CIVIL PLAN CHECKLIST

DOCUMENT 8

The Village of Glen Carbon strives to provide the development community with adequate information to ensure the successful completion of any project in the Village. To aid in the submittal of a complete, thorough civil improvement plan package, the following checklist has been compiled to assist the design engineer. This checklist focuses on requirements specific to the Village of Glen Carbon.

When preparing Civil Plans, the engineer will still be required to adhere to all local criterion and guidelines as set forth in the Village of Glen Carbon Municipal Code, Local, State and Federal Standards, and Planning and Zoning Commission conditions of approval.

In order to have a complete Civil Improvement Plan set for submittal to the Village, this checklist must be completed and included with the submittal package for the plan set. Justification must be provided for any items not completed.

The corresponding traffic and drainage studies or updates must be approved. All items listed must be included in the submittal package. All plans submitted must include date/version with Engineer's Seal and Signature.

#	ACCEPTANCE OF PUBLIC IMPROVEMENTS	X	NA
1	If grading is proposed on adjacent parcels, notarized permission to grade letters from all impacted landowners must be received prior to plan approval.		
2	Plan Sheets must be 24"x36".		
3	Bicycle Parking required on Site Plan for all new Commercial uses.		
4	Certificate of Board of Trustees per Section 10-13-0 of the Village Code.		
5	Drainage Statement per Section 10-13-2 of the Village Code.		
6	Driveway, Sidewalk and Parking Lot Certification per Section 10-13-2 of the Village Code.		
7	No Overnight Parking/Vehicles "For Sale" Statement per Section 10-13-2 of the Village Code.		

#	COVER AND/OR NOTE SHEET	X	NA
8	General notes.		
9	Project Name.		
10	Engineer's seal.		
11	Benchmark and basis-of-bearing.		
12	Abbreviations and Legend.		

#	COVER AND/OR NOTE SHEET	X	NA
13	Sheet Index shown and checked to see that sheet names and numbers match.		
14	Vicinity map showing project location with north arrow.		
15	Parcel Identification Numbers listed and acreage of each parcel.		
16	Total Area of Land Disturbance.		
17	List of Quantities.		
18	Cut and Fill Quantities.		
19	Number of units/lots.		
20	Utility services and provider along with J.U.L.I.E. Contact Information.		
21	Geotechnical report information: geotechnical report must be less than one year old.		
22	Approval signature lines for Public Works Director and Building & Zoning Director.		
23	Print sizes L80 or greater.		

#	HORIZONTAL CONTROL & FIRE ACCESS PLAN	X	NA
24	Engineers Seal.		
25	Adjacent project plans denoted on the plan sheets (provide names, existing and proposed improvements, and line work).		
26	Show all public utility and drainage easements being created based on proposed plan whether granted by separate document or map.		
27	All pertinent line and curve data must be tabled.		
28	Property line stations.		
29	Prominent back of curb locations (i.e., PC, PCC, PT, BCR, etc.) must be shown via station and offset from street centerline.		
30	Existing survey monuments used to construct the project must be identified on the plan.		
31	Required monumentation shall be protected in place, installed, or removed and replaced.		
32	Fire hydrant locations and location of fire riser room.		
33	Fire Department Connection (FDC) location.		
34	Fire hydrants shall be required for all subdivisions. Fire hydrants shall be installed in accordance with Section 45 of the “Standard Specifications for Water and Sewer Main Construction in Illinois,” latest edition. Fire hydrants shall be located no more than 1,000’ (one thousand feet) apart.		
35	All hydrants must be at least 6’ away from residential driveways, power poles, or light standard, and 15’ from commercial driveways curb return.		
36	Fire hydrants must be stationed with streetlights shown to verify there are no conflicts.		

