



CONTRACTORS LUNCHEON

September 11, 2019

Meeting Summary

Welcome: Joseph Montoya, Chief Building Official

- Welcomed all attending the luncheon
 - Thanks to Century Communities for sponsoring and providing the great food from Firehouse Subs, Denise and Jackie from DS Admin for coordinating and setting up the luncheon, and special thanks to guests of honor, the Town's First Responders. The Fire team will provide a presentation on building site safety.

- **Fire Safety (Rick Young, Deputy Fire Marshall):**

Rick introduced "our heroes" - members in attendance from the Fire Department:
Brian Dimock, Fire Marshal, and members of the Fire Prevention and Education team and from the Fire Prevention and Suppression Team

- **Presentation Highlights:**
 - Fire Stops
 - Fire Walls
 - Access
 - Site Safety
 - How to place 911 Emergency Call from Cell Phone
 - No Smoking on Building Sites
 - Combustible Debris
 - Outside Storage
 - OSHA Safety Standards, Violations and Work Related Injuries
 - Hot Work Operations and Requirements
 - Construction Trailer Safety
 - Investigating Complaint Calls
 - Housekeeping and Clean Sites
 - Fall Protection
 - Storage of Hazardous Materials
 - Death Statistics
 - CRFD Responses & Fire Equipment
 - Site Improvements



- **Reminders from Castle Rock Water (Kevin Buffington, Plan Review Engineer)**

Kevin provided reminders and a summary handout outlining changes for building permit submittals for Castle Rock Water.

Highlights included:

Effective 9/11/2019 All 0.67 SFE landscape plans must list total irrigated turf area and total irrigated non-turf areas such as trees, bushes, etc., separately.

Effective January 1, 2020, All residential permits including 1.0 SFE permits and homes not within a WEP must provide landscape and irrigation plans, landscape plan must list total irrigated turf area and total irrigated non-turf areas such as trees, bushes, etc., separately.

(Took questions from contractors)

- **Reminders from Castle Rock Water (Kim Guite, Stormwater Specialist)**

Kim provided a brief review of stormwater compliance requirements for submittals reminding everyone that GESC and DESC submittals must be converted to the new TESC Vertical by January 1, 2020 and new projects will be forced into the TESC Vertical plan.

- **Updates and Reminders from the CBO (Joseph Montoya)**

- **2018 Building Codes:** January 1, 2020, deadline to be compliant with the 2018 building codes and encouraged all to communicate often and ask questions as needed.
- **Master Plan Submittals and Project Trak:** The Town has 1 volunteer to test out the new process for electronic submittal, however, due to recent setbacks in the office and technical issues, the Town is not yet ready to receive submittals in Project Trak and advised everyone to continue using Permit Trak for the time being. Joseph requested when anyone is ready to move forward with their Master Plan submittals to contact him directly and he would work closely with the contractors to assist them with the process.



- **Laundry Room Floor Drains:** Emergency drains need to be tied to sanitary drain. This will be discussed at the next meeting and Joseph urged the contractors to bring their plumbers to the next meeting when the Town will provide more information on this.

Robert Christensen, Meter Services Supervisor, Castle Rock Water, introduced new employee, Michelle Strang, new Meter Services Technician, who will be doing meter inspections. He also introduced Dominic Roybal, Meter Services Technician, who will be leaving the Town on Friday.

Rob announced the Town is moving meter sets out of crawl spaces and can assist customers with flow detection to help them understand their usage and costs.

Final Announcements: Joseph Montoya

- Important reminders: Keep communication lines open – contact us for all your questions and comments.
- Teaching in the evening at Community College of Denver where he will be showing a NOVA video on “Why the Towers Fell” that explains from a building perspective, the investigation into the collapse of the World Trade Center and that this video is a useful training tool.
- Next luncheon is on October 9th and is being sponsored by Richmond Homes.

Reminder: For your reference, the monthly luncheon summaries can be found on the Town’s website under Building/News and Updates.



**FIREHOUSE
SUBS**

FOUNDED BY FIREMEN



Town of Castle Rock
Development Services Building Division
Contractors luncheon

Philip S. Miller Park – Mill House
1375 W. Plum Creek Parkway

9/11, 2019

11:30 a.m.

Sponsored by Century Communities

Menu: Firehouse Subs

AGENDA

Welcome & Thanks to First Responders, Joseph Montoya, Chief Building Official

- Presentation by Fire Department (Brian Dimock/Rick Young)
- Master Plan Submittals Moving to Project Trak (Joseph)
 - Laundry Room Floor Drains (Joseph)
- Erosion Control Permitting Reminders (David Van Dellen)
 - Open Discussion

****NEXT LUNCHEON**

October 9th

Sponsor: Richmond Homes

*For Sponsor opportunities or getting discussion points on the agenda:

Contact: buildingcounter@crgov.com

Development Services Technicians: Diane Maki, Ben Christensen, Cindy Brooks,
Tracy Shipley, Jenn Bigham

Building Division Administrative Assistant: Denise Hendricks, dhendricks@crgov.com

To view past meeting summaries see website: www.crgov.com/contractorluncheon

The background of the slide is a composite image. The lower portion shows a large fire with bright orange and yellow flames against a dark background. The upper right portion shows the silhouette of a firefighter wearing a helmet and operating a hose, set against a sunset or sunrise sky with orange and yellow clouds.

