.1]: a) The bottom of the water pipe shall be not less than 12" above the top of sewer or drain line. b) The water pipe shall be placed on a shelf excavated at one side of the common trench with a clear horizontal distance of not less than 12" from the sewer or drain line.	
4		Water pipe <u>crossing</u> sewer or drainage piping constructed of clay or material that are not approved for use within a building shall be laid not less than 12" above the sewer or drain pipe. [CPC 720.1(3)]	
	N. RETAINING WALLS:		
1		Provide retaining wall detail & structural calculation. Show surface drains, subsurface drains, slope of backfill, footing size, reinforcements, etc…	
2		Provide a minimum safety factor of 1.5 against sliding and overturning except where earthquake loads are included the minimum safety factor for retaining wall sliding and overturning shall 1.1. [CBC 1807.2.3]	
3		Provide material specification for: a) Masonry unit strength f'_m b) Concrete strength f'_c c) Grout strength d) Mortar strength e) Rebar grade	
4		Masonry construction shall be inspected and verified in accordance with Section 1.19 of TMS 402/ACI 530/ASCE 5 and Article 1.6 of TMS 602/ACI 530/ASCE 6 for quality assurance program requirements which include the requirements for tests, inspections, and verifications of masonry construction. [CBC 1704.5]	
5		Special inspection is required for concrete with f'c > 2,500 psi. [CBC 1705.3 exception 2.3]	
6		Provide a 42" high guardrail on top of walls for yard areas which drop more than 30" located along open-sided walking surfaces. [CBC 1013.1]	
7		Basement walls and floors shall be waterproofed and dampproofed per CBC 1805.	
8		The top surface of footings shall be level. Provide detail for stepped	

		footings when slope of the bottom surface of footing exceeds one in ten. [CBC 1809.3, CRC R403.1.5, R602.11.2]	
	O. TRASH ENCLOSURES:		
1		a) Show location of the trash enclosure(s). b) Trash enclosure location and configuration must be approved by Public Work Department.	
2		Indicate the connecting method from the trash enclosure trench/floor drains to the storm drainage system, or to the sanitary sewer. For NPDES, check with Steve Wilson of Engineering Department at (909)395-2389. Per the 2013 CPC, when connecting to the sanitary sewer, the drains must be provided with traps, trap seal priming device, trap arm vent, trap arm with minimum and maximum slope of 2%, and cleanouts. The trash enclosure must be roofed and the surfaces around the enclosure must be sloped away from the drains	
	P. HANDICAP ACCESSIBILITY:		
1		Provide and clearly identify the required accessible routes within the site for the disabled from the public way to the buildings entrances, from accessible parking spaces to the building entrances, and each building entrance to each other building entrance within the site, including to and from new and existing buildings. [CBC 11B-206]	
2		Indicate location of the required curb ramps, blended transitions, cut through islands, pedestrian ramps, landings, walkways, accessible routes, signage, parking stall and access aisles, and truncated domes for handicap accessibility. Provide detail accordingly.	
3		Indicate on plan the accessible route for the disabled the clear minimum widths, slopes, and cross slopes. Minimum width of walks is 4' [CBC 11B-403.5.1 exception 3]. Maximum slope is 5% and 2% max. cross slope [CBC 11B-403.3].	
4		Floor or ground surface slopes of accessible parking spaces and access aisles shall not exceed 2% in any directions [CBC 11B-502.4]. Please check the plans for compliance and indicate the slope on the plans.	
5		For van accessible parking: a) Provide one van parking space for every six or fraction of six accessible parking spaces required. [CBC 11B-208.2.4] b) Van parking spaces shall be 144" wide minimum with 60" wide minimum access aisle OR 108" wide minimum with 96" wide minimum access aisle [CBC 11B-502.2]. c) Van parking spaces shall have access aisles located on the passenger side of the parking spaces. [CBC 11B-502.3.4.3]	
6		Within each access aisle of accessible parking spaces the words "NO PARKING" shall be painted on the surface in white letters a minimum of 12" in height and located to be visible to from the adjacent vehicular way. [CBC 11B-502.3.3]	
7		Add the following note on the plans: a) All the pedestrian areas with enhanced surfaces must be accessible type for the disabled per CBC 11B-302.1, 11B-403. b) Only approved DSA-AC detectable warning products (truncated domes) and directional surfaces shall be installed as provided in the California Code of Regulations (CCR), Title 24, Part 1, Chapter 5, Articles 2, 3, and 4. Refer to CCR Title 24, Part 12, Chapters 11B, Section 12-11B.205, for building and facility access specifications for product	