#	HORIZONTAL CONTROL & FIRE ACCESS PLAN	X	NA
37	A fire hydrant is required within 400’ of each residential property, as measured along the street from the hydrant to the property line furthest from the hydrant at a right angle to the street.		
38	A minimum of 3’ of clear space is required around the entire circumference of all fire hydrants.		
39	Fire hydrants must be located along fire access lanes, a minimum of 4’ and a maximum of 7’ from the back of curb.		
40	When automatic fire sprinkler protection is required, the Fire Department Connection (FDC) shall be located on the address side of the building, adjacent to the fire access lane with no obstructions and within 100’ of a fire hydrant. Yard type FDCs shall be labeled with the address of the building(s) served.		
41	Fire access routes shaded with all radii labeled. Fire routes must meet the following minimum requirements: 1. Be a minimum of 24’ wide with a minimum inside turning radius of 28’ and outside turning radius of 52’.		
	2. Dead-ends must not exceed 150’.		
	3. Be provided to within 150’ of all exterior ground floor walls “as the hose lays” around obstructions.		
	4. Be an all-weather surface capable of supporting the weight of apparatus.		
	5. Two means must be provided for groups of 25 or more residential dwelling units.		
	6. The grade must not exceed 12%.		
	7. Angels of approach and departure must not exceed 6% for 25’ before or after grade change.		
42	Call out areas where red-painted curb is required. Signage is required per the following: 1. Signage shall be posted at the two ends and as required to provide maximum separation of 100’ between signs.		
	2. Signage shall state “No Parking. Fire Lane” A detail of which must be included.		
43	Denote where gates are planned to cross the fire access lanes. These locations must include a note stating, “Gate shall be 24 feet clear opening width, with Knox box on both sides or Knox padlock accessible from both sides”.		

#	UTILITY SHEETS	X	NA
44	Engineer’s seal.		
45	Print sizes L80 or greater.		
46	Call Before U Dig/Call Before You Overhead note(s).		

#	UTILITY SHEETS	X	NA
47	Key Map.		
48	North arrow (pointing upward or to the right) and bar scale (1" =40' maximum).		
49	Approved street names and identification as public or private.		
50	Identify IDOT right-of-way.		
51	Street widths.		
52	Driveway locations.		
53	Lot numbers and unit/building numbers where applicable.		
54	Adjacent project plans denoted on the plan sheets (provide names, existing and proposed improvements, and line work).		
55	Design of the utilities must follow all requirements set forth by the Village of Glen Carbon Municipal Code as well as federal and state standards.		
56	Master Utility Plan.		
57	Existing and proposed utility laterals and services.		
58	All commercial buildings and/or residential units require a separate meter.		
59	Show separated sidewalk, if required.		
60	Look for locations of existing dry utilities facilities (power poles, utility boxes, transformers, etc.) and make sure they are located behind back of future curb and not within proposed driveways or in conflict with proposed utilities.		
61	All dry utility easements, appurtenances, lines, and poles must be shown. Distribution lines, existing or proposed, shall be placed underground if impacted by the proposed development of the parcel or if the pole impedes upon the proper ADA clearances for sidewalk. Under no circumstances will new down guy wires be permitted.		
62	Show all existing easements and recorded document information that created it.		
63	Show public utility easements proposed with this project, whether granted by separate document or map.		
64	Show dimension of rights-of-way and common elements.		
65	Existing and proposed water and sewer facilities with dimensions, labels, and identification as public or private with ownership denoted. Minimum water and sewer diameter is 8".		
66	All water line installations shall include tracer ribbon and locator balls as shown on the attached detail.		
67	Water main pipe shall be SDR21PVC or Class 350 ductile iron bell and spigot joints conforming to ASTM D3139 except at hydrants and fittings.		
68	Wastewater sewer pipe shall be SDR35PVC conforming to ASTM D3034, with joints conforming to ASTM 3212. Service sewers and		

	risers shall be SDR35PVC conforming to ASTM D3034, with joints conforming to ASTM 3212.		
#	UTILITY SHEETS	X	NA
69	All Utility Trenches shall be backfilled with type CA-7 and shall be used at all locations where water and sewer mains and services are installed for the full depth under areas to be paved and shall extend 3' beyond all paved surfaces.		
70	All manholes shall be type A in design and 4' diameter, equipped with A-lock rubber gaskets. Risers and slabs shall be in accordance with ASTM C478. Lifting holes shall be provided in the bases and risers. Lifting hooks shall be provided in flat slabs. Manhole steps shall be constructed of copolymer polypropylene plastic.		
71	All manhole frames and lids shall be either Neenah type R-1916D, Deeter type 1270 series or East Jordan type 1058ZPT. The manhole lid shall have cast in the center the word "Sanitary Sewer". Mastic sealant shall be applied between the concrete and flange of the frame before the lid bolts are tightened.		
72	Minimum slope for all wastewater service laterals shall be one-eighth inch ($^1/_8$") per foot. Sewers installed greater than 10’ deep shall have a section of sewer service lateral and a plug installed from a tee location to an elevation not less than eight feet (8') below finish grade. The service line shall be extended to be 3' above finished grade and capped.		
73	Finished Floor Elevations.		
74	Fire flow requirements and building information for each structure per following: 1. Maximum square footage of proposed buildings.		
	2. Type of construction.		
	3. Maximum area separated by 4 hour-rated walls for commercial/industrial sites.		
	4. Occupancy group of each building in accordance with the Building Code.		
	5. Height of each building.		
	6. Number of stories.		
	7. Whether the buildings have fire sprinklers.		
	8. Resultant fire flow in accordance with fire suppression requirements.		
75	Allowable fire flow reductions: 1. 50% for buildings with fire sprinklers up to two stories.		
	2. 25% for buildings with fire sprinklers three stories or greater in height, high-rises, and buildings stocking high-piled combustibles and/or flammable/combustible liquids or hazardous materials in excess of exempt amounts.		