FIRE AND LIFE SAFETY AT CONSTRUCTION SITES

Castle Rock Fire and Rescue Department –
Life Safety Division is committed to
providing the safest possible work
environment for all of our customers.

September 2019

Discussion Topics

- ◆ Deviations from Codes or Standards can compromise FIRE/EMS effectiveness, and risk of injury or death:
 - ◆ Fire Stops
 - ◆ Fire Walls
 - ◆ Access

NOTE: The photographs in this presentation are NOT intended to discredit any specific contractor, but are used ONLY to show recent examples of concerns noted.

Basic Fire Code Requirements

- ◆ Access road and water supplies shall be installed and maintained at all times;
- ◆ Fire hydrants CANNOT be obstructed;
 - ◆ No parking within 15 feet of a hydrant;
- ◆ Construction materials shall NOT block access to or around buildings;
- ◆ Vehicle parking in any building under construction is prohibited;

Basic Fire Code Requirements

- ◆ Temporary addresses SHALL be placed on all construction sites, and on each building;
- ◆ A working telephone shall be available to ALL construction personnel to report emergencies;
 - ◆ The fire department phone number, and the site address shall be posted at the construction office;
 - ◆ Workers must be informed about calling 911 from cellular phones;
- ◆ Portable fire extinguishers shall be provided within 75 feet of all areas;
 - ◆ The minimum rating shall be 4A-60BC;

Basic Fire Code Requirements

- ◆ Smoking is prohibited on all construction sites where combustible materials are being used for the buildings;
 - ◆ No smoking signs are required to be posted throughout the project, except in designated areas;
- ◆ Combustible debris shall not be accumulated, or obstruct access to the building;
 - ◆ Metal dumpsters must be no closer than 5 feet from combustibles, buildings, or vehicles;

Basic Fire Code Requirements

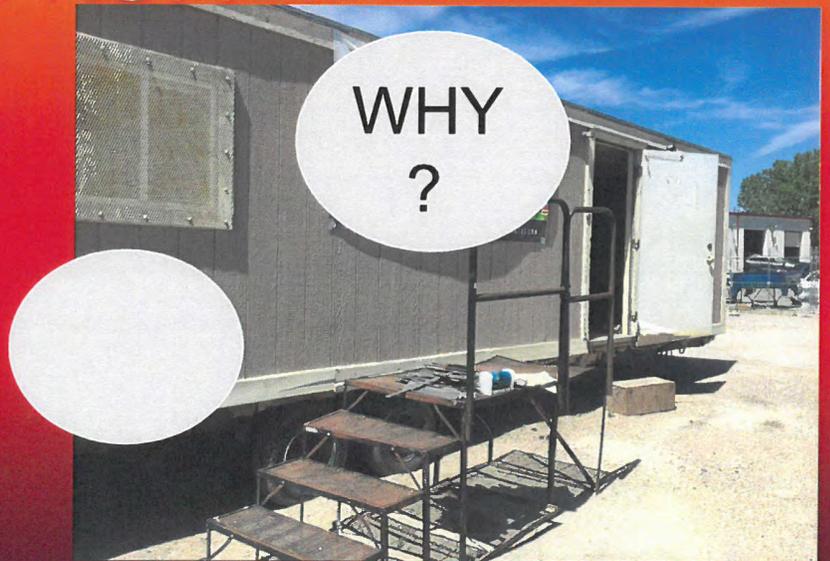
- ◆ Combustible storage NOT in metal containers shall be a minimum of 25 feet from buildings under construction;
- ◆ Hazardous materials used at the construction site shall be properly stored and secured at all times;
 - ◆ Safety Data Sheets (SDS) must be on site;
 - ◆ Releases / spills must be reported and properly cleaned up;
 - ◆ OSHA requires metal cans with self-closing lids;



Basic Fire Code Requirements

- ◆ Hot work operations requires:
 - ◆ Hot work includes, welding, cutting, sweating of pipes, torch use, etc.
 - ◆ Fire extinguisher within 30 feet (2A-20BC rating);
 - ◆ Firewatch for a minimum of 30 minutes after the hot work is performed;
 - ◆ Asphalt and tar kettles cannot be inside buildings;
 - ◆ Must be at least 20' from combustibles;
 - ◆ Attended at all times when operating;
 - ◆ An extinguisher with 40BC rating within 25 feet;
 - ◆ An extinguisher with 3A-40BC rating on the roof;

OSHA REGULATIONS
APPLY TO ALL
CONSTRUCTION
SITES, AND HAVE BEEN
ESTABLISHED FROM
TRAGEDIES



OSHA Standard 1926

- ◆ Health and Safety at Construction Sites
 - ◆ The employer shall be responsible for the fire protection program to be followed through all phases of construction and demo work;
 - ◆ As fire hazards occur, there shall be no delay in providing necessary equipment;
 - ◆ Access to all firefighting equipment shall be maintained at all times MINIMUM 20 feet req'd;
 - ◆ Water supply shall be available as soon as combustibles are on site;