		approval for detectable warning products and directional surfaces. [CBC 11B-705.3]	
8		Abrupt changes in level, except between a walk or sidewalk and an adjacent street or driveway, exceeding 4” in a vertical dimension, such as at planters or fountains located in or adjacent to walks, sidewalks, or other pedestrian ways, shall be identified by warning curbs least 6” in height above the walk or sidewalk surface to warn the blind of a potential drop off; or provide a guard or handrail with a guide rail centered 2” min. and 4” max. above the surface of the walk or sidewalk. [CBC 1125A.1, 11B-303.5]	
9		If a walk for the disabled crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36” wide. [CBC 11B-247.1.2.5 & 11B-705.1.2.5]	
10		The streets and driveways’ surfaces must be marked to identify the pedestrian crosswalks at curb ramps. [CBC 1112A.1]	
11		Provide detail for diagonal curb ramps: a) Show the 48” min. clear space at the bottom within the marked crossings. [CBC 11B-406.5.9, 1112A.4] b) Diagonal curb ramps with flared sided shall have a segment of curb 24” long min. located on each side of the curb ramp and within the marked crossing. [CBC 11B-406.5.9, 1112A.4]	
12		Curb ramps and blended transitions shall have detectable warnings [CBC 11B-406.5.12] that extend 36” in the direction of travel and the full width of the ramp run excluding the flared sides, located so the edge nearest the curb is 6” minimum and 8” maximum from the line at the face of curb. [CBC 11B-247.1.2.2, and 11B-705.1.2.2] ***Exception:*** On parallel curb ramps, detectable warnings shall be placed on the turning space at the flush transition between the street and side walk.	
13		Curb ramps shall have 12” wide grooved border at the level surface of the top landing and at the outside edges of the flared sides. [CBC 11B-406.5.11, 1112A.8]	
14		Provide detail of cut through at islands: a) The clear width of the accessible route at islands shall be 60” wide minimum. [CBC 11B-406.6] b) Pedestrian islands or cut-through medians shall have detectable warnings 36” minimum in depth extending the full width of pedestrian path or cut-through median, and shall be separated by 24” minimum of walking surface without detectable warnings [CBC 11B-247.1.2.3 and 11B-705.1.2.3]. ***Exception:*** Detectable warnings shall be 24” minimum in depth at pedestrian islands or cut-through medians that are less than 98” in length in the direction of pedestrian travel.	
15		Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. [CBC 11B-406.5.1]	
16		Provide additional sign (17” wide by 22” high) posted either at each driveway entrances or immediately adjacent to on-site accessible parking and visible from each parking space regarding the unauthorized use of handicap parking. [CBC 11B-502.8]	
17		Provide the required additional accessible parking space sign below the International Symbol of Accessibility stating “MINIMUM FINE $250”. [CBC 11B-502.6.2]	

18		Limit to 5% max slope for V-gutter located at handicap parking stalls.	
	Q. METHANE REPORT:		
1		Projects in the New Model Colony are required to submit a methane assessment report. See attached copy of Methane Assessment For Projects In The New Model Colony for complete requirements. Print on plan such requirement.	
	R. ADDITIONAL CORRECTIONS:		