	3. Minimum required fire flow for commercial/industrial building is 1500 gallons per minute at 20 psi.		
	4. For industrial/commercial buildings, separating the building into fire areas using 4 hour-rated walls with no openings and a 30" parapet is allowed. The location of the walls must be shown on the plans.		
#	UTILITY SHEETS	X	NA
76	The following structures must have fire sprinklers: 1. Buildings with an area of 5,000 square feet or greater.		
	2. All R-1 and R-2 Occupancy per the Building Code, regardless of size.		
	3. All Group S Occupancy per the Building Code, regardless of size.		
77	When fire sprinklers are required for an R-3 Occupancy per the Building Code and the supply is by a combined domestic and fire water service, a minimum 1" meter shall be installed.		
78	A 1-hour rated fire sprinkler room with exterior door is required unless a yard type or wall mounted Post Indicator Valve (PIV) is provided for sprinkler valve control.		
79	Location of all fire hydrants.		
80	Where more than one building is protected by a common fire protection water supply and where more than one building on that water supply requires a fire pump to achieve the minimum pressure requirements for a sprinkler system, a minimum of two fire pumps shall be installed to supply the private fire protection loop. Each fire pump shall be provided with its own individual tie-in to the city water supply.		
81	Fire Department Connection supply piping shall be rated for at least 200 psi.		
82	Sectional valves must be provided on the underground piping so that no more than two fire hydrants are out of service due to a break in the water supply pipe.		
83	Two sources of water supply are required for every group of four or more fire hydrants and/or sprinkler underground lead-ins.		

#	TRAFFIC (MUST BE SEPARATE SHEET)	X	NA
84	Engineer's seal.		
85	North arrow (pointing upward or to the right) and bar scale (1" =40' maximum).		
86	Full compliance with ALL requirements set forth in the Traffic Study Acceptance Letter.		

#	TRAFFIC (MUST BE SEPARATE SHEET)	X	NA
87	Adjacent project plans denoted on the plan sheets (provide names, existing and proposed improvements, and line work.		
88	Legend correctly shown to match plans (can be on cover, note, or detail sheet).		
89	Construction notes must call out the appropriate IDOT standards.		
90	Show traffic control and improvements a minimum of 500’ in each direction, including existing driveways on both side of the roadway.		
91	Approved street names and identification as public or private.		
92	Denote all IDOT right-of-way.		
93	Street widths.		
94	Show existing utility poles. Distribution poles may NOT be replaced if impacted by the development. Lines must be placed underground.		
95	Show separated sidewalk, where required.		
96	ADA standard sidewalk ramps.		
97	Minimum 5-ft wide unobstructed sidewalk (Residential) Minimum 6-ft wide unobstructed sidewalk (Commercial)		
98	Show dimension of rights-of-way and common elements.		
99	Minimum right-of-way clearly depicted at intersections.		
100	Show existing and proposed signs. Call out the type, street station, and offset distance.		
101	Speed limit (R2-1) 18”x24”. Subdivisions posted at 25 MPH at all entrances.		
102	STOP signs (R1-1) at all commercial driveways. Less than 80’ ROW R1-1 to be 30”. Greater than or equal to 80’ ROW R1-1 to be 36.” 4-way stop not allowed without engineering study.		
103	Street name signs (D3) approaching 80’ or greater ROW to be 12” tall otherwise, 9” tall.		
104	NO OUTLET signs (W14-2a) install two back-to-back on R1-1/D3 assembly with arrows pointing toward no outlet.		
105	Valley gutters not permitted across 80’ or greater ROW.		
106	End of road slopes 6:1 max if traversable, if not, provide Type III barricade with two R11-2 ROAD CLOSED signs. Use advance warning signs: DEAD END (W14-1) or PAVEMENT ENDS (W8-3).		
107	Parallel slopes and roadside embankments must conform to AASHTO Roadside Design Guide, latest edition. NOTE: Drainage Study requirements DO NOT supersede AASHTO requirements. Vertical curves required for grade breaks greater than or equal to 1%.		
108	Centerline intersection stationing.		
109	Existing and proposed street light stationing.		
110	Streetlights shall be LED and housed in an ornamental fixture of the type approved by the Planning & Zoning Commission.		