OSHA Standard 1926

- ◆ Health and Safety at Construction Sites
 - ◆ Housekeeping during the course of construction, alterations, or repairs must be maintained acceptable;
 - ◆ Scrap lumber, protruding nails, and all other debris SHALL be kept cleared from work areas, passageways, and stairs, in or around buildings or other structures;
 - ◆ Combustible scrap debris shall be removed at regular intervals during the course of construction;
 - ◆ Containers shall be provided for the separation of waste, trash, oily and used rags, and other refuse. Containers used for hazardous waste must be covered;
 - ◆ Containers must be emptied at frequent intervals;

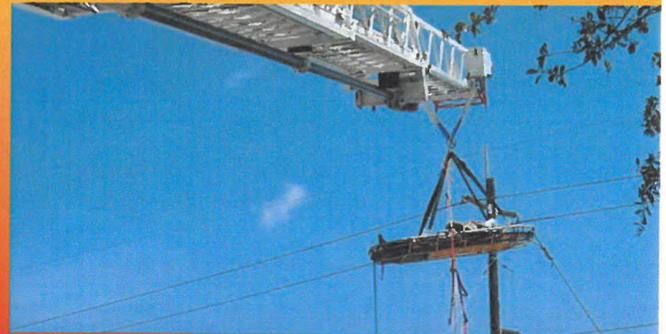
OSHA Standard

- ◆ Working at heights GREATER than 6 feet
 - ◆ Requires workers be secured from falling;
 - ◆ Both the contractor and the workers have the responsibility;
 - ◆ Both can be held responsible for violations;



Construction Worker Deaths

- ◆ Construction accidents, injuries, and fires can occur at ANY time;



- ◆ 2017 OSHA Stats – 5,147 Workers died:
- ◆ 971 (20.7%) were const. (1 out of 5)
 - ◆ #1 – 381 FALLS were the leading cause;
 - ◆ #2 – 80 Struck by objects;
 - ◆ #3 – 71 were Electrocution;
 - ◆ #5 – 50 were Caught in/between;

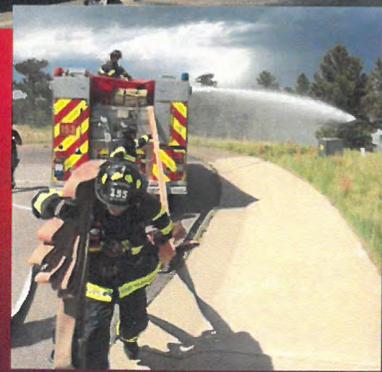
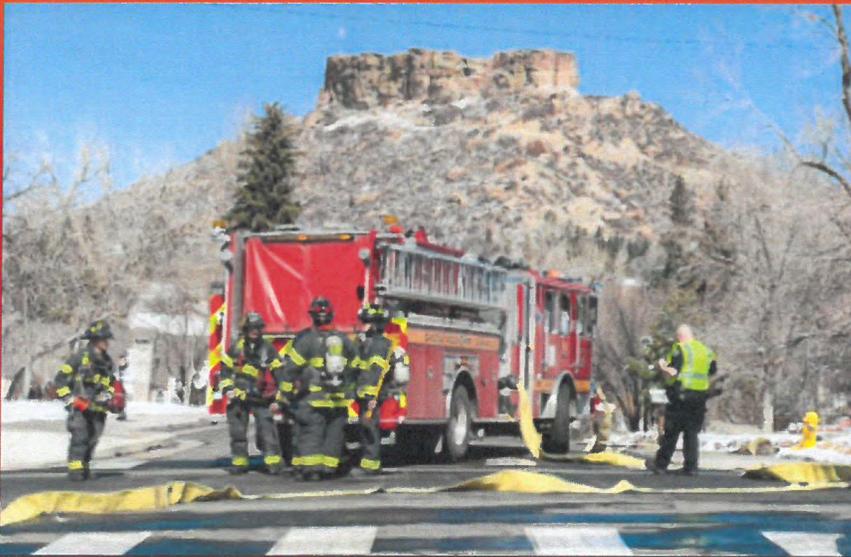


OSHA Construction Violation

- ◆ In 2018 OSHA released the 10 most common cited violations;
 - ◆ Fall Protection;
 - ◆ Hazard Communication Violations;
 - ◆ Scaffolding requirements;
 - ◆ Control of hazardous energy;
 - ◆ Ladders;
 - ◆ Powered Industrial Trucks;
 - ◆ Fall protection training requirements;
 - ◆ Machinery Guards;
 - ◆ Eye and face protection;