#	TRAFFIC (MUST BE SEPARATE SHEET)	X	NA
111	Residential streetlights shall be located at each intersection of two streets (or alleys) at the end of each cul-de-sac, at intervals of approximately 400’ of street frontage.		
112	Multi-family dwelling subdivisions lighting shall be provided within parking areas at a minimum rate of one light per twenty-five parking spaces or any fraction thereof.		
113	Streetlights must be 1’ from the BCR at intersections. Streetlights shall be a minimum of 6’ from the BCR at driveways.		
114	Streetlights to be a minimum of 3’ from drop inlets.		
115	The lighting intensity of each streetlight shall be equivalent, at minimum, to 2’ candles measured at ground level.		
116	Each streetlight standard (post) shall be at least 14’ high.		
117	All street lighting shall be serviced with underground conduit and wiring. No overhead wiring in new subdivisions will be permitted.		
118	If trenching near a signalized intersection is proposed, the plan must show existing conduit and loop detectors, if applicable.		
119	Drive aisle labeled with a minimum width of 24’.		
120	Sight distance triangles with dimensions.		
121	Commercial developments fronting 80’ and greater ROW driveway widths must be a minimum of 32’ wide, lip to lip, with curb return radii of 25’ ingress and 15’ egress.		
122	Commercial developments fronting less than 80’ ROW driveway widths must be a minimum of 28’ wide, lip to lip, with curb return radii of 25’ ingress and 15’ egress.		
123	Gated entrances must be set back a minimum of 50’ from the lip of gutter to the call box with 48’ radius turn-around.		
124	Existing and proposed pavement markings (including bike routes) need to match existing pavement markings, including approaching legs of intersections.		
125	Developments which abut or straddle an existing or proposed bike path, as indicated in the bike trail plan section of the transportation element of the Village Comprehensive Plan, shall provide one or more bike path accessways to connect to residential and/or commercial developments.		
126	For residential developments, the layout and number of such bike path accessways shall be designed to provide all residents of a given subdivision access to the bike trail via internal street network of the subdivision.		
127	Each bike path accessway shall consist of a minimum right-of-way width of 30’, extending from the existing/proposed bike path to one or more residential streets within the subdivision. The respective bike path accessways shall be dedicated to the Village.		

#	TRAFFIC (MUST BE A SEPARATE SHEET)	X	NA
128	Each bike path accessway shall be laid out to intersect as nearly as possible at right angles with the connecting street and the main bike path adjacent to the subdivision. Said subdivision street connection shall not be placed within 100’ of a street intersection. Any bike path accessway intersecting at a street subdivision cul-de-sac shall have a centerline radial from the center of the cul-de-sac. Adequate sightlines shall be provided at all bike path accessway intersections.		
129	The grades of bike path accessways shall conform as closely as possible to the natural topography, and in no case shall the pavement structure exceed a maximum grade of 10%. Pavement grades shall be limited to a maximum of three percent 3% within 10' of any bike path accessway intersection. Cross slopes of bike path accessway pavements shall be designed with a 2% slope to provide proper drainage and biking surfaces. The earth shoulders of a bike path accessway shall not exceed a 3:1 slope. The developer shall plant these earth shoulders in perennial grasses to ensure proper control of soil erosion and sedimentation runoff.		
130	Bike path accessways shall be improved with a ten foot (10') wide bituminous and/or Portland cement concrete that meets IDOT design standards. The developer shall also provide required bike path accessway signage required based on Village specifications.		
131	Street section must conform to VGCMC Title 11-5-3.C Table 5-1 and Table 5-2.		
132	Crosswalk per IDOT.		
133	Property access per Title 10 Chapter 13.		
134	At intersections, the centerlines of streets which are not in alignment shall be offset at least 200’, as measured from centerline to centerline, or as required by the Director of Public Works, or designee.		
135	Intersection of major streets shall be at least 800’ apart.		
136	Master street lighting for master plan/multi-phase projects.		
137	If applicable, add note “IDOT Encroachment Permit required for all work done within state right-of-way”.		
138	Look for locations of existing dry utility facilities and make sure that they are located behind back of future curb and not within proposed driveways.		
139	Table/List of public and private traffic quantities (must match Bond & Fee Estimate).		
140	Print sizes L80 or greater.		