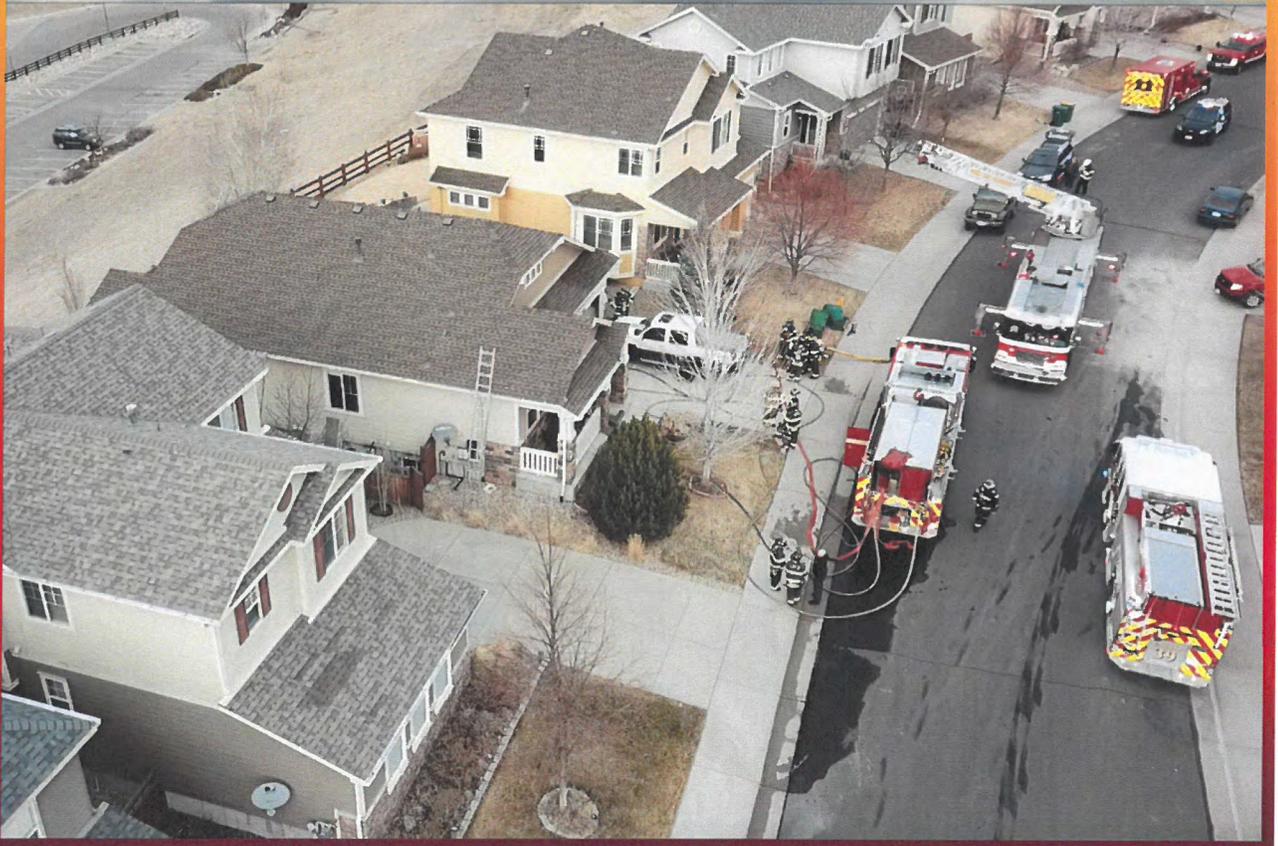
CRFD RESPONSES

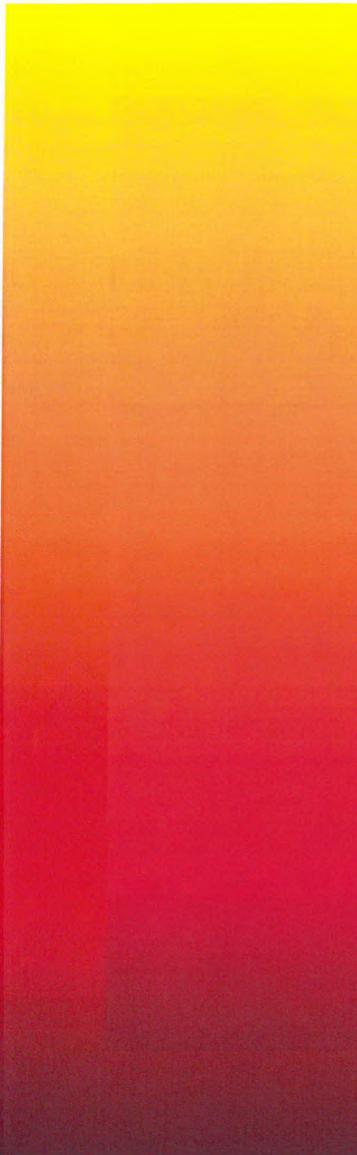
- ◆ CRFD responds the closest available fire apparatus and medic unit to all calls;
 - ◆ These trucks are large and need 20' clear access;
 - ◆ Water supplies;
 - ◆ Help US Help YOU !