#	PLAN & PROFILE SHEETS	X	NA
141	North arrow (pointing upward or to the right) and bar scale (1” =40’ maximum).		
142	Engineer’s seal in accordance with NRS 625 and NAC 625.		
143	Adjacent project plans denoted on the plan sheets (provide names, existing and proposed improvements, and line work).		
144	Approved street names and identification as public or private.		
145	Denote IDOT right-of-way.		
146	Intersection design shown for all four quadrants.		
147	Plan view above profile.		
148	Line and curve data for the segment shown on the plan view.		
149	JULIE note.		
150	Benchmark.		
151	Rights-of-way and sidewalks labeled, and dimensions provided.		
152	Where matching into existing streets, a minimum of 200’ of the existing street must be shown on the plan view and profile. Where vertical curves exist or longer transitions per MUTCD are required the plan and profile of the street shall be extended.		
153	Centerline street stationing at 50’ intervals and at PC/PT, grade breaks, etc.		
154	At centerline street intersections provide station equation.		
155	Existing ground in profile shown and labeled.		
156	Limits of scarping and existing contours (extend the contours a minimum of 100’ beyond project limits) shown on the plan view.		
157	Proposed profile shown and labeled as Finished Grade (FG) or Top of Curb (TC).		
158	Street slopes labeled (0.4% minimum), if 0.4% cannot be provided because of existing conditions, drop inlets every 100’ and storm drain will need to be provided.		
159	Utility crossings shown and checked to meet location, separation, and cover requirements. Provide invert elevation and top of pipe for all proposed crossings.		
160	Sewer pipe size, length, and material labeled.		
161	Sewer slopes labeled.		
162	Sewer connection to existing labeled.		
163	All underground utility separation dimensions will be shown on both the plan and profile sheets.		
164	New water mains 8” and larger.		
165	Depict computed lengths of mechanical restrained joint calculations on profile.		
166	Existing water and sanitary sewer.		

#	PLAN & PROFILE SHEETS	X	NA
167	Manhole number, station, rim, and inverts labeled (minimum 0.2' drop checked for sanitary sewer).		
168	Roadway underdrains shall be required where a soils report states this is needed, and their installation shall be performed by the applicant and as directed by the Village or its duly authorized agent to protect the stability of the roadway.		
169	Storm drain shown with type, size, length, Hydraulic Grade Line (HGL), and slope.		
170	All storm drain laterals shall be profiled.		
171	Saw cuts of existing roadways labeled.		
172	2% maximum cross slope.		
173	Sidewalk ramps per IDOT Standard 424001-11, or latest revision.		
174	Adjacent existing or future conditions (verify they are shown accurately by cross-checking with plans).		
175	Vertical curves shown and labeled, where needed.		
176	Cul-de-sacs checked for a minimum 1% slope from HP to all adjacent edge of AC at lip of gutter locations.		
177	Crown transition shown and stationed.		
178	Intersection grading checked (1% in gutter from midpoint of BCR).		
179	Top of Curbs (TC), Flow Lines (FL), High Points (HP), and Finished Grades (FG).		
180	Suitable head wall or precast end sections shall be provided at the open end of any pipe. Culverts under streets shall have a minimum cover of 30" and shall be extended to a minimum of 10' from the edge of pavement, unless otherwise approved by the Public Works Director.		
181	Look for locations of existing dry utility facilities and make sure they are located behind back of future curb and not within proposed driveways.		
182	Print sizes L80 or greater.		

#	GRADING PLANS	X	NA
183	Engineer's seal in accordance with NRS 625 and NAC 625.		
184	Benchmark.		
185	JULIE note.		
186	Geotechnical report number, engineer, and date. Verify the report is less than one year old.		
187	Legend correctly shown to match plans.		
188	North arrow (pointing upward or to the right) and bar scale (1" =40' maximum).		
189	Full compliance with ALL requirements set forth in the Traffic and Drainage Study Acceptance Letters.		