CRFD RESPONSES

- ◆ Responses require apparatus and room to operate



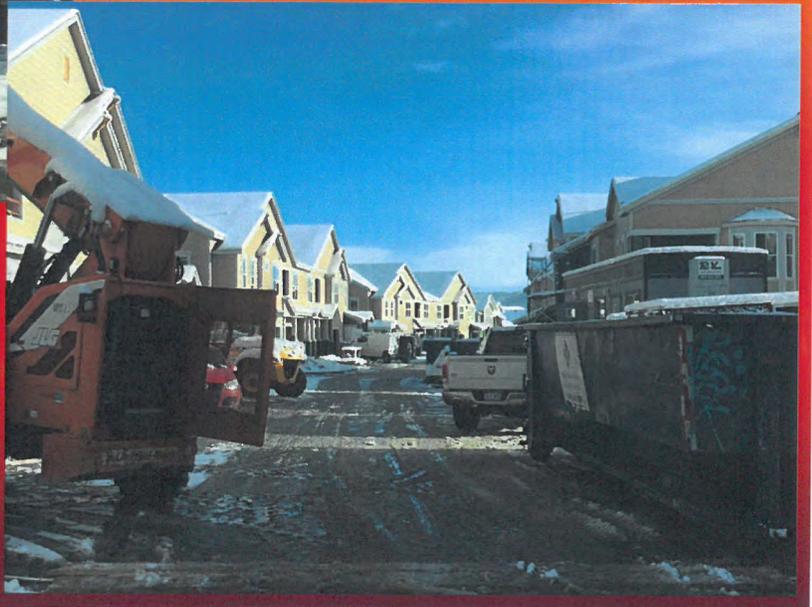


SOME EXAMPLES
OF CONCERNS AT
SITES

ACCESS ISSUES



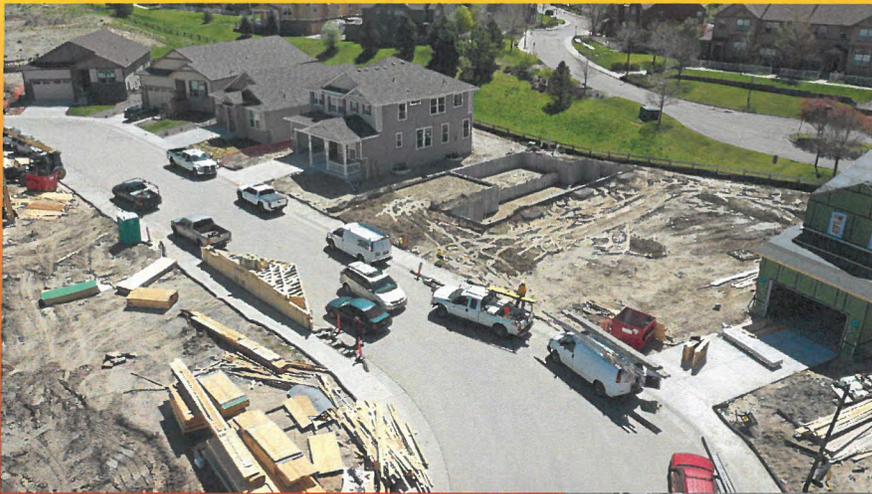
20' required for MINIMUM
Access needs



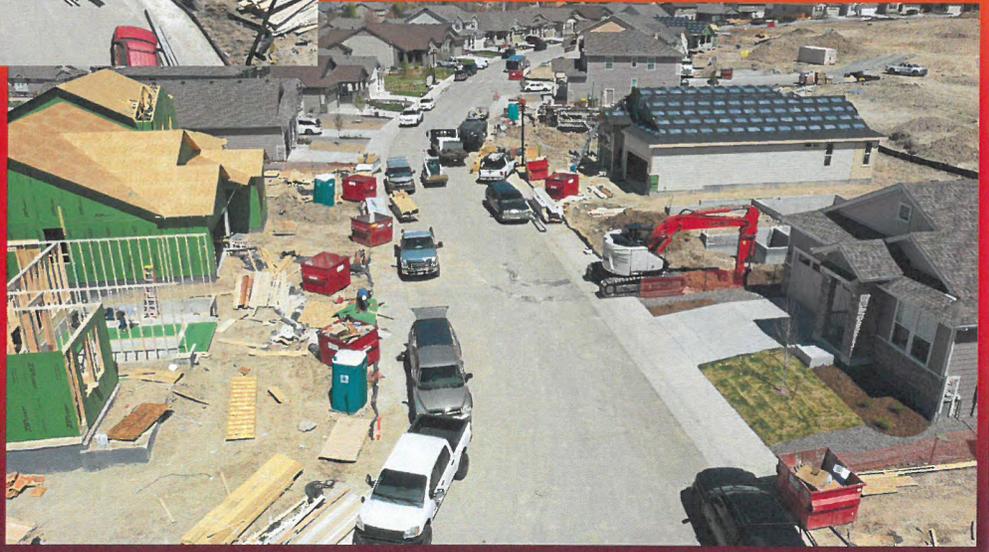
Parking and Material Staging



Parking and Material Staging



OCCUPIED
HOMES



HYDRANTS

Vehicles parking within 15' prohibited

36" clearance around hydrants
Required at all
times

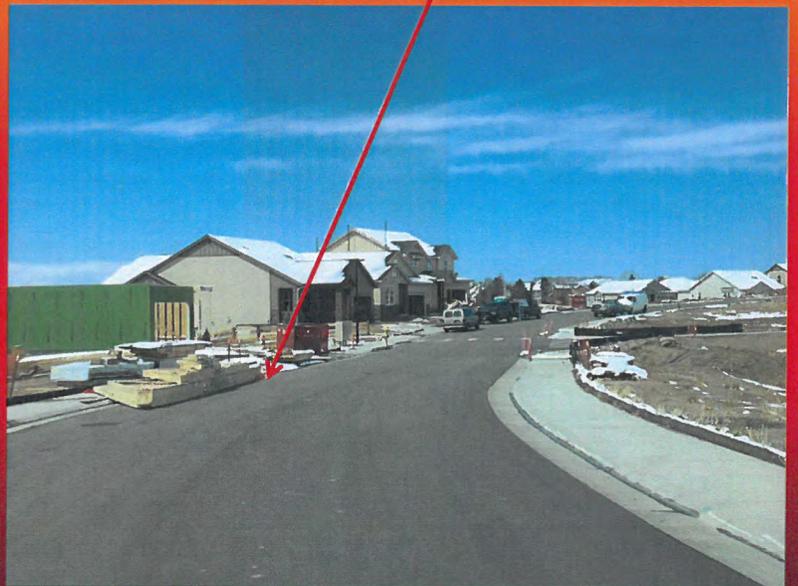
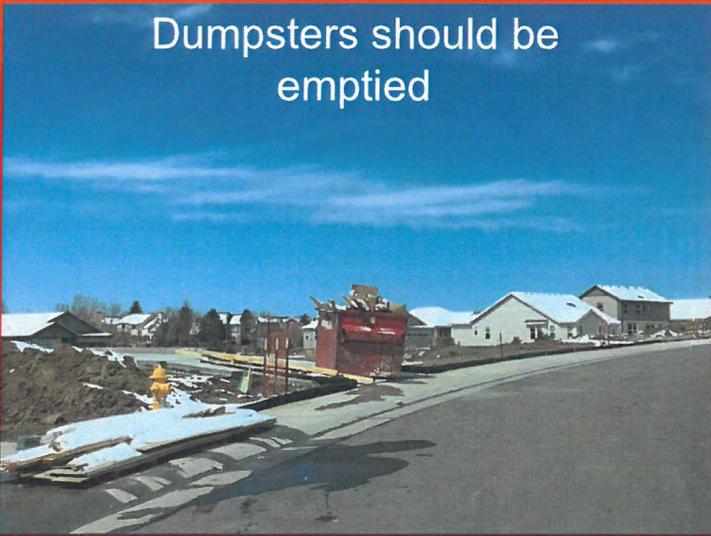


MATERIAL STORAGE

25' required between
outside storage
and building or vehicles

Creates building access
concerns for responders
When on roadways

Dumpsters should be
emptied



TRASH

5' minimum
required
between dumpsters
and combustibles



THE POSITIVE PART
SITE CONDITIONS HAVE
IMPROVED OVER THE LAST
5 YEARS

“Final Point”

The most valuable assets we have are
ALL the members of our workforce.

Lets ALL do everything in our power to
enhance their safety and health.

Castle Rock Fire and Rescue Department
303-660-1066
Ryoung@CrGov.Com



ELECTRONIC SUBMITTAL GUIDELINES

FILE SIZE AND TYPE

- All documents must be submitted in PDF format and submitted through the eTrakit system. etrakit.crgov.com
- PDF files must be flattened, reduced and optimized to PDF 1.4 or greater
 - Flatten layers in your CAD program prior to creating the PDF or use the "save as" flattened and/or optimized options available in your PDF tool.
- Zip files will not be accepted.

PLANS AND DOCUMENTS

- All documents prepared by a design professional such as but not limited to; plans, soils reports or engineered judgements must contain the seal of the registered design professional with signature and date.
- Plan sets must be a single PDF file with all Architectural, Civil, Structural, Mechanical, Electrical, Plumbing, etc. pages combined.
 - Separate sets will be deleted without review.
 - Staff will not combine, extract, staple or otherwise manage the documents.
- Supporting documents, such as Soils Reports, truss calculations, energy reports, etc. must be submitted as separate, stand-alone PDF files, and follow the same protocols.
- Submittals must not be password protected or locked. Security settings must allow mark up. All permissions shall be set to *ALLOWED*.
 - Plan reviews are conducted on copies of the original submission and will not be altered in any way.
- Files must not contain any layers or any editable content.
- Only True Type fonts are acceptable.
- All documents must have uniform orientation and alignment with the top of the page up.
 - Plans must be submitted so that they can be viewed and marked up without rotation.
- All plan pages must be scalable and properly dimensioned.
- Plans must be bookmarked with the sheet number and title.
 - Bookmarks are used to facilitate the review process. Verify all bookmarks are consistent after merging or combining files.
- Plan pages marked "not for construction" or with similar notations will not be accepted.

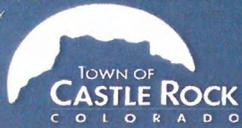
RESUBMITTALS AND REVISIONS - See *Resubmittals and Revision Guidelines*

- Any changes on a plan page, either from a resubmittal due to review comments or as a revision must be clouded with corresponding delta indicators and dates.
 - A detailed narrative for any revisions to any plan must be included along with the clouded plans. For multiple revisions the previous clouds must be removed and the delta indicator left in place.
 - Clouds should appear only on current revisions. Revision deltas must be displayed in the title block with the corresponding dates.