#	GRADING PLANS	X	NA
190	Natural features such as trees, groves, waterways, and other similar resources shall be preserved whenever possible. In the process of development, a minimum of 25% of the existing trees over 8” in diameter shall be retained.		
191	Adjacent project plans denoted on the plan sheets (provide names, existing and proposed improvements, and line work).		
192	Intersection design shown for all four quadrants.		
193	Approved street names and identification as public or private.		
194	Denote IDOT right-of-way.		
195	Lot numbers and unit/building numbers where applicable.		
196	Centerline intersection stationing.		
197	Sidewalk ramps per IDOT standard 424001-11.		
198	Cross sections at all property lines showing elevational relationship, property line, and any existing and/or proposed walls.		
199	Details and sections referenced or shown.		
200	2% maximum roadway crown cross slope.		
201	Street slopes labeled (0.4% minimum).		
202	Top of Curbs (TC), Flow Lines (FL), High Points (HP), and Finish Grade (FG) elevations shown in appropriate intervals to adequately grade the site.		
203	Finish floor and pad elevations.		

#	PLAN & PROFILE SHEETS	X	NA
204	All new or improved stormwater drainage swales created in new developments shall not allow overland drainage to exceed 250' without being captured by a storm sewer system. The velocity of flow in these drainage swales shall not exceed five FPS unless measures are taken to avoid erosion.		
205	Non-paved surface overland flow grades and/or slopes shall be greater than 0.8%. Paved surface overland flow grades and/or slopes for swales and ditches shall not have a slope less than 0.5%.		
206	Reinforced concrete paved swales and ditches a minimum of 4’ wide are required to be designed and constructed for any drainage swale with a slope less than 0.8%.		
207	Adjacent pad/building elevations and spot grades adjacent to site (both existing/future conditions).		
208	Existing contours shown at 1’ interval and labeled (extending 100’ beyond property lines).		
209	No Certificate of Occupancy shall be issued until final grading has been completed in accordance with the approved final plat and the lot covered with soil an average depth of at least 6" which shall contain		

	no particles more than 2" in diameter over the entire area of the lot, except that portion covered by buildings or included in streets, or where the grade has not been changed or natural vegetation seriously damaged. Topsoil shall not be removed from residential lots or used as spoil but shall be redistributed to provide at least 6" of cover on the lots and at least 4" of cover between the sidewalks and curbs and shall be stabilized by seeding or planting.		
#	PLAN & PROFILE SHEETS	X	NA
210	Lawn-grass seed or sod shall be required to be installed on every lot as specified in this subsection. Sod may be used to comply with any requirement of seeding set forth herein and shall be required for portions of the lot that must be covered by grass when the slope of such area exceeds a slope ratio of 5:1.		
211	Edge conditions checked to make sure water does not pool, i.e., scarp requirements or notarized permission to grade.		
212	Provide a barrier to prevent vehicular access to unpaved areas.		
213	Sight distance triangles shown and labeled.		
214	Print sizes L80 or greater.		
215	Flood zones and BFEs shown when site is impacted by a flood zone CLOMR/LOMR required.		
216	Proposed and existing easements with dimensions, elevations, and typical sections.		
217	Pavement section shown on typical street sections.		
218	Elevations (TC, FL, and CL) at project boundaries, limits of construction, PCs, PTs, grade breaks, and lot line extensions.		
219	Locations of mined areas – residential structures are required to have insurance for mine subsidence, whereas commercial and industrial structures should avoid lands located over mined areas. Such developments shall provide information on the possibility of mine subsidence to all tenants prior to leasing space in commercial or industrial buildings.		
220	Show existing power poles. Lines must be placed underground.		
221	Detention basins shall be located on common elements that shall be maintained by the homeowners' or business owners' association and shall be noted as such.		
222	Show existing and proposed drainage easements, whether granted by separate document or map.		
223	Show dimension of rights-of-way and common elements.		
224	Label common elements and limited common elements as such.		
225	Show separated sidewalk, where required.		
226	Check all grading and verify that low points are not proposed, and that positive drainage is not hindered.		

#	PLAN & PROFILE SHEETS	X	NA
227	All lots shall have a finished grade that will allow the natural flow of surface drainage water from one lot to another without erosion or damage. The flow path should be concrete lined to allow for distinct determination of drainage pathways across lots.		
228	Grading shall be sloped and tapered at the side and rear lot lines in such a manner as to permit proper drainage.		
229	All building drainage (sump pumps, down spouts, etc.) shall be daylighted above grade no closer than 10' from any sidewalk, street, or other public infrastructure to minimize or remove the chance of undermining of sidewalks and roads. If storm drains are provided along the lot frontage, the building drainage shall be connected to such storm drains.		