NAMING CONVENTIONS

- Original, first time plan submittals will be named with the word, "Plans", and the version. For example; Plans_V1.
 - The administrative staff will rename the file with the actual permit number at the beginning of the name once it is generated. All subsequent uploads must be named in the same manner but with the actual permit number such as 19-1234_Plans_V1.
- Supporting documents will be named according to what they are such as "soils report".
 - In the event that a supporting document is not acceptable it will be turned down and must be resubmitted in its entirety.
 - There will be no "versions" of supporting documents.
- Resubmittals, will be named the same but with the new version such as 19-1234_Plans_V2 and so on.
 - When a plan is returned with comments and markups, it will be permanently flattened by the administrative staff prior to being sent.
 - All resubmittals must be complete sets, in the same format and order as the original. Partial submissions and incorrectly formatted submissions will not be accepted.
- Revisions, there will not be "versions" of a revision. Name a revision submittal; 19-1234_R1, other revisions that follow; 19-1234_R2.
 - Once the submissions are stamped for construction, all subsequent revisions must follow the same protocol, however only the pages or documents that contain changes will be submitted. In the event the revision is not approved, it must be resubmitted in its entirety with the same name.

➤ *Not following these recommended guidelines may result in additional review time.*



- Electronic Application and Submittal** etrakit.crgov.com - all online application fields completely filled out. *see Electronic Submittal Guidelines*
 - Submittal documents must comply with the requirements of the Town of Castle Rock's adopted codes and amendments. Project design criteria and references must correspond with all other submittal documents.
 - Any document (plans, drawings, reports, surveys, etc.) prepared by an architect or engineer must bear their dated seal and signature.

Master Plans - those submitted to the Town for reuse on a minimum of four structures to be constructed within the same platted subdivision.

- Master Plans are processed through ProjectTRAK
- All submittal documents must meet the design criteria required for the location of the proposed tract build-outs in which they are intended.
- Identify the model and project location on all submittal documents.
- Number each option to later coordinate with those selected and identified when applying for a TRACT permit. Square footage is to include options for the maximum possible build out.
- Changes to the approved Master Plan affecting the valuation, square footage, foundation/ footprint, subdivision location, design criteria and code cycle will require a new application for approval.

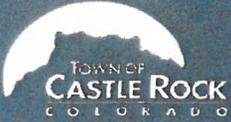
- Architectural Plans** - Provide; applicable codes and amendments, dimensions of all areas for each level (both covered and uncovered porch, deck, patio areas, garages, options, etc.), label all areas as to their use and indicate finished and unfinished, location and size of doors, windows and window wells, safety glazing, roof ventilation, crawl space and attic access, elevations, stair geometry, finished ceiling heights, sections, thermal envelope depicted, energy efficiency details, fire resistive construction, ...
 - Electrical details - Location of lights, fans, outlets, and GFI's, panel location(s), electrical outlets, switches, lighting, fans, carbon monoxide and smoke detector locations.
 - Plumbing details - Show all plumbing fixtures and clearances, label all appliances, clean outs, show all floor drain locations, below grade ejectors, sump pumps.
 - Gas Pipe details - Include layout and calculations.
 - Mechanical details - Location of appliances and equipment, show clearances and access.
 - Energy compliance path - *Prescriptive, Total UA Alternative, Simulated "Performance" Alternative and Energy Rating Index "ERI" Compliance Alternative.* Provide details; thermal envelope, insulation, fenestration, air leakage, duct insulation and duct sealing.
- Structural Framing** - Signed and sealed by a registered Colorado professional engineer.
- Roof Truss Calculations and Layout** - Signed and sealed by a registered Colorado professional engineer.
- Energy Compliance Report** - REScheck, worksheets, manuals and reports showing compliance for an alternative design other than a *Prescriptive* approach.
- Mechanical System Manual J/D/S** - Determination of overall heat loss and equipment sizing, duct sizing calculations and layouts.
- Equipment Cut Sheets** - Provide manufacturer's installation specifications for equipment and appliances.
- Landscape and Irrigation Design Affidavit** - For requirements contact Ruth 720-733-6045
- Water Fixture Calculations** - Structures with a Water Efficiency Plan "WEP" must submit water fixture calculations that include all options. Contact Tina Close 720-733-6089

Tract - a site specific new residential dwelling structure to be constructed from the approved master plan.

- Include the address on all site specific submittal documents.
- Identify all options and area square footages from those approved on the Master Plan including; exterior porch, deck and patio areas both covered and uncovered.

- Foundation Plans** - Signed and sealed by a registered Colorado professional engineer. Based on the lot specific soils report.
- Geotechnical/Soils Report** - Signed and sealed by a registered Colorado professional engineer.
- Plot/Site Plan** - Include DESC requirements and set back requirements.
- Water Fixture Calculations** - Completed form. Contact Tina Close 720-733-6089
 - Those with an SFE other than 1 - "Stamped" Water Fixture Calculations, Landscape and Irrigation Design, including table with total irrigable area, turf, bushes, trees, native grasses.
 - Those within a WEP - Completed packet with checklists, "Stamped" Water Fixture Calculations, Landscape and Irrigation Design.
- Fire Department Application** - Fire alarm and suppression systems. Castle Rock Fire Dept. 720-733-1066
- CRDC Lot Approval Letter** - Filings in the Meadows, contact the Castle Rock Development Company (CRDC) 303-394-5500
- Metro District Certificate** - Contact: Castlewood Ranch and Woodlands 303-987-0835, Heckendorf Ranch 303-818-9365, Founders Village 303-790-4845, Meadows 303-779-5710, Maher Ranch and Castle Oaks 303-689-0833

- All contractors listed on the permit must be register with The Town of Castle Rock and have current liability insurance certificate on file before permit can be released. Expired registrations and insurance can delay the inspection process.
- Observation inspections of the engineered foundation system shall be performed by a Colorado licensed professional engineer. A written report signed and sealed by the Colorado licensed professional engineer shall be provided to the Building Official of the results for these inspections. *see Certificate of Occupancy requirements*
- Work shall be installed in accordance with the approved construction documents, any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents. *see Revision and Resubmittal guidelines*



RESUBMITTALS AND REVISIONS

Work shall be installed in accordance with the approved construction documents, any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

Narrative and Response

- A detailed narrative from the applicant or design professional summarizing all changes must accompany the clouded plans.
- A response letter from the applicant or design professional addressing the Plan Examiner's comments, item by item, is required to accompany all resubmittals. Incomplete resubmittals that do not address all comments will be turned away until they are ready for submission.

Electronic Revisions and Resubmittal etrakit.crgov.com see *electronic submittal guidelines*

- All changes on a plan page, either from a resubmittal due to review comments or as a revision must be clearly identified and clouded with corresponding delta indicators and dates. Revision deltas must be displayed in the title block with the corresponding dates. Clouds should appear only on current revisions. For multiple revisions the previous clouds must be removed and the delta indicator left in place.
- Partial submissions and incorrectly formatted submissions will not be accepted.
- Revised/corrected plans must be submitted in the same page order as the original file.
- Design professionals must be the same as the original submittal. Any document (plans, drawings, reports, surveys, etc.) prepared by an architect or engineer must bear their seal and signature.

RESUBMITTALS - BEFORE a permit is issued, any changes to plans or documents that need to be amended during the plan review process.

- Verify that your permit has not been issued. If the permit has been issued, you cannot do a resubmittal. Instead, you will need to submit a "Revision".
- All resubmittals must be a complete set, same format and sheet order as the original file with the intention that the original file may be removed and replaced with the resubmittal.
- Files should be submitted using the same file-name as the original, include a version such as 19-1234 Plans V2 and so on.

REVISIONS - AFTER a permit is issued, any changes to plans or documents that differ from the original submittals.

- Only the pages or documents that contain changes will be submitted after the permit is approved or issued. Revisions that have been stamped reviewed will not be replaced.
- There will not be "versions" of a revision. Name a revision submittal; 19-1234_R1, name subsequent revisions; 19-1234_R2,...
- In the event the revision is not approved, it must be resubmitted in its entirety with the same file name.
- New Commercial and major Remodels, Tenant Finish and other projects that have had several revisions may require a complete set of fully compiled "as built" plans to be submitted prior to certificate of occupancy.

REVISIONS TO APPROVED MASTER PLANS - The following additional items are specific to a Master Plan.

- Revisions submitted to approved Master Plans may require a separate Master Plan application for approval.
- Changes affecting the valuation, square footage, foundation/footprint, subdivision location, design criteria, code cycle, and inactivity will require a new application for approval.
- Any issued Tract permits from a Master Plan with revisions submitted, may result in a "hold" type status and construction may not be permitted to continue.
- All resubmittals must be complete with the same file-name as original file with the intention that the original file can be removed and replaced with the resubmittal. Files, including revisions that have been stamped reviewed will not be replaced.
- It is the responsibility of the applicant to submit a complete set of plans that include the most recent approved revisions and include all details for tract build-outs that are being constructed or have been constructed under previous approvals to be stamped.

Notification

- For any submittal to be reviewed, you must send a notification to buildingcounter@crgov.com with your permit number and address when uploading any files in eTrakit.
- Uploading a revision does not constitute automatic approval from the Town of Castle Rock. Additional plan review fees may be assessed to the permit.



(Castle Rock Water)

Summary of changes to building permit submittals regarding Castle Rock Water:

Effective 9/11/2019:

- **All 0.67 SFE landscape plans must list total irrigated turf area and total irrigated non-turf areas (such as trees, bushes, etc.) separately.**
- All applications (0.67 and 1.00 SFE) within a WEP (Lanterns and Meadows F16 KB Developments only)
 - Landscape plan must list total irrigated turf area and total irrigated non-turf areas (such as trees, bushes, etc.) separately.
 - Must submit the following with the master plan review
 - Fixture count for the worst case of that unit (including basement rough-ins, optional sinks, super master bath options, etc.)
 - Completed "Water Efficiency Verification Checklist" (found in the appendix of the WEP)
 - The education packet to be supplied to the homeowner
 - Any other items included in the WEP

Effective January ¹/₂, 2020:

- **All residential permits—including 1.0 SFE permits and homes not within a WEP—must provide landscape and irrigation plans. Landscape plan must list total irrigated turf area and total irrigated non-turf areas (such as trees, bushes, etc.) separately.**

Contacts:

Kevin Buffington, E.I.
Town of Castle Rock Water
Plan Review Engineer
Desk 720.733.2308
kbuffington@CRgov.com

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Plan Review Supervisor
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Tclose@CRgov.com